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Negotiating Co-governance of the Waikato River: Political Projects at Work

by

BIZHAN RAHNAMA

A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
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Abstract

The question of how to govern water is challenging technically and politically. While answers must be context specific, the question itself is one of the great global challenges facing humankind. Facing rapid increases in water demand, environmental change, new sciences of water quality, and a raft of political contests authorities are seeking more flexible approaches to achieve equitable and productive use of water resources. In recent theories of environmental governance and after-neoliberal governmental practices, the idea of co-governance has been widely advocated as a platform for managing natural resources. It has particular resonance as a strategy for realising the interests of indigenous groups. Discourses of co-governance point to institutions and practices of participation and collaboration as both principles and objectives of ‘good’ governance. This thesis investigates the democratisation of decision-making through co-governance and its efficacy in dealing with water management problems in the case of the Waikato River catchment in New Zealand. The study interprets co-governance as a particular governmental rationality that has emerged to ‘settle’ potentially conflicting political projects. Prominent among these are economic growth through dairying, environmental concerns with water quality, and claims from indigenous groups for resource sovereignty. The research confirms that combined with new practices of integrated management of land and water resources, commitments to co-governing and co-managing with iwi have reworked institutional arrangements away from the established hierarchical, command and control governance model towards new after-neoliberal and post-colonial state governmentality. This thesis argues that to date, the co-governance provisions have allowed for these contests to be accommodated without generating damaging disputes. Rather than attempting to provide for lasting resolutions, co-governance has allowed different groups to exercise voice, take on responsibility and play an active role in water management. These measures have blunted the destructive edges of political contests, fostered a recognition of difference, and facilitated the cultivation of collective interests in both river rehabilitation and multiple uses of the river. The co-governance platform is still being shaped, but has encouraged practical ways to move forward and to make and negotiate political claims, rather than setting up a framework for contesting any form of final settlement.

Key words: water governance; co-governance, co-management; decision-making; environmental management; indigenous sovereignty; political projects.
Dedication

To my dearest Mother
Acknowledgments

It is very important for me to show my appreciation to all those whom, in many ways, have provided me with the assistance and encouragement that has paved the way for me to undertake this journey. In particular, I would like to send my sincere gratitude to my main supervisor, Associate Professor Nicolas Lewis. Nick, I am forever grateful for all your intellectual guidance and insightful critiques with my thesis. This research would not have been possible without your continuous support and overwhelming kindness. I am very privileged to have been under your supervision and inspired by your humbleness and patience.

I also offer my great appreciation to my co-supervisor, Dr Karen Fisher, for providing me with assistance and helpful advice on my thesis. A warm gratitude goes to my research participants who dedicated their time and valuable knowledge to produce this thesis. I am grateful for my River Iwi participants who contributed in this research. These include: participants from Waikato-Tainui, Ngāti Maniapoto, Ngāti Tuharetoa, Te Arawa and Raukawa. Thank you very much to the Māori scholars from the Waikato University, the University of Auckland and the Landcare Research. To all my Māori participants, the warmth and hospitality you all have provided me is priceless.

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abundance of inspiration which got me through this journey. Thank you for standing by my side all these years.

Finally, Waikato River, thank you for providing me with an opportunity to learn that You have a voice and it is up to us, humankind, to listen. This research has taught me that ongoing discussion about Your wellbeing will herald more enthusiasm, passion and willingness for people to look after You. With this, we can hope to preserve and maintain You so future generations can also enjoy Your beauty, serenity, and importance.

“No man ever steps in the same river twice, for it's not the same river and he's not the same man” (Heraclitus, 544BC).

Waikato River, February 2015
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<td>Used as the Māori name for New Zealand</td>
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<tr>
<td>aroha</td>
<td>love, compassion</td>
</tr>
<tr>
<td>awa</td>
<td>river, stream</td>
</tr>
<tr>
<td>hapū</td>
<td>kinship group, clan, tribe, subtribe</td>
</tr>
<tr>
<td>hui</td>
<td>gathering, meeting</td>
</tr>
<tr>
<td>iti</td>
<td>little</td>
</tr>
<tr>
<td>iwi</td>
<td>extended kinship group, tribe</td>
</tr>
<tr>
<td>kaitiaki</td>
<td>trustee, custodian, guardian, caregiver</td>
</tr>
<tr>
<td>kaitiakitanga</td>
<td>guardianship, stewardship</td>
</tr>
<tr>
<td>kanohi ki te kanohi</td>
<td>face to face, in person</td>
</tr>
<tr>
<td>kaumatua</td>
<td>elderly, old,</td>
</tr>
<tr>
<td>kaupapa Māori</td>
<td>Māori approach, Māori customary practice, Māori institution, Māori principles</td>
</tr>
<tr>
<td>Kīngitanga</td>
<td>King Movement</td>
</tr>
<tr>
<td>koha</td>
<td>gift, present</td>
</tr>
<tr>
<td>kotahitanga</td>
<td>unity, togetherness</td>
</tr>
<tr>
<td>mahinga kai</td>
<td>cultivation, food-gathering place</td>
</tr>
<tr>
<td>mana</td>
<td>prestige, authority, control, power, influence, status, spiritual power</td>
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<tr>
<td>mana whakahaere</td>
<td>governance, authority, jurisdiction, management</td>
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<tr>
<td>mana whenua</td>
<td>territorial rights, power from the land</td>
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<tr>
<td>marae</td>
<td>courtyard (where formal greetings and discussions take place)</td>
</tr>
<tr>
<td>mātauranga Māori</td>
<td>Māori knowledge - the body of knowledge originating from Māori ancestors, including the Māori world view and perspectives</td>
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<tr>
<td>maunga</td>
<td>mountain</td>
</tr>
<tr>
<td>mauri</td>
<td>life principle, vital essence</td>
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<tr>
<td>Pākehā</td>
<td>English, foreign, European</td>
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<tr>
<td>Papatūānuku</td>
<td>Earth, Earth mother and wife of Rangi-nui - all living things originate from them</td>
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<tr>
<td>pure</td>
<td>ceremony to remove tapu</td>
</tr>
<tr>
<td>Ranginui</td>
<td>Sky father</td>
</tr>
<tr>
<td>raupatū</td>
<td>confiscation</td>
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<tr>
<td>rohe</td>
<td>boundary, region, territory, area, border (of land).</td>
</tr>
<tr>
<td>rūnanga</td>
<td>iwi authority</td>
</tr>
<tr>
<td>tangata whenua</td>
<td>local people, people of the land</td>
</tr>
<tr>
<td>taniwha</td>
<td>water spirit, monster, powerful creature, chief</td>
</tr>
<tr>
<td>taonga</td>
<td>treasure</td>
</tr>
<tr>
<td>tapu</td>
<td>sacred, prohibited, restricted</td>
</tr>
<tr>
<td>te reo Māori</td>
<td>Māori Language</td>
</tr>
<tr>
<td>tikanga</td>
<td>custom, rule, way, practice, protocol</td>
</tr>
<tr>
<td>tīno rangatiratanga</td>
<td>self-determination, sovereignty, autonomy, self-government, domination</td>
</tr>
<tr>
<td>term</td>
<td>translation</td>
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<tr>
<td>------------</td>
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</tr>
<tr>
<td>tupuna</td>
<td>ancestor, grandparent</td>
</tr>
<tr>
<td>wai</td>
<td>water</td>
</tr>
<tr>
<td>wānanga</td>
<td>seminar, conference, forum, educational seminar</td>
</tr>
<tr>
<td>whakapapa</td>
<td>genealogy, lineage, descent</td>
</tr>
<tr>
<td>whakataukī</td>
<td>proverb, significant saying</td>
</tr>
<tr>
<td>whanau</td>
<td>extended family, family group</td>
</tr>
<tr>
<td>whenua</td>
<td>land</td>
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Abbreviations

CSG  Collaborative Stakeholder Group
CRIs  Crown Research Institutes
DCSA  Dairying and Clean Streams Accord
DOC  Department of Conservation
EFFG  Ecologic Foundation and Fish and Game
ECAN  Environment Canterbury
FMP  Farm Management Plan
GWP  Global Water Partnership
GEC  Guardians Establishment Committee
HCCLG  Hamilton City Council Leadership Group
HFM  Hancock Forest Management
HPS  Huntly Power Station
ICM  Integrated Catchment Management
IWRM  Integrated Water Resource Management
JMAs  Joint Management Agreements
JMA  Joint Management Agreement
LAWF  Land and Water Forum
LGA  Local Government Act 2002
LTCCP  Long Term Council Community Plans
MEDP  Māori Economic Development Panel
MiE  Ministry for the Environment
NES  National Environmental Standard
NIWA  National Institute of Water and Atmospheric Research
NKKSB  Ngāti Koroki Kahukura Settlement Bill
RPS  Regional Policy Statement
RMA  Resource Management Act 1991
RMLR  Resource Management Law Reform
RiVAS  River Value Assessment System
SES  Stakeholder Engagement Strategy
TGH  Tainui Group Holdings Limited
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<td>TTWTAW</td>
<td>Te Ture Whaimana o Te Awa o Waikato</td>
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<tr>
<td>TLG</td>
<td>Technical Leaders Group</td>
</tr>
<tr>
<td>TLAs</td>
<td>Territorial Local Authorities</td>
</tr>
<tr>
<td>TLA</td>
<td>Territorial Local Authority</td>
</tr>
<tr>
<td>TWA</td>
<td>Treaty of Waitangi Amendment Act 1985</td>
</tr>
<tr>
<td>UAHPEC</td>
<td>University of Auckland Human Participants Ethics Committee</td>
</tr>
<tr>
<td>VS</td>
<td>Vision and Strategy</td>
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<tr>
<td>WJVP</td>
<td>Waikato Joint Venture Project</td>
</tr>
<tr>
<td>WRCSA</td>
<td>Waikato Raupatu Claims Settlement Act 1995</td>
</tr>
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<td>WRC</td>
<td>Waikato Regional Council</td>
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<td>WREP</td>
<td>Waikato Regional Economic Profile</td>
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<tr>
<td>WRPS</td>
<td>Waikato Regional Policy Statement</td>
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<tr>
<td>WRA</td>
<td>Waikato River Authority</td>
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<tr>
<td>WRISS</td>
<td>Waikato River Independent Scoping Study</td>
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1. INTRODUCTION

The question of how to govern water resources is becoming more difficult technically and politically. Combined with a rapid increase in water demand and a new science of water quality, it is challenging authorities to look for more flexible approaches towards securing better use of water. This thesis investigates one techno-political solution, that of co-governance in the context of the Waikato River in New Zealand. Like any such solution, it is situated in a complicated history and politics of place, and a specific set of contests around the use and values of the river. This thesis interprets the co-governance arrangements adopted as a governmental rationality that has emerged to manage these contests, which are dominated by a post-colonial politics intertwined with concerns about water quality and the economic use of the river. By investigating the co-governance arrangements developed to implement the Waikato River Settlement Act (WRSA), this thesis explores the democratisation of decision-making through co-governance, and its efficacy in dealing with water management problems in a very specific setting of contested indigenous resource sovereignty. In this chapter, I introduce contemporary concerns with river governance (the rise of co-governance, indigenous concerns with river governance, and post-colonialism) in the distinctive contexts of co-governance arrangements for the Waikato River (including expectations around economic growth, claims to do with Māori sovereignty, and concerns with river water quality) each of which I theorise later as distinctive political projects.

1.1 Water: A crisis of governance?

The world is widely argued to be facing local and global water crises (Cosgrove & Rijsberman, 2014). Many regions and countries are currently experiencing water scarcity, and it is clear that the world faces environmental and human health crises associated with the lack of access to, or inefficient management of, freshwater resources (Barlow, 2015; Cosgrove & Rijsberman, 2014). The literature has focused on changes in water management in response (Allan, 2005; Pahl-Wostl, Jeffrey, Isendahl, & Brugnach, 2011). Past top-down approaches are argued to have failed to provide solutions that address the multidimensional character of water (Hooper, 2003; Moss & Newig, 2010). Such approaches have tended to focus on finding technical solutions and engineering innovations to meet increasing urban, industrial, and agricultural demands for water (Pahl-Wostl et al., 2011; Schoeman, Allan, & Finlayson, 2014). In recent years, planned solutions have begun to give way to market solutions, with the
provision of technical fixes contracted out, as governments gripped by neoliberal ideology have sought to use market disciplines to overcome competing demands, and to distance themselves from the contests themselves. Techno-scientific approaches to water management have been criticised for neglecting the importance of historical, political, and socio-economic aspects of water management, their empirical failures to revitalise rivers, and for failing to recognise that freshwater resources are composed of large, complex, and interconnected networks of human-environmental interactions (Castro, 2007; Hooper, 2003; Pahl-Wostl, Holtz, Kastens, & Knieper, 2010; Schoeman et al., 2014; Warner, 2006). Water privatisation has also been widely criticised for similar reasons of efficacy, as well as social and environmental justice (Bakker, 2007, 2014).

Two broad and overlapping governance-centred policy agendas have emerged over the last twenty years in response, both of which recognise that managing a common-pool resource like water is an inherently a political act (Mollinga, 2008; Schlager & Blomquist, 2000; Swyngedouw, 2005a). The first is the idea of Integrated Water Resource Management (IWRM) (sometimes used interchangeably with integrated watershed management and integrated catchment management especially in the New Zealand case) that has emerged as an alternative planning regime that starts with the complexity of land-water and human-environment relations. IWRM was to promote the sustainable management of water resources while maximising efficiency, equity, environmental, and human wellbeing (Molle, Mollinga, & Meinzen-Dick, 2008).

In practice, IWRM has struggled to achieve its objectives. In many places around the world, it has been confronted with problems that are more ‘social’ than ‘hydrological’ (Biswa & Tortajada, 2010; Blomquist & Schlager, 2005; Schoeman et al., 2014). This has led some to argue that IWRM has failed to define fundamental political issues such as: how to draw political boundaries within the watershed; how to organise the roles and responsibilities of stakeholders; and how to resolve contested interests amongst different stakeholders (Blomquist & Schlager, 2005; Cohen & Davidson, 2011). Others have gone further, to suggest that issues associated with material contest, power relations, and control over the use and access to water mean that contemporary water crises are less crises of scarcity or the shortage of water, and more a crisis of ‘governance’ (Harris, Goldin, & Sneddon, 2015; Hukka, Castro, & Pietila, 2010; Sehring, 2009).
The second agenda has involved an advocacy for various forms of water ‘co’-governance as a way of encouraging participation in decision-making (Edelenbos & Klijn, 2006; Head, 2005). Co-governance arrangements aim to take into consideration the values, interests, and voices, of multiple stakeholders; often with special attention directed to marginalised groups (Harris et al., 2015; Hukka et al., 2010; Van Buuren, Driessen, Teisman, & van Rijswick, 2014). The idealised governmental form is deliberative democracy, which allows for different community actors across multiple scales of decision-making to balance and negotiate their interests and to participate in the decision-making process (Rogers & Hall, 2003; Turton, Hattingh, Claassen, Roux, & Ashton, 2007). Co-governance approaches are related to efforts to find more democratic and efficient forms of governance for dealing with complex socio-environmental policy problems such as water (Fenwick, Miller, & McTavish, 2012). Good co-governance approaches dovetail with IWRM and set political boundaries (jurisdictional issues), and political responsibility (deliberative democracy) at the watershed-scale1 (Molle, 2006; Molle, Mollinga, & Wester, 2009).

Collaborative and participatory governance promotes ‘good governance’ principles of participation, negotiation, coalition forming, accommodation, and consensus forming at scales of immediate concern among those directly involved with issues rather than traditional forms of top-down rule making and hierarchal administration (Jentoft, 2007, p. 362). Co-governance also has been advocated as an approach that encourages the co-production of locally-relevant, ‘situated’ knowledge for problem solving (Jentoft, 2007; Jentoft & Chuenpagdee, 2009). The key governmental rationalities are seen as participation, deliberation, and partnership (Ansell & Gash, 2008; Cohen, Evans, & Govan, 2015; Fenwick et al., 2012; Somerville & Haines, 2008). Advocates, however, commonly recognise the challenges of enabling participation, managing contest, consensus building, co-producing

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1 One of the difficulties within the field of water governance is to identify appropriate scales for governing water. While scale has been widely discussed in relation to spatial hierarchy, geographers with an interest in social theory continue to argue that reduction of scale to spatial hierarchy is part of the problem. They argue instead that particularly in political or jurisdictional terms, scale is a relational concept (Howitt, 1998; Marston, 2000; Marston, Jones, & Woodward, 2005; Sayre, 2005). It is socially constructed, contingent, and fluid, and is therefore always subject to remaking (see Marston, 2000; Norman, Bukker, & Cook, 2012; Sayre, 2005). The debates on the social construction of scale are important analytical tools for the analysis of complex ‘institutional dynamics’, power relations and governance of common pool resource such as water (Norman et al., 2012, p. 54). In settings such as the Waikato where geophysical catchment boundaries do not align neatly with contested rohe borders, established institutional boundaries, cadastra boundaries and the spatial imaginaries of many actors, a more subtle engagement with scale is emerging and necessary.
knowledge, and implementing holistic approaches such as IWRM (Antunes, Kallis, Videira, & Santos, 2009; Huitema et al., 2009).

On the other hand, such approaches are also a feature of ‘after-’ or ‘roll-out’ neoliberalism. That is, they allow for governance at a distance, and for neoliberal technologies of control such as contracting out and responsibilising communities (Jessop, 1997a; Rose, 1996). New Zealand geographers (Larner & Craig, 2005; Larner, Le Heron, & Lewis, 2008; Lewis, 2004) have explored the contradictions between these two governmental rationalities in the governance-led or ‘partnering’ state. The language of stakeholding is also problematic in this regard as it tends to reduce interest in questions of resource management to the ‘stakes’ held by individuals or social groups (see for example, Mitchell, Agle, & Wood, 1997). While ideological or values-based interests are part of the discussion (Achterkamp & Vos, 2008), critics worry that a language of stakeholding reduces collaboration/participation to the pursuit of self-interest, marginalises collective concerns and commitments, conceptions of justice, or even altruism (Cooke & Kothari, 2001; Käkönen & Hirsch, 2009; Rydin & Pennington, 2000).

1.2 Indigenous rights and managing water

Indigenous involvement in water governance is often discussed in terms of well-being, livelihoods, water rights, and claims to do with political self-determination (Gupta, Hildering, & Misiedjan, 2014; Wilson, 2014). The literature has followed the struggles of indigenous communities in the 1960s and 1970s worldwide to gain voice and political representation that might restore and secure values, cultural practices, and rights to land (Anaya & Williams Jr, 2001). Much of this struggle has centred on the management of natural resources. It has involved intense and often violent local struggles as well as global diplomacy and international agreements such as the Rio Declaration on Environment and Development 1992 (UNCED, 1992), and the Indigenous Peoples Kyoto Water Declaration (IPKWD) 2003.

2006a). As with Agenda 21, it calls for a governance approach capable of integrating knowledge, interests, and worldviews of indigenous people into the decision-making process (Berkes, 2009; Maclean & Inc, 2015; Trimble & Berkes, 2013). Despite this international mandate, few social or political institutions have been established at national scales to ensure indigenous rights and responsibilities in managing natural resources, particularly water. Economic and environmental contests over scarcity and quality degradation, are joined by ongoing debates about neo-colonialism and post-colonial justice (Bakker, 2010b; Fisher & Urich, 2001; Forster, 2013, 2014; Wilson, 2014).

1.2.1 Post-colonial discourse: An architectural binary?
Indigeneity has become a touchstone for postcolonial theorising of race, identity, culture, and marginality (Spivak, 2000). Colonisation has severed connections among indigenous people, their knowledge, ancestral land, and environments (Smith, 1999). These connections are commonly laid out in narratives that relate indigenous identities to the past and future through place, but have been undermined by colonialism, which has stripped peoples of their rights and heritage (Coombes, Johnson, & Howitt, 2012; Smith, 1999) . Efforts to reclaim rights are situated “within settler political orders and become caught up in settler projects of identity and belonging” (Brigg, 2015, p. 1). Postcolonial theorists (Bhabha, 1994; Said, 1979; Spivak, 1988) point to the effects of cultural and socio-political dominance of the West over colonised societies (Browne, Smye, & Varcoe, 2005; Kubota, 2014). While the ‘post’ in ‘post-colonialism’ aligns it with other ‘post’ prefixes such as ‘post-modernism’, ‘post-structuralism’, and ‘post-marxism’ and thus “a movement beyond” (Shohat, 1992, p. 101), postcolonial theory has become a prominent way of thinking about ongoing colonial practice as well as “the legacies of land alienation” (Coombes, 2007, p. 187). For Coombes (2007, p. 187), the point is that past, present and future are bound together in “the naturalisation of the colonial binary between West and Rest”.

That point is important, as for the majority of indigenous peoples around the globe “colonialism is not dead” (Weaver, 2000, p. 223), but continues in new alignments of “inequities” (Browne et al., 2005, p. 19). It manifests as neo-colonial or internal colonialism (Weaver, 2000, p. 223). Colonial dominance by a small group exercising control over a large indigenous people from a distant motherland has been displaced by neo-colonial relations that reproduce the dominance of the distant centre of global accumulation and cultural production,
and/or internal or ‘settler’ colonialism in places like Australia, New Zealand and Canada (Weaver, 2000). Post-colonial experiences involve the workings out of these relations in very different contemporary settings in different places despite apparent decolonising political and cultural arrangements (Shohat, 1992). Using Spivak’s term, the ‘subaltern’ now seeks more voice in decision-making, control over public service, and authority and management control over natural resources (Paquette, 2012, p. 130). Post-colonial critics insist on reconsidering colonial pasts and their outcomes in the modern day, and on using their injustices as a platform for recognising social and cultural equity and encouraging indigenous participation in decision-making (Browne et al., 2005; Hudson, 2003). They advocate for consensus building and partnership, the application of indigenous knowledge in governance processes, and even more profound forms of indigenous empowerment through sovereignty (Briggs & Sharp, 2004; Paquette, 2012).

The idea of co-management has been widely advocated as a platform for managing natural resources through a post-colonial settlement. It is seen as a governmental technology through which to link collaborative governance and the interests of indigenous communities in self-determination. While debated in theoretical and applied terms, co-management generally refers to efforts to enshrine participation, collaboration, and partnership in routine management decision-making about natural resources (including the application of regulation, decisions about access and allocation) (Berkes, 2009; Berkes, George, & Preston, 1991; Trimble & Berkes, 2013). Berkes (2009, p. 1692) defines co-management as “the sharing of power and responsibility between the government and local resource users” in the management of natural resources based on joint decision-making. In corporate understandings, management implements strategy, and follows the principles and protocols set by governing boards who are also responsible for safeguarding shareholders (stakeholders). In practice, it is difficult to distinguish between co-governance and co-management, other than to recognise that while the former might be practised without the latter, it is difficult to imagine co-management without a prior commitment to co-governance. Indeed, the two terms tend to be used interchangeably, confusing the politics of ‘co-ness’ as well as the politics of knowledge production. The literature that seeks to distinguish between co-governance and co-management wrestles with the interpenetration of these concepts, but tends to imagine each as actually existing and distinctive conceptually, and in practice (Feit, 2005; Jentoft & Chuenpagdee, 2015).
At the same time, established configurations of power continue to frustrate efforts to include indigenous people in either co-governance or co-management (Berkes et al., 1991; Maclean & Inc, 2015; Maclean, Robinson, & Natcher, 2015; Natcher & Davis, 2007; Natcher, Davis, & Hickey, 2005; Stevenson, 2006; Wilson, Nielsen, & Degnbol, 2013). Meanwhile, Berkes (2009, p. 1692) argues that conceptions of collaboration without genuine power sharing should not be seen as a “panacea”, especially given colonial histories and post-colonial power relations. The dominance of western ideologies of economic development and growth continues to frustrate efforts to achieve more meaningful self-determination (Groenfeldt, 2003). So too do the resulting marginalization of indigenous knowledge and worldviews, (Hart, 2010) and the challenges of actually achieving progress through political negotiation (Coombes et al., 2012).

The emerging challenge in the New Zealand context is to convert legislative and normative obligations to co-govern with Māori into co-management (Forster, 2014; Tipa & Welch, 2006; Wevers, 2013). This has created a complex field of contest, which makes any slavish commitment to definitions of the terms unhelpful. In this thesis I endeavour to use the term ‘co-governance’ when referring to strategic, steering, and governing practices and institutions, and ‘co-management’ when referring to implementation, project development and project management. There is, however, some unavoidable slippage; and I will refer to co-governance/co-management when the two concepts are being mobilised simultaneously.

1.2.2 Indigenous partnership in natural resource management

Countries such as Australia, Canada, and New Zealand have established partnership arrangements with indigenous communities based on co-governance, co-management, and community based natural resource management, to manage fisheries, forests, wildlife, and water resources (Berkes, 2009; Berkes et al., 1991; Jentoft, 2005; Maclean et al., 2015; Plummer & Armitage, 2007; Ross et al., 2009; Spaeder & Feit, 2005). In practice these approaches have been criticised by critics who argue that they were established to fit the frameworks of the state and often limit indigenous involvement to advisory roles, while state agencies retain control of governance roles and day to day management (Forster, 2014; McGregor, 2014; Stevenson, 2006). Indigenous rights and authority are rarely acknowledged, leaving indigenous peoples disempowered and frustrated. If the aim is to partner with indigenous people in the management of natural resources, McGregor argues that state
agencies need to involve indigenous people in “key decision-making roles, rather than leaving them in opposition or resistance to them” (McGregor, 2014, p. 350). Participatory approaches need instead to embrace indigenous socio-cultural, spiritual, and customary values, recognise indigenous economic, cultural, and customary interests, and foster indigenous self-determination (Maclean & Inc, 2015). The latter is particularly challenging and involves deep contests over control of land and natural resources (Groenfeldt, 2003). In their work on trans-boundary water governance in Canada and the USA, Norman and Bakker (2015, p. 207) point to how recognition of “equal and similar rights” demands indigenous self-determination, and how this might offer new paths forward in water governance more generally.

Alongside questions of historical justice and sovereignty, entrenched social and economic inequalities and political and economic disempowerment mean that indigenous communities are not positioned to participate equally in more general ‘public engagement’ processes (Forster, 2014; Hill et al., 2012; Ruru, 2013b). Capacity issues and “socioeconomic disadvantage” further entrench the dispossession of colonialism. These colonial legacies also undermine the possibility of effective and just co-production of knowledge (Brugnach & Ingram, 2012; D’Hauteserre, 2005; Rathwell, Armitage, & Berkes, 2015). Existing natural resource management decision-making frameworks privilege scientific knowledge to maintain the Enlightenment distinctions between human and environmental domains. Indigenous worldviews, by contrast, tend to see humans and their environments as interconnected (Brugnach & Ingram, 2012; Harmsworth & Awatere, 2013; Harmsworth & Roskruge, 2014; Morgan, 2006; Tipa & Nelson, 2008), meaning that indigenous belief systems, regulatory practices, and knowledge making processes are systematically marginalised (Brugnach & Ingram, 2012). Platforms for co-producing knowledge and co-governance must not only “align action with values of social justice and democracy”, they must also “validate the legitimacy of diverse knowledge systems” (Rathwell et al., 2015, pp. 852-853). Progress here is undermined by the fragility of indigenous knowing caused by disempowerment and colonisation, the continued demands for indigenous knowledge to prove itself against scientific knowledge, and the challenge of just how to involve indigenous knowledge in decision-making (Rathwell et al., 2015).
1.3 A post-colonial moment in New Zealand

In Aotearoa New Zealand, questions of resource management and environmental governance have become increasingly entangled in questions of postcolonial settlement, and around discrimination, dispossession, poverty, and historical injustice. Forster (2014) describes this as a period in which Māori have sought to redress historical injustice and reclaim their rights to govern environments and manage resources. Many of the debates and struggles that characterise this period centre on claims made with respect to the Treaty of Waitangi\(^2\) signed in 1840. The foundational document of colonisation in Aotearoa, the Treaty of Waitangi sealed a partnership between the British government and Māori to establish the rights to use the land and other resources (Bess, 2011; O'Sullivan, 2008). While its meaning remains contested along multiple lines, much contemporary debate comes down to what each partner presumed they were signing, exactly what rights of control were being ceded and assumed, what new conceptions of sovereignty were being constructed, and how these matters ought to be interpreted today. The Treaty made possible commercial exchange between Māori and Pākehā (Ginn, 2008) and established qualified conditions under which European settlers (Pākehā) would be welcomed.

However, the colonial government quickly began to break the terms of the Treaty, leading to skirmishes and war in the 1860s, and a long history of illegal land confiscation and institutionalised marginalisation of Māori (Ginn, 2008). After 130 years of Māori resistance to on-going breaches of the Treaty (Baker, 2013; Bargh & Otter, 2009), the Treaty of Waitangi Act 1975 established the Waitangi Tribunal to consider claims and grievances to do with land confiscation and historical resource management (Baker, 2013). In 1985 the Act was amended to allow the Tribunal to hear claims that dated back to as early as 1840 (De Alessi, 2012). Since then, although Tribunal findings are subject to negotiation with government, and questions of redress remain outstanding (Baker, 2013), the Tribunal has provided judgements that have resulted in significant compensatory payments and the return of environmental assets to Māori. The Act has stimulated commitments to state practices, regulations and statutes that have resulted in co-governance arrangements of multiple forms. Māori are now involved as employees or agents of the state, regulators, owners and developers in commercial fisheries, forestry, and many other resource-based enterprises (De Alessi, 2012; Spolsky, 2003). Māori now have a stronger voice in the management of natural resources, including freshwater.

\(^2\) The term ‘Treaty of Waitangi’ and the ‘Treaty’ are used interchangeably in this thesis.
This post-colonial project of settlement coincided with the rise of neoliberalism, colliding with some dimensions (laissez-faire), but aligning with others (the freeing up of Māori and government-held resources for commercial development) (see Larner, 2002). More recently, in what Larner et al. (2008) have called after-neoliberal projects, the embracing co-governance with Māori has coincided and aligned with the shift from government to governance (Jessop, 1997a) and the relocation of responsibility from central government to local authorities and communities. In these shifts, two further acts of parliament, the Resource Management Act 1991 (RMA) and the Local Government Act 2002 (LGA), have promoted the significance of Māori values, perspectives, and participation in the ‘sustainable management’ of biophysical resources, and the wellbeing of the communities respectively (Fisher & Russell, 2011; Russell & Frame, 2013). Again, just how genuinely or effectively these have been in providing Māori opportunities for self-determination is debated, with critics suggesting that their primary significance has been to legitimate on-going development projects (Memon & Kirk, 2012; Memon & Weber, 2010). Critics continue to highlight the persistence of resource-based economic growth agendas (Tipa & Nelson, 2008), agendas in which Māori too are now increasingly entangled as they manage their resource and financial settlements under the Treaty.

**1.3.1 Indigenous knowledge and post-colonial natural resource governance**

Māori view humans and bio and geo-physical environments as interconnected through linkages to particular ancestral lands (Bess, 2001; Harmsworth & Awatere, 2013; Harmsworth & Roskruge, 2014; Te Aho, 2014). They identify themselves as Tangata Whenua (people of the land) and connected directly to particular lands and rivers through whakapapa (genealogy) (Salmond, 2012, p. 127). In pre-European Aotearoa, land was not a property to be owned, but a place of connection and identity over which iwi (tribal groups) and hapū (extended family groups) held mana whenua, or rights of control, and to which they were responsible as kaitiaki or stewards. Rights to use land always came with specific obligations and responsibilities, which users had to discharge to maintain their rights (Kahui & Richards, 2014). The governance arrangements introduced under colonialism, however, embraced understandings of land tenure and property rights established in English common law (Forster, 2011b, 2014). A resource management system was established that ignored Māori traditional values, customary rights, and traditional conceptions of guardianship.
On-going struggles for self-determination are tied tightly to discourses of indigeneity and notions of “ancestral occupation” and tangata whenua (O’Sullivan, 2006, p. 2). For Forster (2014), indigeneity encompasses the well-being of people and environments, the ability to exercise mana whenua (authority over place), and the recognition of special relationships with geographical spaces created over a long period of time. This does not mean a rejection of “rights of others” nor “political isolation”, but emphasises that sovereignty should not be accepted as a set of “political orders” (O’Sullivan, 2006, p. 2). As O’Sullivan (2006, p. 2) emphasises, as signatories to the Treaty Māori have no option but to recognise the legitimacy of the New Zealand state. However, they expect the provisions it makes for them to exercise a particular form of sovereignty to be honoured (O’Sullivan, 2006). Indigeneity is more than cultural difference (Brigg, 2015) and embracing it must extend beyond recognition in colonial institutions that offer “illusions of inclusion” (Corntassel, 2007, p. 140). Rather, it involves “reconnecting with homelands, cultures, and communities” through political authority as well as cultural practices (Corntassel, 2012, p. 97). Existing regulatory regimes and agendas generally lack the capability to transfer power from the state to indigenous people, and to engender power sharing that is not seen as jeopardising the state’s power and authority (Maclean et al., 2015).

1.4 Co-governance in the Waikato

The Waikato River is 425 km in length (Figure 1.1), the longest river in New Zealand, and an iconic natural feature. The Waikato catchment is approximately 14,260 km² (Marsh & Mkwara, 2013). Nearly 403,638 people live in the Waikato region (Statistics New Zealand, 2013). It is a strategically important resource for livestock and dairy-farming, horticulture, exotic forest production, and hydro-electric and geothermal energy generation, all mainstays of both national and regional economies. For many generations the river has been an icon of cultural identity and physical wellbeing for the Waikato iwi (Baker, 2013; Te Aho, 2011). Over the past few decades the river has experienced severe water quality decline, which is mostly associated with intensive agriculture, dairy farming, mining, and urban usage including sewage and stormwater runoff (WRISS, 2010). In Māori terms, pressures on the

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3 The Waikato River also provides water to nine hydro stations which account for around 17 percent of the country’s electricity demands. Source: Mighty River Power. Retrieved from [http://www.mightyriver.co.nz](http://www.mightyriver.co.nz)
river have threatened the mauri (life force) of the river and disconnected iwi from cultural practices and identity (Morgan & Te Aho, 2013). Restricted access to the river and the loss of many ‘taonga species’ (culturally treasured native flora and fauna) have been a major source of disconnection, frustration and discontent (Te Aho, 2011). For Māori, a lack of participation in decision-making about how the water resource should be managed, allocated, and used has seen traditional rights ignored and beliefs devalued (Te Aho, 2010, 2011). They claim that restoring mana whenua through genuine co-governance would produce different outcomes.

Figure 1.1: Map showing the Waikato River which flows from Lake Taupo, passing through the Hamilton City and to the sea at Port Waikato (Map: Authors’ own. Data: LINZ).
The recent Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 (WRSA) was designed to restore some level of mana whenua and address these claims through co-governance. The WRSA emerged from a long history of contests over land confiscation and indigenous resource sovereignty (Mahuta, 2010; Muru-Lanning, 2011; Van Meijl, 1993, 2015; Van Meijl, Van Meijl, & Von Benda-Beckmann, 2012). Given new immediacy and a framework for resolution by the Treaty of Waitangi Act 1985, and the turn to co-governance across the state, this context of contest crystallised in the 1987 Waikato Raupatu Claims to address land confiscation and concerns over use rights on the Waikato River (Te Aho, 2011).

A large and politically capable iwi, Waikato-Tainui chose to avoid the lengthy assessment procedures in the Tribunal and negotiate directly with the Crown (Te Aho, 2011). The difficult question of ownership of the Waikato River was excluded from the initial rounds of negotiations, allowing the Crown to reach a landmark settlement with Waikato-Tainui in relation to land confiscation in 1995 (Te Aho, 2011). Fifteen years later, the passage of the WRSA ushered in a new era of commitment to co-governance, river rehabilitation, mana whakahaere (the exercise of rights and responsibilities), and a revitalised relationship between Waikato-Tainui and the river (WRSA, 2010).

Subsequent to the passage of the WRSA, two further settlement acts have been passed, the Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010 (the ‘Upper Waikato River Act’), and Nga Wai o Maniapoto (Waipa River) Act 2012. Together, the three River Acts aim to manage the Waikato River in an integrated and holistic manner, including concern for the 115 km long Waipa River, the largest tributary of the Waikato River (Figure 1.2). These River Acts give effect to the policy objectives associated with the co-governance arrangements between the Crown and five River Iwi: Waikato–Tainui, Ngati Tuwharetoa, Raukawa, Te Arawa, and Ngati Maniapoto. Their legislated purpose is to restore and protect the health and wellbeing of the Waikato and Waipa Rivers for present and future generations (Waipa River Act, 2012; WRSA, 2010).

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4 Known in some legislative debates as the Lower Waikato River Act, it is in this thesis referred to as the WRSA or the Settlement Act.

5 In this thesis ‘River Acts’ pertains to two rivers (the Waikato and the Waipa rivers) which indicates the Upper, Lower Waikato River and the Waipa River legislation acts.

6 The term ‘River Iwi’ in this thesis refers to the Waikato–Tainui, Ngati Tuwharetoa, Raukawa, Te Arawa and Ngati Maniapoto.
The WRSA is underpinned by an explicitly stated ‘Vision and Strategy’ (Te Ture Whaimana)\(^8\), which gives substance to this purpose. The Act itself establishes a single governing body, the Waikato River Authority (WRA), to oversee the Vision and Strategy. The co-governance board of the WRA gives effect to a 50/50 partnership arrangement. It

\(^7\) http://www.waikatoriver.org.nz/catchment/

\(^8\) The term ‘Vision and Strategy’ and ‘Te Ture Whaimana’ are used interchangeably in this thesis.
consists of ten members; five who represent the Crown and five members appointed from the five River Iwi organisations. The Settlement Act also mandates the establishment of joint management agreements (JMAs), co-management arrangements, and the integrated river management plan, all of which are designed to give effect to the Vision and Strategy. The WRSA provides a $210 million clean-up fund to be allocated by the Waikato River Clean-up Trust for a period of 30 years (WRSA, 2010).

1.5 Hypotheses, research questions and objectives
So what does this all mean for how we might understand and practise river management and governance, and what concepts are helpful in teasing this out? In this thesis, I begin from the position that co-governance is complex and situated. It is less a state of being that can be measured against a prior definition or set of objectives, and more a ‘more-or-less’ effective technology of political settlement. To develop this argument, I work with the concept of ‘political projects’ (Larner et al., 2008; Lewis, Larner, & Le Heron, 2008) to consider the alignments and collisions of interests and understandings that are often blithely understood as co-governance. For Larner et al. (2008), political actors, knowledge, multiple (and sometimes competing) interests, governmental rationalities, investment trajectories, and institutions are purposefully and temporarily aligned into projects. “Co-constitutive and emergent” (Lewis et al., 2008, pp. 43-44) assemblages, these projects are “relational constructs” (Le Heron, 2009, p. 140). They may be initiated by particular ideas, actions, events, and sometimes long-term contests, but they become rather than appear as fully formed (Le Heron, 2013; Lewis et al., 2008). Political projects are not the exclusive preserve of the state, or actors who drive political initiatives through the state (Le Heron, Le Heron, & Lewis, 2011; Le Heron, 2013; Le Heron, Lewis, & Harris, 2012; Lewis, 2011).

The Waikato River co-governance arrangements settle a set of competing and potentially mutually destructive political projects. As this thesis will show, the Waikato River co-governance arrangements are a situated form of co-governance that settles competing projects of neoliberal managerialism, agricultural productivism, environmental concerns with water quality decline, and Māori projects to secure tino rangatiratanga and kaitiakitanga. Co-governance frames and secures a legitimate temporary alignment among these projects – one that deals temporarily with inherent contradictions between them. This research asks how effective co-governance has been in negotiating such an accommodation, how it is operating
as a management strategy for achieving a healthier river, and what it might tell us about the nature and generative potential of co-governance as a governmental rationality and technology in Aotearoa.

The research problem, then, can be understood as finding a way to evaluate the potential of co-governance, given this broader understanding of what is in play and what is at stake in the Waikato. The study is less as an illustrative case but more one situated case among many, differently situated cases. In particular, I ask:

1. What politics are at play around water in the Waikato River catchment?
2. How are they being negotiated?
3. How is co-governance being developed and applied as a governing strategy, and what forms is it taking?
4. What kinds of framework for knowing and making knowledge can be established that bring different knowledge bases and research practices together?
5. What issues remain and how might they be tackled?
6. Does the case of the Waikato River tell us anything about the generative potential of co-governance more generally?

In addressing the research problem as outlined and answering these questions, my research has four objectives:

a) To investigate the nature and forms of river co-governance and co-management implemented in the Waikato
b) To explore the potential of co-governance in the contemporary context of New Zealand
c) To evaluate the extent to which the Waikato River co-governance arrangements have to date delivered democratised decision-making processes and effective management
d) To consider the generative potential of current Waikato River co-governance arrangements as a strategy for uncertain future co-governance and co-management arrangements and wider political settlements in Aotearoa-New Zealand

These questions will be asked and objectives developed through a methodology inspired by a post-structuralist political economy approach (see Larner & Le Heron, 2002; Larner et al.,
Lewis and colleagues (2008) argue that a post-structuralist political economy approach begins with recognising the significance of institutions and investment trajectories. However, rather than then seeking explanation narrowly in pre-defined social structures, it is sensitive to post-structuralist emphases on the interplay of agency, rationality, and discourse. Thus conceptions such as political projects do not emerge from prior or given political structures, but emerge from struggle, active agency, experiment, and uncertainty (Larner et al., 2008). In this case, I examine documents and conduct interviews with key informants involved in the construction and implementation of the WRSA, and related co-governance arrangements to identify governmental rationalities, stakeholder interests, incongruities, and unfamiliar or unexpected alignments of interest. These informants include local government officials, scientists, Māori resource management academics, community activists, and industry actors.

1.5.1 A Persian migrant learning with iwi

This research is about the way a particular example of natural resource co-governance is organised and practised in relation to a set of contradictory political projects. Perhaps the most significant of these projects is the Māori struggle for self-determination; that is to say to negotiate a form of sovereignty that aligns with Māori expectations of the Treaty. This struggle is grounded, in part, in cultural concepts, historical grievances, and related narratives that as an outsider I cannot fully understand, and are not mine to relate in the post-colonial context of New Zealand. I am not Māori and cannot speak for Māori, or of the cultural grounding of the environmental politics that underpin this thesis. Conducting research with Māori is difficult and there are arguments and Kaupapa Māori discourses, which for some suggest that non-Māori should not seek to do so (see Smith, 1999).

My research is therefore, in this and in other ways, heavily shaped by my positionality. In response to my outsiderness and kaupapa Māori sensitivities, yet fascinated by the Waikato River co-governance arrangements, I sought to proceed in line with an outsider observing the principles of what Linda Smith terms ‘decolonising methodologies’ (see FitzHerbert & Lewis, 2010; Smith, 1999). My approach recognises the methodological challenges of kaupapa Māori. I treat concepts such as kaupapa, tikanga, and kaitiakitanga as elements in a discourse (see Underhill-Sem & Lewis, 2008); concepts that perform politically in co-governance debates. I neither romanticise them and seek to expand on their cultural meanings.
and significance, nor question their appropriateness or how representative they may or may not be of contemporary practice. I recognise them, and the political project to which they are attached, as material forces that are connected to a history of colonial exploitation, and variously positioned in contemporary Māori development models and aspirations. I acknowledge and discuss these matters as an outsider, but with appropriate empathy for, and recognition of, both kaupapa Māori and the historical disposessions and injustices that contextualise the politics of knowledge production in New Zealand environmental management.

I am a Persian emigrant from Iran who has been living in New Zealand for the past 14 years. I have conducted previous research on resource management that involved engaging with a range of stakeholders (Rahnama, 2010). These parties included Māori. I had to learn to work with Māori, a learning that is on-going. For a Persian immigrant from Iran, this has posed particular challenges to do with language and cultural understanding, but came with many opportunities and learning experiences. My whakapapa is not Pākehā even if I am manuhiri (a guest). I am an outsider and in many different ways a guest: but I am not a colonist, nor part (or direct beneficiary) of historical colonial injustices in this land. I sit uneasily within Pākehā-Māori binaries, and am not easily positioned within them by others. I am a person with a different accent, ethnicity, and background, and one that is not orientalist. I am more unambiguously an outsider, yet a person who understands othering and historical enmity. In this work, I ask questions about co-governance, neither to reinscribe nor to directly correct injustices, but to understand how they have come to shape co-governance. I was to all of my informants, a curiosity to whom they showed compassion and empathy.

1.6 Contributions
This thesis contributes to the development of the co-governance literature in the context of post-colonial river management. It seeks to extend understandings of co-governance as a strategy in resolving contradictions and contests amongst various actors. These understandings are crucial in both the Waikato and in the New Zealand context of river management and river rehabilitation because: there are always multiple interests involved in the use of the river; people are connected to it and through it to the wider catchment; and the river is an important source for economic development. The empirical findings of this thesis can also provide another example of the implementation pathways of a co-governance
approach, and its effectiveness in dealing with the problem of power inequalities and existing political and institutional constraints over resource use. More specifically, it contributes to the understanding of postcolonial resource management in New Zealand which includes the post-Treaty settlement moments of restoration, restorative justice and Māori investment in the resource economy. New Zealand’s postcolonial moment provides opportunities to rethink co-governance and to consider how best to institutionalise and govern through a revitalised Treaty, reconceptualise sovereignty, and practice governance.

The research confirms that Waikato River co-governance has repositioned the boundaries of the institutional framework by reallocating responsibilities away from an established hierarchical, command and control governance model. Analysis suggests that this is an after-neoliberal governmental rationality that aligns state interests in governing at a distance, with Māori interests in self-determination – at least temporarily. However, this is not a predetermined purpose, but rather emerged from efforts to settle contests around the management of the river by imposing and taking up the new organisational, political, and social technologies of collaboration, partnership and power sharing. The pivotal actors here have been Māori who have a clear agenda to participate more fully in the governance of the river, but have yet to articulate (at least publicly) a case for full sovereignty over the river, conceptualise what that might mean in articulation with existing legislative and regulatory frameworks and understandings of government, and develop a clear programmatic agenda to secure such a sovereignty. Other actors are also involved: farmers, electricity supply companies, New Zealand voters, environmentalists, scientists, academics, national and local politicians, and council officials charged with running cities and rural districts. In this respect, co-governance has reduced the sharp edges of the politics and allowed for various contests to be negotiated.

While co-governance appears to have created more collaboration and greater co-operation between actors and organisations, and involved Māori more actively in river management and restoration, contradictory interests clearly remain. Indeed, we should not expect that they may be resolved immediately or permanently. Co-governance is neither a settled thing nor an off-the-shelf governmental design. Rather, it is always shifting and unpredictable that takes the form of negotiated accommodations and moments of nudging things forward. Any actualised expression of co-governance will always be context dependent; and any tensions in relation to governance and management will need to be worked out in that situated context.
1.7 Thesis outline

The following chapters explore the emergence and implementation of the co-governance arrangements for the Waikato River. Chapter Two provides an overview of the literature on the rise of neoliberal statecraft, the shift from government to governance, and the emergence of discourses of good governance as governmental rationalities to manage water resources. As the chapter argues, the concept of good water governance is contested and difficult to apply through institutional arrangements capable of balancing power-sharing among multiple actors (Ingram, 2012; Ostrom, 2010). Chapter Three develops the methodological framework of the research. Following the concepts of situated knowledge (Haraway, 1988; Rose, 1997) the chapter argues that all knowledges are socially and politically situated. The chapter elaborates on my personal situatedness. Chapter Four presents the context of the emergence of co-governance in neoliberal and post-colonial New Zealand, focusing on Māori efforts to revitalise their relationship with the river and regain their indigenous sovereignty over it. Chapter Five analyses what is at stake in co-governance initiatives to do with the Waikato River: economic growth, political struggle, Māori sovereignty, water quality, and shifting personal and collective sociocultural, economic, and environmental values among resource users. Chapter Six maps the situated politics of co-governance in relation to its governing body, and the legislative force of the Vision and Strategy to analyse how they are implemented on the ground. Chapter Seven discusses how political projects of environmentalism, economic development, and Māori sovereignty are negotiated into being under the Waikato River co-governance arrangements. Chapter Eight summarises the empirical findings of this research and offers some final thoughts for future research.
2. FROM GOVERNMENT TO GOVERNANCE

2.1 Introduction
This chapter develops understandings of co-governance in relation to the equitable and productive use of water resources. Co-governance discourses point to institutions and practices of participation and collaboration as both principles and objectives of ‘good’ governance and platforms for delivering access, voice, public engagement, transparency, accountability, responsibility, efficiency, and local empowerment as ethics of ‘good’ governance. The first part of this chapter discusses the rise of interest in ‘governance’, associated with the shift from government to governance that has marked the reinstitutionalisation of the state under ‘roll-out’ neoliberalism. It outlines key discourses of co-governance and the claims made of them in terms of ‘good’ governance objectives.

With renewable resources are still largely non-marketised and public goods, state agencies heavily involved in their regulation, and local governments and communities involved in their management, the organisation of relative rights and responsibilities through just and effective institutions is a live question (Agrawal & Benson, 2011). Against a backdrop of the continued ‘neoliberalisation of nature’ and more market variants of governance (Bakker, 2007), the question is deeply political and urgent. For Ostrom (2010, p. 665) the challenge is to ensure that this is answered by promoting institutions that support and encourage “innovativeness, learning, adapting, trustworthiness, levels of cooperation of participants, and the achievement of more effective, equitable, and sustainable outcomes at multiple scales” . Institutional arrangements must be transparent and flexible enough to deal with multiple decision factors and must deliver public accountability (Agrawal & Benson, 2011). Despite the debate around the devolution of decision-making, public participation, and market forces associated with recent neoliberal reforms, little attention has been paid in the literature to how these institutions alter relations among actors, or encourage participation by disadvantaged and marginalised groups (Ingram, 2012).

This chapter develops the notion of ‘governmentality’ as a basis for emphasising the rationality of governing alongside empirical accounts of institutional structure and performances. Governmentality analysis provides for a critique of institutional arrangements that offers a platform for exploring how power is distributed, whose preferences and interests are privileged (and in what ways), as well as a basis for examining institutional efficacy.
Perhaps the greatest challenges for effective policy making in contemporary society arise from the complexity and cultural diversity of modern society (Booher, 2004). In natural resource management, these become entangled with overlapping jurisdictions, economic imperatives, complex environmental and ecological dynamics, and jurisdictional complexities. Collaborative governance is seen as an appropriate response.

2.2 Governance: Institutionalising fields of power relations

Governance has been related to ‘governability’, or making social formations governable via regulations, laws, institutions and discourses of legitimation (Tropp, 2007). It is one of those keywords that is applied in multiple settings to mean multiple things, so much so that it risks describing and explaining nothing (Jessop, 2002a, p. 4). It is used (and used differently) in new institutional economics, management theory, geopolitical and state theory, and social theory, especially to think about contemporary shifts away from ‘government’ in policy-making and delivery towards at-a-distance forms of social and economic control (Lewis, Moran, Perrier-Cornet, & Barker, 2002, p. 434).

Those interested in governance refer to the work of organisations and institutions in framing and shaping social and economic lives, where institutions are “the rules of the game” that shape human interaction with each other and nature (North, 1990, p. 3). Polski and Ostrom (1999) extend this concept to refer to an institution as “a collection of rules, norms, or particular strategies”. These ‘rules of the game’ may be set or structured by governments or other actors, and are very often implicit in social interaction: what Polski and Ostrom (1999) refer to as invisible decision-making frameworks. Markets are important institutions (Barrett, Lee, & McPeak, 2005), as are formal institutions set by “law, policy, or procedure”. Institutions may also be cultural and informal and take the form of “norms, standard operating practices, or habits” (Polski & Ostrom, 1999, p. 3).

The literature differentiates between ‘institutions’ and ‘organisations’, which deploy sets of rules and processes to configure groups of individuals into particular roles and shared objectives (Bandaragoda, 2000). These will be subject to social, economic and governmental institutions as they interact with others and organise themselves (Bandaragoda, 2000; North, 1990; Polski & Ostrom, 1999; Prell, Reed, Racin, & Hubacek, 2010). Organisations include: government departments, non-governmental organisations, schools, clubs, corporations, tribes, and families (Polski & Ostrom, 1999), and may be responsible for overseeing or
making institutions work in society, economy and communities, and become agents for them in governance.

In the political science literature, governance is seen as referring to “the broad social system of governing, which includes, but is not restricted to, the narrower perspective of government as the main decision-making political entity” (Rogers & Hall, 2003, p. 7). More generally, the term has been used to refer to “any strategy, tactic, process, procedure or program for controlling, regulating, shaping, mastering or exercising authority over others in a nation, organization or locality” (Rose, 1999, p. 15). Institutionally, and in relation to water, the UNDP (2004, p. 10) defines water governance as “the political, economic and social processes and institutions by which governments, civil society, and the private sector make decisions about how best to use, develop and manage water resources” (my emphasis in italics).

Academic interpretations of governance as social process differ from this UNDP definition of it as an essentially technical process. That is, for scholars it is open, political, and fundamentally about mediating contests among multiple and contradictory political projects, and across multiple and competing values and interests, while for the UNDP it is a technical process responding to an external determination of best use. I will return to this point later in a discussion of ‘good governance’, but as UNESCO recognises, again with respect to water governance, how best to use water involves weighing up social, economic, financial, environmental and political goals (da Cunha, 2009) and thus addressing equity, values, and the well-being of individuals and societies (Turton et al., 2007). The allocation and use of water impact on human health and livelihoods, ecosystem integrity, and environmental sustainability (da Cunha, 2009). Making decisions will be political, and that politics is often contained and constrained within an administrative framework of governance (Turton et al., 2007). Such a framework will respond to, and impact upon, the exercise of power, democratic principles and commitments such as securing the participation of marginalized groups. As Rogers and Hall (2003) observe, questions of financial productivity and administrative efficiency will commonly run up against political legitimacy and democratic principles such as participation.

This brief turn to the more applied literature confronting governance reminds us that governance is a political process (in its making and its exercise), and modern societies are built around it. The practice of rule requires agendas and strategies that set goals, balance
interests, allocate and coordinate responsibilities, engage different actors, and set up ways of delivering on goals (Jessop, 1997b, 1998; Schnurr, 2008). We have always had ‘governance’ in the shaping of economies and societies in ways that institutionalise and formalise the exercise of power – from monarchy to communism and social democracy and its command and control governance of economies. However, in recent years, governance has come to mean a more specific form of governing.

2.3 Governance and neoliberal statecraft
The story of the rise of neoliberalism in relation to the economic and political crises of Fordist-Keynesian capitalism in the 1960s and 1970s, is well-rehearsed. It links the Chicago School of Economics, the Mont Pelerin Society, Thatcher and Regan, the Chicago Boys of Pinochet’s Chilean regime, the Washington Consensus, global financial capital, and much else besides (Harvey, 2005; Klein, 2003; Kotz, 2002). In the arena of natural resource management, neoliberalism is argued to have unleashed a wave of ‘accumulation by dispossession’ through the privatization of ‘the commons’ and the removal of tight state controls over private activities (Swyngedouw, 2005a, p. 87). In New Zealand, this story includes Roger Douglas, privatisation of state assets from forests to banks, and a determined purism of approach that drove neoliberalism into government reorganisation and social lives deeper and faster than most other places (Kelsey, 1995; Lewis, 2004). Neoliberal strategies of de-regulation, re-regulation, privatisation, hollowing out, and contracting out the welfare state, overthrew Keynesian-welfarist and social-collectivist institutions (Jessop, 1990, 2002b; Lewis, Lewis, & Underhill-Sem, 2009; Lockie & Higgins, 2007; Peck & Tickell, 2002; Rhodes, 2007). Broadly speaking, neoliberal processes have been attributed responsibility for multiple and widespread changes in modern economic, political, and social life (Larner, 2009).

The literature has identified distinctive phases or patterns in the rise of neoliberalism. De Angelis (2003, p. 7), for example, divides neoliberalism as a global order into three phases. The first phase is associated with the emergence of neoliberal ideas of economic theory, introduced in the 1970s to the mid-1980s, and articulated via dense ‘pro-markets’ policies both in the North and in the South (De Angelis, 2003). The second phase, which started in mid 1980s- mid 1990s, was the development of the ‘Washington Consensus’ in which developing countries were encouraged to follow and adopt development policies from
industrialized countries (Brand & Sekler, 2009; Williamson, 1993). Neoliberal policies in the form of privatisation, disentangling government from economy, export-led development, and liberalising global capital and goods markets, were used to open up the Global South\(^9\) for Northern investment (Orhangazi, 2008; Perreault & Martin, 2012). Reworked to emphasise transparent and efficient institutions, the Washington Consensus gave way to the post-Washington Consensus in mid-1990s. This third phase of neoliberalism shifted attention to the requirement for strong and transparent institutions as a platform for efficient markets and private sector led economic growth (see De Angelis, 2003).

Working more closely with shifting forms and practices of neoliberalism in the anglophone Global North, Peck and Tickell (2002) have divided neoliberalism into two distinctive moments: ‘roll-back’ neoliberalism, when reformists dismantled social democratic governmental forms in the 1980s, and ‘roll-out’ neoliberalism. ‘Roll-out’ neoliberalism looks much like De Angelis’ third phase, but is theorised differently. For Peck and Tickell, it is a still-emerging phase of active state-building, regulatory reforms and institution building to secure market governance, reallocate responsibilities more effectively, and address market failures. In social arenas, neoliberal governments recognised that they couldn’t expect market solutions to deliver minimum welfare levels or docile citizens (Larner et al. 2007). In the economic arena, market solutions were not delivering effective national development, while the propensity of private investments to protect revenues through externalising the social and environmental costs of production were creating inefficient outcomes and perpetuating crises tendencies in natural resource management (Lockie & Higgins, 2007; O’Connor, 1998). Neoliberalisation, or the design and implementation of neoliberalism politically and technically has not so much been about the death of the state, but its contraction to a more effective and powerful centre and its development of new technologies of control that empower certain actors, most notably finance capital, corporations, managers and technocrats process (Peck & Tickell, 2002).

While both the De Angelis (2003) Peck and Tickell (2002) accounts risk treating neoliberalism as singular and monolithic, and in turn overstating its analytical significance at the political and micro levels (Barnett, 2005; Castree, 2008; Larner, 2003; Lewis, 2009), they

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\(^9\) The terms Global North and Global South are used in place of established references to developed or Third World nations so as to better account for ongoing socio-economic and power inequalities between different parts of the world (English, 2005; Kacowicz, 2007).
do point to the rise of governance as something of a neoliberal fix. They also point to the underlying challenge of holding neoliberalism to account for forcibly releasing resources from public ownership and non-private property rights into capitalist social relations. Neoliberalism must also be held to account for the ways in which its agents have responded by building new institutions that enhance state capacities to guide growth, foster neoliberal subjectivities, monitor efficiency, and confront deficits in equity and democracy (Harvey, 1999; Peck & Tickell, 2002). For Peck and Tickell (2002) the ‘roll-out’ moment highlights how neoliberal political agents have responded not only to “absorb or displace crisis tendencies” but to “capitalise upon” the policy failures that they were “complicit in creating”, and to “erode the foundations upon” which critique and resistance might actually be constructed (Peck & Tickell, 2002, p. 400). These agents have built institutions to prop-up, legitimate, and make more efficient, neoliberal solutions through what Jessop (1997a) has described as a shift from ‘government’ to ‘governance’.

What Peck and Tickell (2002) describe as the ‘roll-out’ moment of neoliberalism is often the starting point for contemporary discussions of ‘governance’ as a term used to refer to the diffuse and distanced forms of state agency and control implemented under neoliberalism (Jessop, 1997a; Rhodes, 1997; Swyngedouw, 2005b). State theorist Bob Jessop talks of a shift from ‘government’ to ‘governance’ in response to neoliberal discourses of ‘state failure’ (Jessop, 1997a, p. 574). He points to a “destatization of the political system” in which hierarchical policy-making through bureaucracies has been displaced by new ‘decentralised’ technologies of control and institutional arrangements. These technologies and arrangements allow governments to control through ‘markets’ and contractualised arrangements that align technocratic policy-making within restructured state agencies with displacement of responsibility to private and community organisations (Armitage, de Loë, & Plummer, 2012; Norman & Bakker, 2009; Swyngedouw, 2005b). This ‘governance-beyond-the-state’ is played out at various territorial scales and across various functional domains (Jessop, 1997a), and involves multiple new forms of ‘neoliberal statecraft’ (Peck & Tickell, 2002, 2007). In such debates, governance is used less as a term to refer to the abstract process of governing territories, economies and/or societies, and more as a marker for a particular historical conjuncture of governing rationalities and technologies.

The idea of ‘governance’ described in this way directs attention to the enrolment of diverse actors in political decision-making processes (Jessop, 1998; Rhodes, 1997). Governing ‘with
and through’ complex networks of public and private organisations requires the cultivation of interactions, shared purposes and new modes of co-ordination among multiple agencies and institutions (Rhodes, 2007, p. 1246). While the creation of such networks is a technical process and can work to suppress and obscure power relations, the interests, values and visions of different actors must be balanced, wrapping ‘governance’ into a complex ‘multiply-scaled’ politics, albeit one that is more dispersed, fragmented, and difficult to comprehend than the hierarchical state bureaucracies of social democracy (Rogers & Hall, 2003). Many more actors are involved in more fragmented relations between those governing and their subjects, and the tensions involved pervade both the design and the workings of mechanisms of coordination (Rogers & Hall, 2003). As Jessop (2009) insists, empirical studies must confront both the micro-politics of governance in particular contests between particular agents, and those deeper structural agendas at work.

2.4 From governance to ‘good’ governance

Under the general rubric of neoliberalism, then, the state has fashioned institutional arrangements that mediate and sustain economic growth and address the negative social and environmental effects of lasissez-faire neoliberalism (Lockie & Higgins, 2007). The co-emergence of ‘governance’ as roll-out neoliberalism, and the post-Washington Consensus shift to establishing prior institutional conditions for effective market liberalisation, has seen the concept become caught up in the notion of ‘good governance’ and institutionalised in the work of government and UN agencies. These include inclusiveness, accountability, participation, transparency, predictability and responsiveness (Rogers & Hall, 2003). They are supposed to deliver governance that is moral and efficient according to liberal principles, and to support and balance institutional arrangements, not to constrain development (Rogers & Hall, 2003). When a governing arrangement fails to achieve these aims, its governance will be labelled ‘poor governance’ (Rogers & Hall, 2003).

These ‘good governance’ principles are new forms of steering and governing that require a careful understanding of its mechanisms and its performance (Lockwood, 2010). They are used to create institutional arrangements under which governments can govern in association with non-state agencies, a process understood by advocates as governing collaboratively in a shared decision-making process (Tortajada, 2010). In principle, it is an open assemblage of multi-layered, interrelated interactions rather than a linear or technical process (Rogers,
and in practice it is made messy and uncertain by contradictory value positions and normative concepts (Kooiman & Jentoft, 2009, p. 818). However, arrangements are commonly designed into hierarchical orders in which organisations are charged with implementing preferences and guidelines set by decision makers, even if these involve multiple parties (Hukka et al., 2010). That is, governance networks are nested within institutional arrangements that configure rules and norms, establish procedures, and frame information flows (Ostrom, 1990).

Kooiman (2003) identifies three modes of governance: hierarchical governance, self-governance, and co-governance. According to Kooiman & Bavinck (2005), all modern societies exhibit a combination of these three modes of governance. Hierarchical governance consists of the traditional forms of governance, dominated by governmental top-down command-and-control approaches (Kooiman & Bavinck, 2005). Self-governance represents a condition in which actors take care of themselves independent of any Government (Kooiman & Bavinck, 2005). Co-governance, on the other hand, involves various forms of interaction structured to pursue common objectives, including: collaboration, participation, coordination, private-public partnerships, co-operation and co-management (Kooiman, 2003). These are ideal types, which Jentoft (2007) suggests cannot work in isolation from the others. Instead, all actualised governing structures are a ‘hybrid governance’, configured from a mix of all three modes and involving the state, market and community in governmental practice. Tropp (2007) cuts across these three modes to identify ‘old’ and ‘new’ modes of governance (Table 2.1), which might be seen as traditional hierarchical governance and ‘good governance’.

Table 2.1: A Comparison of old (hierarchical) governance and new (good) governance approaches (Source: Tropp, 2007, p. 25).

<table>
<thead>
<tr>
<th>Old forms of governance</th>
<th>New forms of governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government and bureaucracy</td>
<td>Self-governance and market mechanisms</td>
</tr>
<tr>
<td>Hierarchical control</td>
<td>Horizontal coordination</td>
</tr>
<tr>
<td>Centralised decision-making</td>
<td>Negotiation and partnership</td>
</tr>
<tr>
<td>Formal institutions</td>
<td>Formal and informal institutions</td>
</tr>
<tr>
<td>Political power monopoly</td>
<td>Diversity of actors and diffused power</td>
</tr>
<tr>
<td>Centralised top-down management</td>
<td>Decentralised bottom-up management</td>
</tr>
<tr>
<td>Enforcing rules and regulations</td>
<td>Inter-organisational relations and coordination</td>
</tr>
<tr>
<td>Centralised power</td>
<td>Co-governing (distributed governance)</td>
</tr>
</tbody>
</table>

There exists a literature concerned with the efficiency of any actualised good governance framework (see for example Lockwood & Davidson, 2010; Pahl-Wostl et al., 2010). This
literature tends to treat the governance arrangements as technical and judges their efficacy on whether they delivered on shared objectives, demonstrated levels of participation in decision-making, levels of direction on how to participate and collaborate, and responsiveness to those with interests in the process. Critics of good governance, however, point to both its links to neoliberalism and to how objectives are set and institutions established. They see in its efforts to, and tendencies towards, rendering governance technical, an attempt to take the politics out of inherently political decision-making, thereby supporting the neoliberal architects and beneficiaries of any good governance models (see for example Bevir, 2011; Springer, 2010). They also single out the managerial and other forms of collaborative expertise required to make good governance work, as vested interests.

Critics suggest that politics is deliberately contained within the networks, thereby shielding states or advocates such as the World Bank (WB), International Monetary Fund (IMF) and UNDP from the political contradictions among interests and values, as well as objectives such as sustainability and development, efficiency and democracy, poverty and export-led growth. Where these contradictions cannot be contained, responsibility is assigned to institutional failure, either as the result of poor design or execution (see Rogers & Hall, 2003). For authors such as Ferguson (1990), Büscher (2010), Li (2007) and others, good governance is a quite explicit neoliberal project to depoliticise governance; that is, the ‘anti-political technology’ of governance. Nonetheless, James Ferguson, the originator of the concept of the anti-political machine, has more recently called for critics to seek out the generative potential of such technologies and to ask whether a politics might be practised after all, and whether anything might be rescued from neoliberal technologies (Ferguson, 2011). The intervention echoes those of Barnett (2005), Castree (2008), Lewis (2009) and others, who point to the need to go beyond identifying correlation between governmental change and neoliberalism to finding a new praxis. As Swyngedouw (2005a) suggests, we need to remain attentive to the presence of contest and the possibility of resistance.

Before taking up this critique further by examining ‘good governance’ as a governmental rationality, I look more closely here at five policy discourses that form core dimensions of ‘good governance’: participation, collaboration, co-management, collaborative governance, and co-governance.
2.4.1 Participation

Discourses of good governance, and governance models constructed in their name, have become based on enhanced participation in decision-making. Commentators from Ostrom to the UNDP and national environmental ministers celebrate participatory governance, especially in matters of environmental management or community development (Buchy & Hoverman, 2000; Newig & Fritsch, 2009). It is also understood as giving voice to multiple groups, especially the otherwise marginalised, and thus as ‘empowerment’ and a normative goal in and of itself (Gibson & Woolcock, 2008). For theorists of deliberative democracy, which Parkinson (2006) refers to as ‘reasoning between people’, participation involves a greater number and variety of voices, diverse expertise, and greater responsibility and commitment. It implies that citizens are ready and willing to give up or compromise where there are competing interests or preferences involved in the decision-making process (Parkinson, 2006). All this, it is suggested, will result in more effective and creative debates about decisions, ‘re-common’ decision-making, and result in better accommodations and compromises from negotiations over contradictory arguments and positions (see Adger, Brown, & Tompkins, 2005; Ostrom, 2010).

More instrumentally for governments, participation is argued to foster commitments to decisions, and create ‘ownership’ of them, and thus to lead to social acceptability, enhanced public support for new rules and policies, and thereby increased likelihood of political implementation, and ultimately promotes better outcomes (Lachapelle & McCool, 2005). When these different claims are put together, it is efficient, moral, legitimate, and effective; its logics are unassailable, and anticipation is expected to yield higher quality outcomes in decision-making (Reed, 2008). Public participation is increasingly seen as pivotal to legitimate environmental decision-making (Head, 2007; Newig & Fritsch, 2009; Reed, 2008; Rogers & Hall, 2003), with its authority established in Principle 10 of the Rio Declaration:

Environmental processes are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities (…) and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available (UNED, 1992, Principle 10).
Participation is inevitably entangled in programmes of decentralisation (Head, 2007), which seek to enhance the efficiency of public goods and services provided from a centralised government (e.g. water supply, infrastructure, the development of management plans, and providing services). The idea is that removing decision-making from a concentrated central location and transferring it to a local level where the interests in and effects of decisions are more immediate and keenly felt, will improve the efficiency, responsiveness and effectiveness of decision-making. Participation in localised decision-making will bring self-interest to bear on more effective decisions (Bryson, Quick, Slotterback, & Crosby, 2013). It offers a model for implementing decentralisation in which administrative functions and responsibility are transferred to local actors who are arguably in a better position to deal with local conditions more effectively; one into which market mechanisms can be readily grafted (Ingram, 2012). The conceptual and empirical challenge is to ensure that such claims are not made empty by failing to localise authority, control, and access to the financial and other resources necessary to make localisation work for local communities; or by asking the market to do too much work (Bakker, 2007; Bruns, 2003; Ingram, 2012).

Participatory approaches, then, stem from the turn to governance of roll-out neoliberalism (especially the formation of local and regional plans), discourses of sustainable development such as the Rio Declaration, and the economic and community emphases of the post-Washington consensus (Buchy & Hoverman, 2000; Furlong, 2010; Larner & Craig, 2005; Rahaman & Varis, 2005; Ruckert, 2006). Each appeals to democratization in terms of equity, as well as voice and access by involving communities in governance. While appealing to notions of deliberative democracy, however, participation in neoliberal governmental practice has been seen by critics as reducing towards stakeholder participation or efforts to open decision-making processes to those with direct interests (or their representatives) (Cooke & Kothari, 2001; Rydin & Pennington, 2000). The figure of the ‘stakeholder’ is crucial in the roll-out moment of neoliberalism, because stakeholders are expected to, and can be relied upon to pursue their own interests (Fletcher, 2010). This legitimates neoliberalism in its own terms, while involving them, also legitimates new governance arrangements more broadly by appearing to democratise them. That is, as well as holding stakes in the issue at hand, stakeholders share stakes in the particular systems of governance under design with the architects of those systems (Swyngedouw, 2005b).
Others suggest the notion of public participation is virtually impossible to define in practice (Davies & White, 2012; Neef, 2009; Sneddon & Fox, 2007), while communities are almost inevitably frustrated by the restricted level of empowerment it actually delivers (Buchy & Hoverman, 2000). This sets up irreconcilable tensions between communities and government agencies. These are intensified because while government may wish to off-load responsibility, they rarely want to relinquish control (Buchy & Hoverman, 2000). Rather than delivering deliberative democracy or the empowerment of marginalised groups, public participation can “hide and perpetuate deep socio-political inequities” (Perkins, 2011, p. 205). Some argue that the ‘real’ rationale for participatory approaches is that they offer an alternative to traditional top-down models, but because it fosters myths of empowerment and commitments to the decisions made, and provides labour for development projects (Cooke & Kothari, 2001; Kapoor, 2008). The literature tends to concur that sufficient authority and resources are rarely transferred to local scales and participatory models in practice, to judge their effectiveness (Cooke & Kothari, 2001; Kääkönen & Hirsch, 2009; Mansuri & Rao, 2004). Concepts such as participation, community, empowerment, and capacity building frustrate and escape efforts to translate them into effective new planning frameworks in complex grounded political, environmental and economic contexts (Mansuri & Rao, 2004). Despite the advocacy of a participatory approach for many organisations, there is a risk that it will be captured as ‘a type of development-driven participation that can contribute to the de-politicization of knowledge in support of a particular governance agenda” (Kääkönen & Hirsch, 2009, p. 334). Participation may not always generate a participatory or deliberative democracy, and fair decision-making, but may result in more, rather than less government overall (Agrawal, 2005; Lamb, 2012).

2.4.2 Collaboration

Participation is a necessary but not sufficient precondition for collaboration. Collaboration does not necessarily follow from participation, and neither does co-management or co-governance (Davies & White, 2012). Collaboration involves different responsibilities and expectations, and must extend to a high degree of interaction, communication, mutual responsibility and trust building (Davies & White, 2012). Public participation is a particular form of governance, but is often seen as a means to achieve collaboration even if it does not guarantee participation. For Davies and White (2012) collaboration is three steps along a
continuum of participatory ethics and practices and related commitments running from informing different publics to empowerment. Collaboration involves an ethos and formal institutions of partnership, the identification and formalisation of advisory roles, and commitments to accept advice. It is more of a partnership than commitments to inform, but stops short of full empowerment in the form of commitments to accept and implement community-based decisions, elicit feedback in the form of consultation, or incorporating community views into alternatives for consideration in decision-making (Davies & White, 2012). Collaboration involves techniques such as consensus building, the formation of citizen advisory committees, or the incorporation of community participants into decision-making bodies. These practices go beyond consultative workshops, the delivery of public commentaries, focus groups, or the production of fact sheets.

Little systematic research has been conducted on collaborative partnerships and how they might best be sustained, but this research does suggest that collaboration cannot be assumed to arise spontaneously (Ferreyra & Beard, 2007). Rather, it needs to be worked at by involving appropriate partners in designing institutions, setting clear targets for specific outcomes (Ferreyra & Beard, 2007), and incorporating different knowledges (Davies & White, 2012). Collaborative governance, then, establishes ethics, institutions, and practices that assign community participants authority, capacity, and resources to establish their capability to influence decisions directly in a regulatory environment (Davies & White, 2012), where capability is seen as collective capacity (see Le Heron et al., 2011).

Collaboration has been institutionalised into collaborative governance, co-management and co-governance regimes in which community actors take on roles in decision-making processes alongside formal governmental agencies. These regimes represent moves towards more decentralised, deliberative, and shared decision-making (see Figure 2.1), but do not progress along a simple and stable axis of less to more ‘co’-ness. In certain accounts or applied circumstances, for example, co-management is the most participatory of processes, affording a devolution of control to multiple parties in on-going, everyday co-decision-making practices under terms agreed in higher order structures of co-governance. On the other hand, it might simply refer to co-management of certain applied matters, with no shared decision-making about structural matters and no co-governance. Collaborative governance might involve multiple parties in governmental questions, but with little participation in management decisions. Devolution implies a relocation of control to local levels, but has in
practice often collapsed to a decentralisation of certain functions to localised and lower levels of the hierarchy, and not necessarily reliant on collaboration.

**Figure 2.1:** Discourses and possible Regimes of co-governance (Adopted from Davies & White, 2012, p. 162).

### 2.4.3 Devolution (decentralisation)

Each of these expressions of co-governance builds on an underlying decentralisation of central functions to yield more or less collaborative or inclusive governance involving local non-state actors. Decentralisation, which has been widely advocated in roll-out neoliberal policy programmes, as well as those based on various democratisation agendas, involves a deliberate relocation of decision-making powers and management responsibilities from centralised institutional settings to the local level (Newig & Fritsch, 2009; Ribot, 2002). This is argued to allow decision-making to deal more effectively with the urgencies and immediacies of local contexts and to contend with the values, perceptions, and worldviews of different individuals within the community (Booher, 2004). To realise this potential, the state must not only develop new organisational structures, but must create the capability to implement and make these forms work (Kettl, 2002). That is, it must resource the new structures in the form of financial resources, access to expertise, and genuine devolution of powers. It must also rethink the spatialities of constituency, rights, and responsibilities embedded in the spatial forms of existing administrative hierarchies (Booher, 2004).
Lemos and Agrawal (2006) contend that effective decentralised governance requires three shifts in the organisation of relations among actors and their relationship with resources: relocation of responsibility geographically and functionally from central authorities to localised levels; new relationships between local decision makers and their constituents; and new relationships among actors, and between them and their environments. The second and third of these aspects require broader thinking than simply organisational design, and more complex societal engagement and institutional change. They are less a case of technical bureaucratic redesign, and more questions of socio-political change; and they take us towards deeper conceptions of co-governance (Lemos & Agrawal, 2006).

2.4.4 Co-management

Here ‘stakeholder participation’ extends towards inventing new institutionalised arrangements that formalise shared decision-making (Berkes, 2009). The concept of ‘co-management’ recognises that individuals and groups whose livelihoods are affected by management decisions should have the opportunity to contribute meaningfully to daily, and more strategic decision-making. It builds upon an important distinction between governance and management in organisational and state theory (Hood, 1995). In the water governance literature, commentators distinguish between ‘water resource management’ and ‘water governance’ (Lautze, de Silva, Giordano, & Sanford, 2011; Lockwood, 2010). Water management refers to the day-to-day operational responsibilities exercised through planning, monitoring, and management techniques in order to promote the sustainable use of water resources. On the other hand, governance is associated with decision-making and institutions that define management objectives (Lautze et al., 2011). Here, ‘water governance’ overarches ‘water management’ in the sense that it provides a framework and drives water management to ‘implement’ predefined goals. Significantly, critics argue that traditional, centralised bureaucracies bound the roles of multiple actors, defined management activities, and reinforced the distinction between management and governance from above – even if managers ‘captured’ governance activities (Blomquist & Schlager, 2005).

‘Co-management’ presupposes commitments to equity, justice and empowerment and the design of institutions and practices that deliver them (Berkes, 2009). It involves “the sharing of power and responsibility between the government and local resource users”, and a negotiation and recognition of rights in this regard (Berkes et al., 1991, p. 12). While often
still locked in the roll-out neoliberal language of stakeholding, co-management is “as a middle course between pure state management and pure communal property” (da Silva, 2004, pp. 419-420).

Discourses of co-management have become critical in negotiating resource management with indigenous peoples (Natcher et al., 2005). By working away from decentralising decision-making and inviting participation as baseline practices, co-management approaches can be used to involve indigenous people meaningfully in natural resource management (da Silva, 2004). For Stevenson (2006) co-management in such a context calls for new models of integrating local and state administration; it cannot be grafted onto existing models. In this away it appeals politically to indigenous peoples who argue for major administrative and even executive and constitutional reform.

The challenge in practice, however, is to overturn the terms and conditions of participatory governance under which local peoples must contribute and integrate their values and knowledge, which are usually set by agencies and informed by “bureaucratic behaviours, relationships, approaches and institutional structures modelled after the state” (Stevenson, 2006, p. 171). In general terms, equity, cultural sustainability, and self-determination are subordinated to functional values, efficiency, and the exercise of technical skills (Berkes et al., 1991; Howitt, 2012). An effective co-management regime must establish institutional arrangements that secure, not just dialogue among cultural values, but power sharing between resource users and the state (Ross et al., 2009). In the case of water, concerns with access for survival, economic use, leisure, and cultural values, must be connected to different economic and cultural values, self-determination, and shifting dynamics among all of these values/uses (Fritz, Kaiser, & Levy, 2009; Ingram & Schneider, 1998).

Getting co-management wrong may not only inflame existing conflicts with unrealised expectations, but raise new and unanticipated expectations or cause old conflicts to reappear (Castro & Nielsen, 2001). Co-management must be taken seriously and properly designed to ensure that devolution of responsibility comes with the devolution of rights (Adger et al., 2005). It needs to be considered as part of a wider regime of co-governance.
2.4.5 Collaborative governance

There is a large and growing body of literature (Hüesker & Moss, 2015; Huitema & Meijerink, 2014; Margerum & Robinson, 2015) which advocates for the extension of principles and practices of collaboration into a regime of ‘collaborative governance’. Ansell and Gash (2008, p. 544) define collaborative governance as:

A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets.

While public agencies are usually the initiators of collaborative governance in a public management, the aim is to facilitate participation by non-state actors (Ansell & Gash, 2008). Collaborative governance is claimed to be more responsive than non-collaborative forms of governance, and thus able to tackle/solve complex situations, ultimately producing more flexible and efficient policies (Purdy, 2012). Collaborative governance encourages participation and engagement at ‘all’ stages of the policy and planning process (Bingham, 2009; Yu, Brown, & Morison, 2011), including problem identification, priority setting, implementation, and enforcement; and in relation to decision-making, at a variety of scales (Somerville & Haines, 2008).

Head (2007) produces a matrix of potential types of ‘co’ governance based on different relations of integration (cooperation, coordination, and collaboration) (Table 2.2). Each ‘integration relationship’ is examined in relation to duration, aspirations, formalisation and risk/reward to define a particular bundle of governance relations. Each pursues ‘reciprocal communication’ between stakeholders and organisations, but the matrix highlights how these vary significantly in application and the way in which they are integrated into wider institutional structures (Head, 2007).
Collaborative governance then, includes and promotes ‘voice’, collaboration, coordination, and integration in decision-making. However, while a necessary condition for inclusion in decision-making and power sharing, this is not sufficient (Kooiman & Jentoft, 2009). According to Ackerman (2004, p. 457) both ‘government transparency’ and ‘institutional design’ are important factors to consider for creating participatory institutions that promise active involvement of the most marginalised groups (Ackerman, 2004). That is, greater democratisation of state and civil society brings citizens closer to the state (Somerville & Haines, 2008). Collaborative governance processes need to engage with political and economic processes. In practice, then, collaborative governance takes many different forms as its designers grapple with how to build engagement into decision-making. However, as Ansell and Gash (2008, p. 544) observe, researchers have tended to examine collaborative governance as a ‘species’ rather than a ‘genus’. Different forms in practice are not well documented.

Freeman (2000, p. 4) argues that the reality of public–private interdependence is best perceived as a set of negotiated relationships where “public and private actors negotiate over policy making, implementation, and enforcement.” Without shared knowledge and clear

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Duration</th>
<th>Goals/Perspectives</th>
<th>Structural Linkages</th>
<th>Formality</th>
<th>Risks/Rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>Short</td>
<td>Independent outcomes. Participation organisation is autonomous</td>
<td>Loose and flexible links</td>
<td>Informal</td>
<td>Low risk/small rewards</td>
</tr>
<tr>
<td>Coordination</td>
<td>Medium</td>
<td>Joint planning. Members remains autonomous</td>
<td>Some level of stability of members. Medium links and often central hub</td>
<td>Formal</td>
<td>Increase in benefits and risk to certain point</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Longer</td>
<td>New system and operation. Power sharing is highly interdependent</td>
<td>Members move outside traditional functional areas. Steady links</td>
<td>Formal</td>
<td>High risk/high rewards</td>
</tr>
</tbody>
</table>

Table 2.2: Networked Forms (Sources: Brown & Keast, 2003, p. 123; Head, 2007, p. 451).
institutions for sharing power, however, a logic of participation based on stakeholding can lock principles, practices and institutions of collaborative governance into competitive rather than collaborative relations. Armitage et al. (2012) suggest that in order to be meaningful, a collaborative approach needs to be capable of overcoming institutional challenges that will always emerge from power differences amongst participants or competitive processes (Ostrom & Basurto, 2011). More empowering decision-making frameworks will begin by focusing on such structural imbalances as well as values.

2.4.6 Co-governance
Collective decision-making organised around adversarial politics and institutions that undermine ethics of collaboration and participation, may diminish its potential to empower others and its efficiency (Booher, 2004). Two closely related distinctions must be drawn here with respect to differentiate co-governance from collaborative governance and co-management. Firstly, co-management refers to ‘decision-making power’ and ‘responsibilities’ whereas co-governance entails ‘control’ and ‘authority’ over the decision-making entity (Dodson, 2014). Just as partnerships are about the establishment of co-governance/co-management, while participation is about stakeholding (Dodson, 2014), the crucial distinction is the depth of collaboration and sharing of control. Thus, secondly, if co-governance is to alter ‘the processes and structures of public policy decision-making and management’ to engage publics in carrying out a ‘public purpose that could not otherwise be accomplished’ (Emerson, Nabatchi, & Balogh, 2012, p. 2), then it is crucial to ask what that purpose actually is. If it is to share power or involve the marginalised, then more is required than stakeholding or changing the structure of competition.

With reference to Habermas’s theory of communicative rationality (Habermas, 1984), Connick and Innes (2003) advocate for deeper collaborative dialogue as a foundation for co-governance, one that they see as being formed as part of consensus-building. In a study of three cases of water policy formation in California, they identify a set of criteria for ‘best’ practice in collaborative dialogue and a checklist for fostering more sophisticated forms of collaborative policy making. These, they claim, have the potential to significantly alter policy-making and day-to-day management decisions (see Table 2.3).
Table 2.3: Best practice criteria for collaborative dialogue and policy making (Source: Connick & Innes, 2003, pp. 180-181).

<table>
<thead>
<tr>
<th>Process criteria for collaborative dialogue</th>
<th>Checklist for collaborative policy making</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Includes representatives of all relevant interests</td>
<td>• Social and political capital</td>
</tr>
<tr>
<td>• Is driven by a practical purpose and task shared in the group</td>
<td>• Agreed-on information and shared understanding</td>
</tr>
<tr>
<td>• Is self-organizing</td>
<td>• End to stalemate</td>
</tr>
<tr>
<td>• Is engaging to participants as they learn and interact</td>
<td>• High-quality agreements</td>
</tr>
<tr>
<td>• Encourages critical analysis of assumptions and fosters creativity</td>
<td>• Learning and change beyond the original stakeholders</td>
</tr>
<tr>
<td>• Incorporates many kinds of high-quality information</td>
<td>• Innovation</td>
</tr>
<tr>
<td>• Seeks consensus only after discussions have fully explored issues and interests and after significant effort has been made to find creative responses to difference</td>
<td>• A cascade of changes in attitudes, behaviours and actions</td>
</tr>
<tr>
<td></td>
<td>• Institutions and practices that involve flexibility and networks</td>
</tr>
</tbody>
</table>

This takes us away from stakeholding to a discussion of how to break down and flatten power relations. Decentralisation, co-management, and collaborative governance all propose moves to formalise participation and collaboration, and a more decentralised, deliberative, and shared decision-making. Each can be positioned on axes of devolutionary extent, levels of participation, power-sharing commitment, and reach across geographical scales and organisational function. While they overlap, and are at some level co-constitutive, and thus difficult to position relative to each other on these axes, each imagines a new mode of governance that configures participation, collaboration, institutional design, and power sharing in a particular way. Each of these modes of co-governance seeks to govern interactions among actors through negotiation, communication, collaboration, and co-operation rather than command and hierarchy (Kooiman, 2003). They are horizontal models and seek to govern to a greater or lesser extent through that which co-operating actors hold ‘in common’, rather than imposed ideology.

Sitting at the apex of ‘co-ness’, co-governance takes seriously the potential for such ‘commoning’ to fracture power relations and asymmetries and inappropriate ‘wills to power’ (see Foucault, 1982). Co-governance imagines a governance beyond stakeholding, and trading-off among competing interests, and where sovereignty is multiple, but not a necessarily a post-political world where there are no interests and no contest. Actors will have
to negotiate through their own ‘autonomy’, ‘identity’ and values, but decision-making will take place with reference to a shared purpose that is negotiated by multiple parties. Each of the other modes of co-governance, by contrast, continues to rely on consultation, stakeholder negotiation, accommodation, and imperfect forms of consensus. It is significant that ‘co-governance,’ as a distinct apex form, has emerged from development debates in the Global South; and restorative justice projects and negotiations over sovereignty with indigenous populations in the Global North, where questions of power, rights, and sovereignty are so central.

Drawing on this development studies tradition, Ackerman (2004, p. 447) suggests that co-governance ‘involves inviting social actors to participate in the core activities of the state’ and that collaborative governance needs ‘to open itself up to full “co-governance” with the citizenry at large’. For Ackerman (2004) the crucial next step is to recognise ‘accountability’ as the public purpose of co-governance, but accountability is understood in terms of ethics responsibility and social contract rather than stakeholding, contractualised delivery, or market disciplines. In these terms, co-governance does not imply a diminution of state responsibility or engagement. Indeed, he argues that deepening relations between the state and its publics “is the central idea of “co-governance” as a concept. If institutions are properly designed, a virtuous cycle that reinforces both state and society is possible” (Ackerman, 2004, p. 458).

In Jessop (2009, p. 81) terms, what is at stake is not just the shift from ‘command’ (‘a substantive and goal-oriented mechanism for securing given collective goals’) to ‘dialogue’ (‘a reflexive and procedural mechanism to secure negotiated consent about interdependent goals’) in the exercise of governance (i.e. from hierarchy to collaborative governance), but a further shift to ‘solidarity’, which ‘involves an unreflexive substantive commitment to provide support’. Not surprisingly, then, as with co-management, co-governance has emerged from efforts to re-empower indigenous populations in the Global North as well as from debates about development in the Global South, discourses of democratisation of knowledge and governance in the North, and ‘roll-out neoliberal’ efforts to disperse responsibility everywhere. As a concept, co-governance tends to imply and anticipate formal commitments to power sharing; while collaborative governance on the other hand tends to be used more in roll-out neoliberalism inflected by interests in the efficacy of co-producing knowledge, mandates, and solutions with stakeholders. That is, it is about wider questions of sovereignty than just rights to participate more or less equally in applied resource management.
2.4.7 Co-ness as ‘Good governance’

Each of these policy discourses, which have been more or less implemented in different settings, constitutes part of the discursive formation of ‘good governance’. In the section that follows, I talk more generally of these policy discourses as ‘good governance’ to suggest that taken together and understood as seeking to impose governance and extract the social, economic and political benefits of participation and collaboration, they form a governmentality juxtaposed against the market liberalism and laissez faire of roll-back neoliberalism. This is very much how these discourses and related decision-framing and decision-making technologies have been understood in the language of the post-Washington consensus. It is important, however, to issue the caveat that, understood in emancipatory terms, co-governance escapes much of the critique of ‘good governance’ by seeking to transcend discourses of stakeholding – a point to which I return below.

2.5 Good governance as governmentality

Despite the ‘hollowing out’ of the nation-state, Norman and Bakker (2009) argue that decision-making has not increased significantly at the local scale under governance or co-governance. The literature raises doubts about both the empirical record and the efficiency and democratic potential of participatory and collaborative governance (Armstrong & Bernstein, 2008; Berkes, 2009; Swyngedouw, 2005b). It questions the way that diverse actors exercise power in collaborative governance processes and how this affects final allocative and efficiency outcomes (Buchy & Hoverman, 2000; Buchy & Race, 2001). Head (2007) and Huxham, Vangen, Huxham, and Eden (2000) suggest that collaborative governance is used by governments to deliver policy at lower cost and with less responsibility, and with the added benefit of the enhanced legitimacy attributed by participatory democracy. They argue that government has continued to control.

For some, this is because co-governance regimes have been poorly designed or implemented, or somehow stalled in collaborative modes. Huxham et al. (2000), for example point to the frequency and extent to which priorities and settings are imposed prior to collaboration, and in legal/regulatory frameworks for the practice of co-governance. This not only tends to be undemocratic, in the sense that it gives those actors involved at the beginning an opportunity to design the partnerships in a manner that suits them, and to ensure their own widespread participation, but also tends to lock participation into government agendas. Collaboration and
consensual governance are compromised, although this does not have to be the case and others point to how co-governance might be designed and implemented otherwise, and offer opportunities for a wide range of participants to become involved in setting priorities (Birkenholtz, 2009). Agrawal (2005) for example, describes a case in which the forest-dependent community in India initially followed conservation objectives established by the state, yet went on later to enthusiastically restructure their environmental activities, and set their own objectives as their own targets (Birkenholtz, 2009).

For others, however, there is something more fundamental in the governmental rationality of collaborative governance that shapes its democratic possibilities. Following Nikolas Rose (1996), and others, Jessop (2009, p. 81) draws on Foucauldian notions of ‘governmentality’ to insist that the turn to governance represents a systematic shift in governmental technologies. Foucault (1991) uses the term ‘governmentality’ to connect the practice of governing (the governmental) to the modes of thought (rationalities) that underpin them, and the exercise and mechanisms of power, without examining the political rationality behind them. This allows for an approach that questions how and why expert knowledge is mobilised in the design of new technologies of governance, and thus in how individuals should conduct themselves (Neale, 1997). Governmentality directs attention to the “complex relationship between thought and government” (Larner & Walters, 2004, p. 2); and thus to the ‘how’ of government (a certain way of thinking and acting) that attempts to know and oversee the exercise of power within modern society (Larner, 2003; Lemke, 2002; Rose & Miller, 1992).

The term draws on Foucault’s definition of ‘government’ as a form of power juxtaposed with the ‘principle of sovereignty’ (Lemke, 2002). The purpose of government was not to act as sovereign, but instead to rule by maximising the welfare of its citizens (Sending & Neumann, 2006). As Foucault (1991, p. 95) observed “With government it is a question not of imposing law on men, but of disposing things; that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics to arrange things in such a way that, through a certain number of means, such and such ends may be achieved” (quoted in Sending & Neumann, 2006, p. 656). That is, rather than disciplining, punishing, or demonstrating through spectacle, government is dependent on governmental practices, discourses, and rationalities, which have become the main foundation of modern political programming (Rose, O'Malley, & Valverde, 2006). For Foucault, power is immanent in this exercise of government— it is everywhere and emerges in its exercise. Government takes the form of ‘the
conduct of conduct’, employing strategies to organise and direct individual behaviour towards specific directions (Sending & Neumann, 2006, p. 656). Foucault considers governmentality to be the ‘art of government’, in which the state mobilises and configures institutions, bureaucracies, expertise, knowledge, and governance techniques to underpin political programming (Rose et al., 2006). It refers to the “ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power” (Foucault 1979, p. 20 quoted in Rose et al., 2006, p. 6).

Governmentality analyses draw attention to the representations, knowledge, expertise, technologies, instruments, and tactics of conducting the process of policy making and implementation (Bevir, 2010; Jessop, 1998, 2001; Lagendijk, van Tiggelen, & Wiersma, 2009). They seek to identify and critique the ‘political knowledge’ or rationalities put to work in government as much as the “relation between practices and rationalities” (Lemke, 2002, pp. 54-55), how legitimation takes place and how knowledge becomes rationalised in a form of guidance in contexts of agency, resistance and subversion. Lemke (2002, p. 55) suggests that the notion of governmentality seeks to uncover how ‘politics of truth’ produce new forms of knowledge that contribute to new modes of steering and intervention (Lemke, 2002). Such truths, their experts and the institutions that secure them, shape self-regulating individuals who are actively involved in their own self-government (Neale, 1997).

Foucault used the idea to examine how the modern state applied specific political rationalities to secure and strengthen its powers and accomplish its goals (Rutland & Aylett, 2008). Governmentality analysts and critics of neoliberal governmentalties have explored how neoliberalism has been achieved through government discourse and technologies of control (Lewis, 2015); or by what Peck and Tickell (2002) call neoliberal statecraft. Both Jessop (2009) and Swyngedouw (2005b) use the term to examine the reworking of interactions between state and civil society in the shift from government to governance. In this sense the hierarchy of institutional centralization around ‘The Government’ is displaced by new forms, and spatialisations of power such as co-governance, and by the intensification of the effects of power at the community level, and for individuals (individual and collective subjectivity) (Darier, 1996). If rationalities are ways of thinking that require a clear understanding of “how things are and how they ought to be” (Lockwood & Davidson, 2010, p. 391), they consist of
sets of values that shape formulating rules and norms, and help to direct their implementation (Lockwood & Davidson, 2010).

The emergence of concepts such as participation and collaboration, therefore, must be seen against the backdrop of neoliberalism, most notably marketization, privatisation, and the ‘hollowing out’ of the nation state (Brenner, Peck, & Theodore, 2010; Jessop, 2007; Larner & Craig, 2005; Newman, Barnes, Sullivan, & Knops, 2004). This is not to reduce neoliberalism to a universal, homogenising and totalising force, or one that displaces the state as a source and site of governance. As Larner (2003, p. 512) observes, care should be taken to “avoid treating neoliberalism as a hegemonic monolith”. Rather, it is to recognise and appreciate how different types of policies and institutional arrangements function under the rubric of neoliberalisation (Castree, 2005), but also that the state “plays a pivotal and often autocratic role” in imposing this new form of governance (Swyngedouw, 2005b, p. 1999). Within the shift from ‘government’ to ‘governance’, the state still establishes the terms and assumes pivotal roles for state agencies, but divests itself of certain risks and responsibilities in return for commitments to collaborate with civil society and private organisations across various levels of decision-making (Newman et al., 2004).

That is, the governmental logic behind the shift to collaborative governance is associated less with a devolution of control from the state to non-state actors and associated commitments to greater efficiency and participatory governance, but more with a dispersal of responsibility (McKee, 2009; Newman et al., 2004). By relocating governmental practices to dispersed and diverse sites beyond the state apparatus, collaborative governance not only operates on prior material, social, and discursive relations (objects of government), but helps to co-constitute them. Co-governance repositions citizens (understood as communities) from being passive objects of government, to being active ‘objects’ and even ‘subjects’ of government (Sending & Neumann, 2006). Roll-out neoliberal (or ‘after neoliberal’) states built collaborative governance institutions to govern through responsibilized citizens (Larner & Craig, 2005; Larner, Le Heron, & Lewis, 2007). Collaborative governance is a form of ‘governance-beyond-the-state’, and uses institutional arrangements to make individuals and civil society groups responsible in the process of collective rule-setting, but does not give them meaningful control (Swyngedouw, 2005b). They even created their own subject of government (the community), exercising political power through institutions that shape individual behaviour under its name (Neale, 1997).
Inequality, inequity and power not only emerge from institutions, norms, and governmental logics and structures, they are designed ‘by’ and ‘into’ them and designed to be exercised through them (Lockwood & Davidson, 2010). This is a reflection on power and governance that is largely absent in the applied water governance literature (Birkenholtz, 2015; Sending & Neumann, 2006), but is a fundamental insight of the political, sociological and geographical literature that critiques neoliberalism. Investigations of governance require an understanding of how different regimes achieve government or rule through creating governing objects and subjects (Jessop, 2009). As Forster (2013, p. 11) observes in the New Zealand context, citing Rose et al. (2006, p. 85) working with the concept of governmentality directs attention to a simple set of questions: “Who governs what? According to what logics? With what techniques? Towards what ends?”

2.6 Relocating geographies of power in water governance

2.6.1 Water governance as a field of power

Power is a difficult theoretical concept. We do not have any direct access to it as an empirical phenomenon, but instead our understanding comes from the theoretical consideration of it (Holler & Nurmi, 2011). In fact, we know very little about power, despite on-going debates over its conceptual forms (Allen, 2004, 2009, 2011; Bachrach & Baratz, 1962; Dahl, 1957; Dean, 1999; Flyvbjerg, 1998; Foucault, 1979; Haugaard, 1997, 2010; Lukes, 2005; Polsby, 1963; Weber, 1947). It takes many forms that are often collapsed in discussion: domination, force, influence, control or manipulation (Haugaard, 2010). Efforts to analyse power are even more diverse (Arts & Tatenhove, 2004). While some observe power as control over, within organisational terms (resources, rules and bargaining, others consider power in terms of achieving outcomes or relational power (Arts & Tatenhove, 2004, p. 346). Some see power as dispositional (such as money, personnel, weapons, knowledge, reputation and prestige), whilst others refer to power as a social and collective integration (Arts & Tatenhove, 2004, p. 347). Understandings of power in the governance literature have become more sophisticated in recent times, largely by exploring the challenge posed by Foucault to more entrenched understandings of power as a stock, a capacity to dominate, or negative force that suppresses freedom (Allen, 2004).

For Foucault, power exists as a relation that takes form in its contested exercise; it is more or less immanent, more or less relational and more or less constructive (Allen, 2004; Foucault,
1982). Foucault turns his attention to technologies of power rather than power per se, and the co-constitutive relationship between power and knowledge in any social relation (Jessop, 2007). For geographer John Allen, power is also relational, but it is topological and a question of reach across space rather than hierarchy. He argues that “power does not radiate out from any given centre, as much as runs along the length and breadth of a network” (Allen, 2009, p. 203). Instead, Allen (2011) argues that by viewing power that is everywhere, we have lost sight of the ‘particularities’ of power and the variety of modalities of power that affect how we experience power and how we position power within our place. Power relations are constructed in the process of mobilising resources across networks of interactions (Allen, 2009) and thus tied to governmentality and subject formation as much as (initial) stocks of financial, ideological, or political capability to control.

Water governance can be understood as a field of power in these terms, a field in which actors struggle to gain and secure access to water. Collaborative governance regimes rework these struggles, and impose a different governmentality, but they do so in more than merely technical terms. They are wrapped in a politics of control – the state no longer has the will or capability to resolve such struggles itself, or to embroil itself in the minutiae necessary to do so in each and every case. Rather than using hierarchical technologies, it does so at a distance, geographically, technically, and politically. This politics is in turn wrapped in a normative discourse of devolution, participation, efficiency, immediacy, and community control, which redistributes ‘power’ (or at least the regulation of struggles over access to water) from state to civil society agencies (Carr, 2004; Simpson & de Loë, 2011). In the work of the United Nation agencies, collaborative governance has been known as ‘good governance’.

‘Good water governance’ aims to allow for actors with different values and interests to contest their positions. However, good governance can never be imposed in a power vacuum. Rather, processes are planned and initiated in the context of a highly dynamic ‘power infrastructure’ in which certain actors and knowledge are included and empowered, and others are excluded (Huxham, 2003). The relations that hold this together, however, are constantly shifting. Planning, initiating, funding, implementing and guiding new arrangements are all different and contested moments in this dynamic (Huxham, 2003). What shakes out is unlikely to be what was intended, or any purist expression of the exercise of power held by one actor or another. Rather, it is more likely to express ‘power as an effect of dispersed socio-natural relations’(Ekers & Loftus, 2008, p. 709). In water, state agencies remain central in connecting water as a socio-natural construct to water as resource and water
as a necessity for life, such that these relations tend to be built around: the connection between a state's functional power and the mechanisms of providing services for day-to-day life; the relationship between state powers and practices and knowledge that shape everyday rules; and the state as an organisation that establishes authorities and shapes water governance institutions (Ekers & Loftus, 2008, p. 703).

In the New Zealand context, this field of power relations is further complicated by Māori claims to sovereignty (see Chapter Four), and to the right to exercise ‘power over’ territory and natural resources and their allocation. This establishes a different field of struggle (see Bargh & Otter, 2009; Barrett & Strongman, 2013; Elizabeth & Larner, 2009; Forster, 2013; Waldron, 2005). While qualified by certain cultural principles and protocols, including environmental guardianship and commitments to rivers as ‘beings’, Tino Rangatiratanga is a claim to power related to values, rather than to establishing technologies for on-going struggles over access. It invokes conceptions of sovereignty and population that do not reduce easily to Foucault’s genealogy of western power. Co-governance with Māori brings collaborative governance governmentalities into relation with tino rangatiratanga. This theme will be taken up in later chapters. The point to be made here is that collaborative governance comes with political rationalities and connections to particular conceptions of rule and social life – it is a governmental rationality.

2.6.2 Making water governable

In short, water resource management in New Zealand, as well as elsewhere, must offer a legitimate and pragmatic framework for regulating this field of power, one that delivers and secures equitable and democratic use of resources. The challenge is to develop regulatory frameworks and institutions that clarify rights of access to water under different conditions, secure water quality, stimulate efficient use of water resources, and formalise decision-making processes (da Cunha, 2009). Booher and Innes (2010, p. 2) suggest that in contemporary times these challenges are exacerbated by “uncertainty and complexity, fragmentation and diversity, interdependence, and new spaces for decision-making”. The challenge of making water governable is made tougher still by the need to bring together a normative and an analytical perspective in shaping governance frameworks, confronting multiple social and cultural values, and guiding decision-making (Sehring, 2009). Water governance will always be political.
Contemporary responses have seen water governance transformed from a top down government approach to a governance approach. Collaborative water governance has been widely advocated internationally as an approach to water management that engages multiple stakeholders, and establishes institutions that bring them together to set water management plans and policies across jurisdictional and administrative boundaries (Ghose, 2005; Huijtema et al., 2009; Tropp, 2007). It is also argued to address three particular problems of governance when it comes to water – jurisdictional boundaries that cut across water catchments and the hydrological materialities of water’s behaviour, multiple and conflicting values associated with water’s centrality to life, and the relationships between water and land use. Water systems are multi-scalar, fluid and generate myriad functional values (life, income, cultural values, security, self-determination and many more) (Bakker, 2003; Ingram & Schneider, 1998). Collaborative approaches have been argued to establish principles, protocols and practices (institutions) for bringing actors together, and facilitating integrated water management in the form of watershed and catchment management across administrative and jurisdictional boundaries (Benham, Hussey, & Beavis, 2012; Huijtema et al., 2009).

Collaborative governance, then, has a special purchase in relation to water management. Indeed, international institutions such as the Global Water Partnership (GWP) and the European Water Framework have for some time advocated for co-governance and public participation in water resource management (Hammer, Balfors, Mörtberg, Petersson, & Quin, 2011; Rogers & Hall, 2003). Much of this advocacy is captured in discourses of integrated water resource management (IWRM) (Lautze et al., 2011), a governmentality that is thoroughly interwoven with ideas of participation and collaboration. Lautze et al. (2011) make this point by referring to the definition of IWRM given by the GWP as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems” (GWP, 2000, p. 22). This is irreducible to good governance, and vice versa.

Instead, IWRM applies the underlying premises of collaboration and participation to the special problems of water management including fluidity, jurisdiction, necessity to life, common pool resource, and cultural resource. Here Blomquist and Schlager’s (2005) concern with bounded structures of management are pertinent – management and governance merge
as boundaries around management blur and are collapsed by the movement of water, and the challenge of reconciling multiple values and involving multiple actors in decision-making across different constituencies. Accepting porous boundaries which include geographical, functional, issue-focused, and institutional as a platform for co-governance and co-management is, in this sense, a feature of IWRM. So too are the Dublin Water Principles (1992), which include involving resource users and transferring responsibilities and control over resources to the lowest appropriate level (Rogers & Hall, 2003). Water management and collaborative governance principles come together in the ‘good governance’ prescription that decentralisation is necessary to capture the efficiency and democratic gains of relocating decisions to the local level and building institutions that allow local communities to confront local issues in context, with better information (Ribot, 2002).

However, as discussed in Chapter One, the complexity surrounding how participation should be organised, socioeconomic factors, and the importance of analysing real world situations, calls for a greater understanding of power, and how power is distributed amongst different actors (Mollinga, 2008). Since water is a common-pool resource, comprising various resource users with diverse interests, decisions on water management can affect different sectors of a community and may be the subject of conflict depending on its use and allocation (Schouten & Schwartz, 2006). There is always a politics – governance, whether ‘good or bad’, has political dimensions (Castro, 2007; Mollinga, 2008). Water managers must structure policy frameworks in a way that can deal with the interests and demands of different areas of society (Mollinga, 2008). As Kettl (2002, p. 25) emphasised, the problem “requires understanding that fundamental transformations have occurred in governance, and that these transformations challenge both administration and policies”.

Across all of this discussion, two features remain pivotal sites of politics. Firstly, water remains a common pool resource, and national and local states remain the major political players, and continue to “subject their subjects to policies” (Gustafsson & Driver, 2005, p. 540). And secondly, while many agree that co-governance approaches offer important principles for organising water management (albeit commonly disagreeing on priorities where these are conflicting), they are at odds as to precisely what water governance institutions ought to be included in co-governance (Hukka et al., 2010). How then, in relation to water, has co-governance been developed as a field of socio-material relations, and does it now dominate how water is made governable?
In what follows I examine the governmentality of collaborative water governance; that is the institutions and knowledge formation that make up the foundations of citizen engagement in participatory water resource management. Collaborative governance is in part neoliberal and designed to govern through self-government, the market and increased individual and community responsibility (Babu, 2009). Water has increasingly become the subject of experiments in market-making as neoliberal governments have grappled with regulating it as a common pool resource – in the Global North (Bakker, 2010a; Tadaki & Sinner, 2014) and the Global South (Ahlers, 2010; Bakker, 2007; Perreault, 2006). Collaborative governance of water, however, has also been developed in part through a turn to a new knowledge, and a related set of practices centred on the efficiency, democracy and ethics of co-governance.

Debates over water and its governance in the Global North are increasingly informed by contests over water in the Global South and the margins of the North, where issues of access are often more immediate and pressing. Here, the tensions between these two thrusts towards collaborative governance are not only stark, but highlight contests over values and related approaches to dealing with problems (Dewulf, Mancero, Cárdenas, & Sucozhañay, 2011). They are also overlain by the public choice discourses of good governance advanced by United Nations and development aid agencies seeking to prepare ground for development processes beyond the state, and its capture by politicians and bureaucrats.

### 2.6.3 Good Water governance in the Global South

Good governance discourses have been widely articulated in the recent water governance literature to promote democracy, equity and better use of natural resources (Ansell & Gash, 2008; Berkes, 2009; Emerson et al., 2012; Saravanan, McDonald, & Mollinga, 2009; Warner, 2007). They emerged alongside the Stiglitz-led ‘good governance’ for development discourse of the Washington Consensus in the early 2000s (Lautze et al., 2011; Stiglitz, 1999), and were addressed explicitly at the Second World Water Forum in the Hague in 2000 (Lautze et al., 2011). UNESCO (2006b, p. 49) lays out a clear prescription for the good governance of water (Table 2.4). This is set against rising global threats to water access and security (Vörösmarty et al., 2010) and conceptions of human rights to water (Bakker, 2007), as well as neoliberal development strategies that link more efficient water management to more productive use of water resources for economic growth (Ahlers, 2010).
Table 2.4: Good governance principles of effective water governance (Source: UNESCO, 2006b).

<table>
<thead>
<tr>
<th>Principle</th>
<th>Element</th>
</tr>
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<tbody>
<tr>
<td>Participation</td>
<td>Water users should have a voice in the decision-making process;</td>
</tr>
<tr>
<td>Transparency</td>
<td>Information need to be available freely, accessible and understandable to society. Development of institutions, decisions and activities must be open to public scrutiny;</td>
</tr>
<tr>
<td>Accountability</td>
<td>Governments, civil society, private sectors and organisations must be accountable to the public and the interests they are representing;</td>
</tr>
<tr>
<td>Equity</td>
<td>All groups in society should have opportunities to improve and maintain their wellbeing;</td>
</tr>
<tr>
<td>Coherency</td>
<td>Water governance institutions must take into account the development of clear and coherent rules for creating policies;</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Institutions and processes must serve the general public and should respond appropriately to demand and their interests;</td>
</tr>
<tr>
<td>Integration</td>
<td>Water governance must promote and enable integrated and holistic approaches for managing water;</td>
</tr>
<tr>
<td>Ethics</td>
<td>Water governance has to take into account the ethical principles of the societies such as respecting traditional water rights.</td>
</tr>
</tbody>
</table>

As Ahlers (2010) demonstrates in his study of Comarca Lagunera, however, these different goals can be contradictory, especially when privatisation of shared land rights delinks marginalized people from their connections to their place, and related social and historic contexts. Rights to water become ‘shifted from identity forming to tradable objects that create alien wealth’ and wrapped up in ‘struggles over recognition’ as well as access to water itself (Ahlers, 2010, p. 224). Generating collaborative processes for governance is not the same as the exercise of traditional collective rights and conceptions of ownership, especially where that identity was built from past exertions over land and water. This point is pivotal in the New Zealand context (see Chapter Four), and there is a growing literature that explores it in Latin America, East Asia, and the Global South, focused on collaborative governance in relation to the water rights of colonised and indigenous peoples (Cosgrove & Rijsberman, 2014; Rogers, 2002).
Indigenous water governance regimes tend to begin with recognition of the cultural and livelihood values of water and principles of ‘common good’, rather than abstract conceptions of ‘economic good’ (Castro, 2007). This provides a different starting point for developing co-governance than failed local-national state distributions of authority. In his work on an urban water governance structure in San Cristobal de las Casas, Mexico, Castillo (2012) points to the responsiveness of informal (outside-the-state) governance arrangements to socio-environmental complexities and questions of local access and water quality issues. These informal frameworks combine dimensions of community based and indigenous approaches, and provide an efficient and just distribution and allocation of water in the local context, in juxtaposition to an ‘official’ state-sponsored system that had proven impractical. Starting from these points ensures that while the values, views, interests, and voice, of all resource users are taken into consideration, the crucial needs of the most marginalised groups of the community are prioritised (Hukka et al., 2010).

However, interests in making water governable in contemporary times normally do not emerge from the bottom-up, and through analyses of what is working in marginalised communities. Rather, they tend to be viewed and approached from the top-down as a project of state reform, and thus wrapped in discourses of decentralization. As well as thus ‘missing’ the existence and merits of indigenous and other informal regimes, decentralization has come with at least three further core problems.

Firstly, as Abers (2007, p. 1450) observes, viewing the challenge as one of transferring powers to local actors misses the complication that there may be ‘no local authorities waiting to receive power’ or ‘pre-defined “power” to transfer’. Secondly, such transfers have tended to occur under the influence of neoliberal policies. As Perreault (2008, p. 837) stresses, while it has involved different implementation strategies and taken different forms, “the neoliberalisation of water governance has involved forms of institutional reconfiguration that have in many cases limited the ability of most people to participate in the management of the water they use on a daily basis”. And thirdly, as Saravanan et al. (2009) recognise, creating new rules and institutions, and building the capabilities necessary to allow marginalised actors to participate more effectively in decision-making processes in relation to them, must accommodate the different ideologies that they will bring to the process. An hegemonic ideology, or governmental rationality, will not allow for an informed policymaking process.
In response to these challenges in the Global South and elsewhere, other commentators have begun to imagine distributed water systems in which genuinely decentralised governance technologies can co-exist alongside a centralised system (Yu et al., 2011). The political process of decentralisation can also be structured and formed as a fragmented power system, so that several authorities have their voice (Linder, 2002). Collaboration and decentralisation is not always about a transfer of power from the central authority to lower level actors and institutions; rather, it is about how power is structured and flows through those actors (Schlager & Blomquist, 2000). Committing to such an articulation is a way of enforcing the meaningful participation of others, and the incorporation of their preferences and aspirations in advance of establishing any collaborative form of governance.

This is a way also to ensure that co-governance initiatives avoid neoliberal rationalities that impose a ‘one size fits all’ model that disregards the specific situation of actors, organisations, and water issues (Ghose, 2005). Instead, it places an accent on assessing values and resources, institutional arrangements, assets and challenges, access to technology, and established water-related rights. This need not produce arrangements that ignore political economy and the development interests of actors such as the World Bank (see Fritz et al., 2009), but situates such considerations in the water politics of place (Bakker, 2003).

2.7 Conclusion

Debates about water governance tend to centre on recognizing the values of good water governance. These debates suggest the need to evaluate the efficacy of water governance, but most empirical case studies continue to focus critique against ideal forms, and yet fail to focus on the appropriateness of certain institutions in context, or evaluate them against water resources outcomes (Lautze et al., 2011). Nonetheless, they do question the extent of citizen community participation and engagement in decision-making (Bruns, 2003). Ansell and Gash (2008) argue that the empirical record is as variable as the theoretical imagination (see Arnstein, 1969). That is, participation can vary from consultation and public surveys to collaborative governance, and from normatively grounded engagement to pragmatic participation (Reed, 2008).

Co-governance emerged from concerns with principles such as accountability, transparency, and decentralization, both as a means of achieving democratisation (Mollinga, Meinzen-Dick,
& Merrey, 2007) and an instrument of ‘roll-out’ neoliberalism (Jessop, 2009). These principles are linked to concepts of ‘collaborative’, ‘participatory’, ‘community based’ and ‘deliberative’ governance, which have become understood as ‘good governance’ and common sense. Bakker (2007), however, warns against collapsing the concepts of governance, institutional restructuring, and privatization under the banner of either common sense or neoliberalism. Collaborative water governance emerged as an alternative strategy to traditional top-down and command-and-control water management, not as a neoliberal plot; while common sense in political realms is never common sense. It presupposes and builds upon a governmental philosophy and associated rationality, and is a particular resolution to an inherently political process of governance. It reinstitutionalises governance and imposes new forms of resource management and rules for controlling decision-making. Governance is a political rather than a narrowly technical process (Buchy & Race, 2001; Clarke, 2004; Newman, 2004; Newman et al., 2004). Good governance has to be won and defended politically in settings where private property rights and their philosophical underpinnings predominate.

In this chapter, I have argued that collaborative and participatory governance are borne of particular economic, political, and technological times and related to dominant ways of knowing and performing governance in those times; that is, neoliberalism (Larner & Craig, 2005). These times and ways of knowing and performing governance are not in any simple sense ‘neoliberal’. Operationalising collaboration and participation in realms of contest, historically established institutions, and uneven power relations, is highly problematic and will always be contingent and compromised (Geddes, 2006). Even where efforts have been made to build participatory and collaborative institutions, most empirical research suggests that opportunities for local communities to participate in planning and decision-making processes fail to meet the full expectations of good governance, especially in terms of community empowerment and/or including marginalised groups (Ribot & Larson, 2013). Nonetheless, as I have demonstrated in the final part of this chapter, the literature on water governance continues to argue for the merits of co-governance of water with marginalised and disadvantaged groups, even if at a minimum this may offer a broader sense of public participation and a louder voice (Head, 2007). This dissertation will go on to explore this debate in the New Zealand context.

Governance and its good governance manners are therefore problematic conceptually, philosophically, and politically, as well as technically, in terms of application. However,
participation, transparency, collaboration, community empowerment and accountability to communities remain idealised and worthy ethics and goals, and an important alternative to market disciplines as a way of accommodating voice and introducing responsiveness and flexibility into governance (Ingram, 2012). Indeed, empirical studies (Benson, Jordan, Cook, & Smith, 2013; Memon & Weber, 2010; Weber, Memon, & Painter, 2011) suggest that the recent shift to collaborative water governance are encouraging more flexible institutional arrangements, policies, and practical decision-making processes that at least promote meaningful participation (Armitage et al., 2012). They offer a meaningful target for those involved in redesigning water governance, especially in the context of empowering indigenous groups with claims and rights to local control of natural resources. Efforts to establish new governance frameworks and practices will, however, always be set within existing and wider institutional and political structures. In the New Zealand case, the politics of resource management is dominated by the post-colonial obligations to Māori communities – the so-called ‘post-Treaty settlement’ phase of resource based economic development and social life. The following chapter establishes some of this context.
3. METHODOLOGY: WORKING AS AN OUTSIDER IN THE WAIKATO

3.1 Introduction
This chapter discusses the approach adopted in this research to understand how the Waikato River Settlement Act has been picked up, deployed and practised. Co-governance was adopted as a collaborative and governmental technology to include stakeholders more directly in the process of environmental management of the Waikato River, especially Māori. The case study allowed me to explore the potential of co-governance and co-management at least as it is apparent in the short-term. Primary data were collected from semi-structured interviews, and were used to complement document-based institutional analysis that outlined the genealogy of co-governance and co-management arrangements and their implementation.

3.2 Situating co-governance/co-management in a genealogy of governance
My study began by understanding how water governance policy was assembled within complex networks of governmental rationalities, environmental processes, human-environment relations and political aspiration, and the actors and objects involved in policy formation and its application (Mollinga, 2008). Co-governance is part of a set of ideas of ‘good water governance’ that have in the last two decades been brought to bear on issues of ‘environment and human development’ so as to move away from “state-centred water resources policy processes into society-centred policy processes” (Mollinga, 2008, p. 2). In the Waikato, these ideas have been brought to a situated politics of knowing and regulating the environment, demonstrating traditions of freshwater management in New Zealand; new institutional arrangements in knowledge production and governance locally and nationally; ideas of integrated management of water and related resources and the co-production of knowledge; and the political significance of indigenous values. The importance of each of these influences is contested, but it is clear that there is a large gap between the research on policy and water management practice on the ground. As Mollinga (2008) stresses in relation to similar governmental assemblages elsewhere it is as yet unclear what impact the shift of discourses of participation and collaborative management have had in practice. In the background, the public continue to hold regional councils responsible for the effectiveness of water management decisions (Sinner & Berkett, 2014). Collaborative water management,
however, is set to provide new directions and objectives, and to confront in new ways the challenge of balancing contested values. Social science research is critical to ‘contextualise’ competition among values, especially given the uncertainty of the policy making process in the water management arena (Mollinga, 2008; Mollinga et al., 2007). Any form of collaborative management must incorporate processes that consider origins and cultural backgrounds, as well as the more instrumental capability of actors to participate the decision-making process (Pahl-Wostl et al., 2007; Pahl-Wostl et al., 2008).

In New Zealand, Māori cultural knowledge and values reflect a long history and the relationships that tangata whenua have with geographic areas or resources (Taiepa et al., 1997). The contemporary politics of co-governance are negotiated in terms of these relationships, indigenous knowledge, and experiences of colonialism (through which they are understood by Māori). The cultural and spiritual significance of the Waikato River to Māori, along with experiences of disempowerment and dispossession, affects co-governance and co-management arrangements. My research explores the socio-economic, environmental and cultural values and interests held by different stakeholders in an environment dominated by key political projects. Conducting research in this area of environmental governance and management in the New Zealand context is not straightforward, especially for non-indigenous scholars. Indeed, the politics of knowledge production and engagement with actors in this context as Underhill-Sem and Lewis (2008, p. 305) argue is always complicated and “requires engagement in complex representational politics of place and divisive identity politics that rage around it”. The situatedness of the researcher and the research question are crucial.

3.3 Research design in outline
Research designs must confront the interplay between the nature of the world and how it has come to exist (ontology); how humans come to know this world (epistemology); what processes are required to learn about the world and how these can shape the world and how we know it (methodology); and what ethical considerations are needed to follow and carry out research (axiology) (Duffy & Chenail, 2009). For Lewis and Rosin (2013) this axiomatic ‘what’, ‘who’ and ‘how’ triad of world making through knowing must also include a fourth co-constitutive prong of ‘why’ (the political or praxeological domain). Despite the several possible approaches for conducting any research, the choice of applying appropriate methodology depends on the research question and its theoretical framing and the aims of the
researchers. This indicates the importance of ‘questioning’ as an important criterion for any research. For example, Kincheloe (2008, p. 229) quotes Werner Heisenberg (1963, p. 58) that “what we observe is not nature itself, but nature exposed to our method of questioning”. For Kincheloe (2008, p. 229) ‘observation’ is an important criterion for studying complex series of interactions that necessitate specific techniques of questioning. However, epistemology does not fully pre-exist any research setting. It is constituted by an underpinning ontological stance and by the aims of the research and comes into formation through the interactions among the “knower and known” that craft the human’s insight about how the socio-cultural and political occurrences interlock and are understood (Kincheloe, 2008). That is methodology is co-constitutive of both ontology and epistemology (see Le Heron & Lewis, 2011; Lewis & Rosin, 2013). The ‘interpretation’ of the interrelationship between knower and known is a key element that brings the ‘knowing’ into existence. As Kincheloe, 2008 suggests:

“Facts” simply don’t exist without interpretation, and even if such a phenomenon were possible such data would be nothing more than a conglomeration of random and meaningless fragments until brought together by human consciousness (Kincheloe, 2008, p. 229).

The Waikato River co-governance is not simply a question of semiotics. There exists a material world of politics and investment, of colonial experience and contemporary struggle, and of river dynamics and pollutants. As Fairclough, Mulderrig, and Wodak (2011, p. 123) stress “we cannot take the role of semiosis in social practices for granted; it has to be established through analysis”. In this regard, the term ‘critical discourse analysis’ (CDA) outlines a specific research agenda that engages with the “analysis of the dialectical relationships between semiosis (including language) and other elements of social practices” (Fairclough et al., 2011, p. 22). The CDA studies the concepts of ‘ideology’, ‘power’, ‘gender’, ‘culture’, ‘race’ and ‘hegemony’ with related sociological variables to describe and interpret the text (Wodak, 2002). However, the application of CDA varies for each of these concepts as it is affected by the objectives of the research and the techniques of producing material, which ranging from field work or ethnographic research of a single case study, to multiple case studies involving large data collection (Wodak, 2002). The challenge is to identify a situated design for a ‘situated’ will to know a set of ‘situated’ social practices (see Fisher et al., 2015). In the context of my research, I identified and tracked the progress of
political projects through the particular governmental rationalities of co-governance as deployed to manage the Waikato River.

Such qualitative inquiry, in contrast to a positivist approach, offers the flexibility to analyse governmental rationalities. As Denzin and Lincoln (2011, p. 8) emphasize, qualitative research has been developed across multiple disciplines such as cultural studies, constructivism, poststructuralism, Marxism, critical studies and feminism to provide knowledge and understanding of the “socially constructed nature of reality” and to inform “how social experience have created and given meaning” (Denzin & Lincoln, 2011). This approach allowed me to identify the questions that made visible the projects at work in the remaking of governance structures, and legal and administrative frameworks embedded within a particular cultural and socioeconomic environment. The methodology for this research enables me to conduct an inductive qualitative inquiry with the sensitivity necessary to work across cultural boundaries (Liamputtong, 2010) and to recognize that “knowledge could not be produced outside of a position” (Ateljevic, Harris, Wilson, & Collins, 2005, p. 11).

3.4 Situated knowledge: A philosophy of knowledge-maker

‘Reflexivity’ is a critical factor in conducting research associated with different types of knowledge and how knowledge is constructed (Guillemin & Gillam, 2004, p. 274). The literature debates at length questions about what is legitimate knowledge, who holds or has access to it, and under what circumstances. Indeed who has legitimate knowledge, whose ideas matter the most, and how might we value and interpret different knowledges, are all fundamental questions at the heart of how and what we can know in any circumstance (Haraway, 1988; Harding, 1991; Lang, 2011; Rose, 1997). These debates mostly attempt to encourage researchers from different disciplines to evaluate competing claims to knowledge and its validity and to identify how knowledge is constructed (Pedynowski, 2003). However, increasingly these debates have turned to the politics of knowledge production and to questions of indigenous knowledge (see Fisher et al., 2015).

Traditionally, knowledge was perceived from an ‘imperialist position’ as a set of universal and objective facts produced through the experimental process without taking into account the socio-historical origins of knowledge (Turnbull, 1997, p. 552). This view was challenged by feminist researchers in particular, who viewed knowledge through its ‘localist position’
These scholars advocated that all knowledge, including scientific knowledge, was locally constructed and situated (Haraway, 1988; Suchman, 2002). Donna Haraway’s (1988) ‘situated knowledge’ claim criticizes the truth claims of neutrality and the universality of what can be a ‘hostile’ science, which views knowledge and knowers as separate entities existing independently (Haraway, 1988; Lang, 2011). Haraway (1988) theorised instead a situation-dependent knowledge, which connotes the production of knowledge through theoretical reflections based on social life. Knowledge and its makers and users are thus ‘positioned’, in time and place and the power relations that comprise them. This means in its most brutal form that power permits the execution of certain forms of knowledge (Rose, 1997).

Haraway (1988, p. 584) argues that the positivist knowledge assumption that claims to be able to ‘view knowledge from nowhere’ is a "God-trick". Sandra Harding (1998) replaces the “view-from-nowhere” with her “standpoint epistemology” and advocates that the process of knowledge production must incorporate the views of people or places that have been traditionally isolated from the production of knowledge.

My research starts from the position that all knowledge is socially constructed and thus situated (Haraway, 1988; Rose, 1997). The intellectual processes of knowledge construction are a social process (Longino, 2006). Not only is knowledge situated, but any knowledge made is implicated in the historical, political and cultural relations of any given context (place and time). As a result, the journey we travel to explore and gain our knowledge is situated in place and place making. Moreover, this also means that different knowledges will collide against each other and that there will always be contest over ‘truth’ and/or ‘practicality’. Knowledge production is always highly contested between different approaches undertaken to understand the way the world comes into being, especially across disciplinary and/or political and epistemological borders (Jasanoff, 2004). Boundaries between indigenous knowledge and science are complicated by this multiplicity of contest and other borders and margins.

3.5 Situated knowledge-making in the Waikato: Researching co-governance with Māori
I am a Persian. I emigrated from Iran and have been living in New Zealand for the past 14 years. I gained my bachelor’s degree in biological science from the University of Auckland. During the course of this degree, I completed a stage three environmental management paper which prompted me to complete a Master of Science in Environmental Management at the
University of Auckland. My master’s thesis focused on studying stakeholder participation in Integrated Catchment Management (ICM) using the case study of Mangakahia catchment, Northland, New Zealand. The project taught me that the opportunities for stakeholder involvement in planning and decision-making tend to be limited to consultation, leaving the majority of management decisions to be made without the full involvement of stakeholders (Rahnama, 2010). Effective stakeholder participation requires the presence of clear legislation and policy frameworks, and support from central government (Rahnama, 2010). The Waikato River Settlement Act and the subsequent co-governance arrangements between the Waikato River iwi and the New Zealand government/Crown create a very different enabling context for meaningful and effective stakeholder participation. It is this potential that I explore in my PhD project.

To complete this project required that I work with Māori as well as other stakeholders. For a Persian immigrant from Iran this posed particular challenges but came with many opportunities and learning experiences. Whakapapa is crucial to Māori. My Māori respondents were particularly curious about me: where I come from, how long I have been living in New Zealand, and what I am I doing now. I was manuhiri, an outsider and in many different ways a guest, but not a colonist. I lacked some of the Pākehā understanding of colonial and post-colonial relations, but was positioned differently as I was not part of colonial injustices or the Pākehā-Māori binaries. And I was asking questions not to reinscribe or to correct injustices, but to understand them. I was a researcher subject awaiting subjectification. Moreover, to both Māori and Pākehā, I am a person with a different accent and background. I was a curiosity which I found to be an important asset in helping me to gain interview access. I was also aware that there was a human, empathetic dimension to the decisions made by informants to agree to participate in my research, one promoted by my positionality as a migrant other seeking to understand my new land.

Who the researcher is, who and how they are trying to represent, and who will have benefit from the research involves a complex politics (Mayan & Daum, 2014, p. 81). In the context of contemporary New Zealand, this is a much more charged politics than just the ethics of cultural sensitivity in conducting research with people from different cultures, where researchers need to have ‘cultural awareness’ so they can avoid imposing their own beliefs and interests over/upon other cultures (Liamputtong, 2008; Papadopoulos & Lees, 2002). Rather, at stake is the deeply political context of ‘the Treaty’ where histories of dispossession
and resultant injustices have not only created a sense of ‘distrust’ among Māori of research and all forms of Pākehā knowledge making but also yielded today’s context of Treaty renegotiation and material restoration (Bargh, 2012; Bargh & Otter, 2009). For many indigenous societies colonial knowledge making was a significant part of their disempowerment, marginalisation and dispossession, while the desire of outsiders to research ‘the other’ in post-colonial settings reinscribes this negative politics of ‘research’ (Burnette & Sanders, 2014). For Linda Smith (1999) knowledge making requires explicitly decolonising methodologies. She argues that:

… “research”, is probably one of the dirtiest words in the indigenous world’s vocabulary. When mentioned in many indigenous contexts, it stirs up silence, it conjures up bad memories, it raises a smile that is knowing and distrustful (Smith, 1999, p. 1).

As is the case in many colonised places around the world indigenous researchers have sought to decolonise research by insisting on researching their own context and raising their self-determination by emphasising the values of indigenous knowledge over western ways of research (Latulippe, 2015). For Māori, the Kaupapa Māori approach to research has become a strategic way of “structuring assumptions, values, concepts, orientations, and priorities in research” (Smith, 1999, p. 2). This approach, which is underpinned by the philosophy that research about things Māori be undertaken by Māori, with Māori, and for Māori, aims to progress indigenous Māori philosophy in a similar way to ‘critical social theory’. That is, it seeks to explore historical, socio-cultural, economic, and political aspects of Māori-Pākehā relations so as to overcome uneven power relations while encouraging ‘self-development’ (Smith, Hoskins, & Jones, 2012, p. 19). In such an account, the conceptualisation and practice of co-production of knowing requires indigenous research of cultural constituents (Forster, 2012, pp. 51-52).

The literature has long pointed to the challenges of ‘insiderness’ and ‘outsiderness’ (Ganga & Scott, 2006) or the stranger and friend of the ethnographer (see Powdermaker, 1966), but Smith’s (1999) argument is deeper. Alongside decolonising methodologies and shaping critical social theory for indigenous peoples, her work encompasses other political projects of knowledge production: colonial redress, intellectual address (more meaningful knowledge), improved cultural sensitivity, enhancing research capability, and decolonising knowledge. In short Kaupapa Māori points to better, more appropriate, and more productive knowledge. It
also points to possible new knowledge that might otherwise be unavailable. Cooper (2012, p. 67) for example stresses that while western science interprets Māori epistemologies as “wilderness”, which we may wish to contest, this wilderness can create a “positive space where Māori knowledge is entirely present, universal, unequivocal: that is, epistemological”. As Cooper, (2012, p. 67) argues, wilderness is an opportunity to allow Māori move towards freedom where their epistemologies can be present in the absence of “external benchmarks of epistemic normativity”.

I cannot adopt kaupapa Māori research as I do not speak Māori. As a result, I am an ‘outsider’ or a stranger. However, this does not exclude research within the water governance arena in which Māori and non-Māori engage. My research objective is to explore the ways in which co-governance has been implemented and to ask whether it is creating potential opportunities for Māori to enhance the way they manage water. My aim was to ‘work with Māori’ to produce knowledge instead of ‘researching Māori’ (Forster, 2012, p. 78) and to quite explicitly find ways of positioning myself as a non-indigenous person (Smith, 1999) so as to achieve this. In so-doing, I adopted a set of approaches, from being explicit with respondents and self-reflective about my own background to meeting with Māori academics. In all my engagements, I sought to approach my respondents on their terms. When interviewing my Māori informants, I sought to engage with, and be guided by, concepts such as kaitiakitanga, tikanga, tino rangatiratanga and mana whakahaere. Wherever possible, I have tried to let these informants speak through the use of quotations from the interviews and formal documents, and to allow participants to present and advocate “the interests of the community beneficiaries” (Mistry, Berardi, Bignante, & Tschirhart, 2015, p. 28). I also structured my research design to emphasise three engagement strategies: the value of being stranger and friend; learning from Wānanga; and engaging with Waikato-Tainui.

3.5.1 The value of the stranger and a friend
As a stranger and a friend I sought to position myself to represent Māori values in a way uncompromised by a politics of self-interest. I did not have the ‘dilemmas’ of indigenous scholars who enjoy the privileges but must bear the burdens of being both “partly insiders and partly outsiders within both the academy and their home communities” (Kaomea, 2004, p. 67). This of course meant that I could not ‘see’ much of what ideally I might have been able to observe/grasp, but it has also meant that I did not carry quite the same burden of
responsibility in my research or its representation here in this thesis. The research and my findings are thus inevitably different, in some ways less penetrating and grounded, yet enjoying certain privileges of abstraction. In a thesis that takes situatedness and the value of engaged and socially responsible knowledge making seriously, this privilege of abstraction is a mixed blessing and ultimately an unavoidably discomforting dimension of my work. On the other hand, efforts to understand and represent from different perspectives and uncomfortable learning experiences are necessary in post-colonial encounters and politics of settlement.

In one interview with one Māori participant, the informants asked me “why did you choose to do the co-governance research?” — given that you are neither Māori nor Pākehā —. In response I explained: “Since I am not a Māori nor a Pākehā, I think I can see the overall picture of the co-governance arrangements without taking any party’s side”. This comment made my informants start laughing. He/she asked another Māori academic to join us and told me: “I liked what you said, can you repeat that again?” (Informant 15). Whether or not they considered this response naïve, plausible, or in any way tenable, it was both uncomfortable for me and discerning (or naïve) enough to open that particular door to an interview. Another Māori academic informant commented that “I think you are very brave in doing this research” (Informant 1) indicating both the inherent challenges involved in doing research with Māori and that I had sought to establish a subject position that was at some level plausible. In one other interview another Māori academic commented on the benefit of the stranger’s gaze:

In my opinion it is extremely important and one of the reasons why I have agreed to this kind of interview that we have internal examinations as well as external. So the person like you with the different background can examine from different maybe worldview and there is another understanding that is brought to the table (Informant 33).

Nonetheless, all this was a challenge. At the beginning of my research, obtaining permission to do research with River Iwi was time consuming and challenging. Colleagues who had experience in doing research with other iwi questioned the wisdom of my project, and stressed that it can take a long time to go through formal processes. I became aware that, in order to gain access to interview participants, I would need to work through tribal mediators (see for example Sixsmith, Boneham, & Goldring, 2003). As Smith (1999) elaborates in the context of research with Māori, researchers must overcome the frustration of the researched, especially the subaltern. As Thomas (1990) recalls of her efforts to recruit Afro-Caribbean
older people to discuss their life histories, people have become exhausted by such recruitment. Indeed one of her potential participants said: “[W]e hope you are not one of those who want to come and ask endless questions. If you are, forget it! We have given enough already” (Thomas, 1990 quoted in Liamputtong, 2008 p. 10).

Furthermore, my research topic was the hot topic of the Waikato. It was something that all my participants were interested in. Actors looked forward excitedly to the new era of co-governance. My supervisor, Dr Karen Fisher, was in a position to introduce me to tribal contacts and to guide me in appropriate approaches to making contacts. I also drew on Underhill-Sem and Lewis (2008) to think about my outsidersness and to seek strength in the quality of my research:

There are no easy protocols for outside researchers, but with appropriate humility and sensitivity to these politics, we can rely on, and should stand up for, the value of our work, which lies in commitments to excellence in scholarship (Underhill-Sem & Lewis, 2008, p. 305).

In addition, to overcome the difficulty of my outsidersness, I tried to build trust with iwi by acknowledging Māori commitments to indigenous self-determination (Burnette & Sanders, 2014). In the particular context of an emergent Waikato River co-governance, my research offered Māori participants an additional outlet for their view to be expressed, just as it offered all respondents an opportunity to work out and represent their views through my interviews. The concentration on Māori views by an independent outsider is also further acknowledgement of the normalcy of Māori participation in the management of water resources. My thesis is another voice that echoes the matter of course participation of Māori in democratic, collaborative and participatory processes of decision-making in water governance. Co-governance claims are not unusual and nor are they the pleading of a particular stakeholder – they are central to resource management in Aotearoa New Zealand today.

To interview River Iwi participants, I gained permission from the five iwi organisations. My research was primarily a surface-level and largely top-down approach as is appropriate for an ‘outside view’. I interviewed the key informants from Trust Board as opposed to hapū. Studying hapū based views was not the objective of my research project. In general, it is preferred that a hapū based research project is conducted by indigenous scholars who have an
affiliation with that tribe (see for example Forbes, 2014; Forster, 2012; Muru-Lanning, 2010; Tipa, 2003).

While I was able to secure permission to interview the representatives of Te Arawa, Ngati Raukawa and Ngati Tūwharetoa with few complications, for Ngati Maniapoto and Waikato-Tainui, obtaining the same permission was more complicated. For Ngati Maniapoto I attended a series of wānanga and for Waikato-Tainui, I had to present my PhD proposal at the Waikato-Tainui College for Research and Development. My participation with iwi included: attending three wānanga for Ngati Maniapoto, two Waikato River symposia and one meeting at the Waikato Regional Council involving iwi participants voicing their concerns for a clean-up fund.

Despite these formalised introductions, it is important not to overstate the engaged nature of my research or the depth of any knowledge I gained from them. I remained very much an outsider and did not develop a depth of knowledge from these staged encounters. Rather, they served to allow me to demonstrate respect and a willingness to conduct research on Māori terms. I was able to demonstrate that I was not a threat, and that on balance I was likely to do more good than harm.

3.5.2 Learning from Wānanga

Initiating research targeted at investigating a topic within the context of a different cultural background from that of the researcher demands at least a basic understanding of their language and worldviews. This may pave the way to build stronger relationships, to foster trust between academics and policymakers with Māori, and to promote collaboration. As one of the Māori academic informants elaborates:

Scientists cannot expect the access to indigenous knowledge without demonstrating that they have the appropriate respect and they share the values that they are going to use that knowledge in appropriate way. One of the first things they need to do is actually learn every basic understanding of the Māori language and concepts (Informant 1).

Attendance at wānanga was my first experience in developing the relationship with iwi and to find my positionality. I attended the first wānanga, structured much like an extended
workshop, with my supervisor (Dr Karen Fisher) who has an affiliation with Ngāti Maniapoto iwi, an iwi with representation on the Waikato River Authority board. The wānanga was formed to discuss issues surrounding the preparation of Ngā Wai o Maniapoto (Waipa River) Act 2012. This was a rare opportunity to learn more about wānanga, marae and Māori perspectives on resources. At the beginning of each wānanga people introduced themselves and their tribal affiliations. I also introduced myself and informed participants that I was a PhD student from the University of Auckland undertaking my research on co-governance and co-management.

After a few hours of discussion, the participants broke into groups to workshop the draft of the Maniapoto River Act. I was asked to be scribe for the group by an iwi member who pointed at me and said: “He is a student we can ask him to do the writing for us”. He turned to me and said: “Here is a marker and a board, we tell you and you write”. The discussion was focused on how to best represent Māori aspirations in the Maniapoto River Act. Being the first time on a marae, I heard many te reo Māori expressions with which I was unfamiliar, which made me feel unsure about whether I could fulfil the role of being a scribe. For example ‘wh’ ‘whakapapa’, pronounces ‘f’ as ‘fakapapa’ or the expressions such as; ‘tino rangatiratanga’, ‘mana whakahaere’ were not easy for me to understand or pronounce. So my response was: “I am really sorry, my Māori vocabulary and language is very limited. Is there anything else that I can do?” A group member turned to the person adjacent to him and said: “What kind of student is he?” This was a tough initiation and I immediately felt out my depth, guilty for not knowing their language.

In the second wānanga, after the karanga (Māori welcoming guest into the marae), the chair of the wānanga, who was sitting adjacent to me, asked me about my ethnicity and background and introduced me to the hui as a guest from the University of Auckland. During the second round of greetings, the same person who commented in the first wānanga “What kind of student is he?” came to me and said: “How are you my friend?” His approach suggested that at least for him I had passed some kind of test by returning. Indeed, before attending the second wānanga I prepared myself to learn some basic Māori words just in case I faced a similar situation and to avoid any future repetition of this scenario.

The second wānanga was organised to develop objectives for the proposed draft of the Waipa River Act. A few days after that session we received an email outlining the main objectives for the proposed Waipa Act. I read the objectives and compared them with other documents
from the other two river acts (the Upper Waikato River Act and the WRSA). With some temerity, I used this comparison to offer comments by return email. After the third wānanga we received a similar email asking us to highlight any missing objectives that participants believed necessary to achieving the overall purpose of Act. There were traces of my comments in the proposed final draft. Whether or not this was a direct reflection of my contribution (others had made similar comments), I was very pleased to see that I had potentially been of some value.

3.5.3 Meeting with Waikato-Tainui

I contacted the Waikato-Tainui Claims and Environment Unit (WTCEU) to inform them of my research and to request permission to do research with them. I spoke to the principal manager of the WTCEU and explained my research over the phone. The manager asked me to send a formal email to WTCEU explaining my research objectives. One week after that conversation, I received the manager's email in which it required me to attend a formal meeting with staff and academics from the Waikato-Tainui College for Research and Development (WTCRD). At the meeting I provided a summary of my PhD proposal. In response the WTCRD stressed: “this is for you to do your research, but what does it have for us”? My response was: well by doing this study, my thesis will look for possibilities and opportunities that can contribute to the empowerment of tangata whenua (people of the land) to manage water resources in more effective ways. The group offered its support, and a few members approached me and told me that they were happy to work with me. The group provided me with a letter of support that indicated their approval to conduct my study on the Waikato River co-governance/co-management. Furthermore, the WTCRD requested that I submit one copy of my PhD thesis upon completion.

In another meeting, one of the senior managers of the WTCEU invited me to attend their office in Hamilton City, where the manager presented a PowerPoint presentation which set out general information about the WRSA and how they had come to this point. The presentation started from the prosperity and the golden age of Māori to war and confiscation (raupatu) and the emergence of Māori kings movement (Kīngitanga). After confiscation, each Māori king tried to negotiate with the British government. However, it was not until Sir Robert Mahuta’s time in the late 1980s that Waikato-Tainui could successfully negotiate land confiscation compensation in relation to the Waikato River claim. However, as the WTCEU
manager emphasised during the meeting the Waikato River and its water quality were not now what it once was. Iwi were recovering rights to govern a seriously degraded river. This made Waikato-Tainui seek other solutions and advocate for the new era of co-governance/co-management. For the Waikato-Tainui, this co-governance was a ‘paradigm shift’ in responsibility and power sharing and presented new forms of management that committed Crown to work with iwi (Waikato-Tainui, personal communication, 2012).

In short, the form and boundaries of this research are defined by the nature of my relationship with Māori participants, as are the qualities of any insights drawn from it. This is not, and cannot (nor should not) be a thesis about the cultural grounding of Māori environmental politics. Rather, it is about the way co-governance is practised in relation to a set of established political projects, one of which is grounded in the well-documented political struggle for a negotiated sovereignty, the contours of which are not yet fully defined. This political project is grounded in part in cultural concepts and practices such as kaupapa, tikanga, and kaitiakitanga, each of which is an important element in the grounded discourse of co-governance in the Waikato. So too are indigenous onto-epistemologies to do with relations among people and place. I am an outsider with respect to these concepts, and as such do not seek to critique or otherwise interrogate them in my work in line with the principles of ‘decolonising methodologies’ (see FitzHerbert & Lewis, 2010; Smith, 1999). My approach recognises the methodological challenges of kaupapa Māori, and as a result treats the concepts such as kaupapa, tikanga, and kaitiakitanga as elements in a discourse (see Underhill‐Sem & Lewis, 2008); that is, I treat them as elements that perform politically in co-governance debates, but do not question their appropriateness or representativeness. These concepts and the political project to which they are attached are connected to a history of colonial exploitation and are variously located in relation to contemporary Māori development models and aspirations. These are acknowledged and discussed in terms of an outsider, but with appropriate empathy and recognition of both kaupapa Māori and resource dispossession that contextualise the politics of knowledge production in New Zealand environmental management.

3.6 Research methods
The term ‘method’ refers to the processes and techniques applied to collect and analyse data in this multiple situated research context. These include case study, interviews, policy and
document analysis (Owen, 2014). My research objective is the set co-governance and co-management processes established in association with, and in order to implement the provisions of, the WRSA. These include the Waikato River Authority, the overarching document of the Vision and Strategy, the Waikato River Clean-up Trust and the co-management arrangements. I used a mix of document analysis and key informant interviews to identify what is a relational configuration of practices, rationalities, agencies and aspirations, which I theorised as the settlement of a set of political projects. In one sense, this configuration is the grounded object of which I seek to make sense. In another, however, it is also a case study of the potential of co-governance in water management in New Zealand. In this section I outline the method I used to identify and make sense of this relational configuration of the case of co-governance.

3.6.1 Case study research

Case studies investigate processes and their outcomes in a particular context that sheds light more widely on “real-life phenomena” (Zainal, 2007, p. 2). They help to focus attention on specific objects or complex social phenomena situated in time and place (Zainal, 2007). Case studies direct attention to “how and why” questions (Yin, 2013), as my ‘case study’ does in relation to the co-governance and co-management arrangements as they have emerged and been deployed and practiced in the Waikato region.

Case studies can also provide a platform for investigating wider social processes that empower actors to have a voice (Bogdan & Biklen, 1997; Tellis, 1997). Case studies are also an important way of generating insights and testing the value of competing theoretical perspectives (Flyvbjerg, 2006; Tsang, 2014) in specific, ‘unique’ (Tellis, 1997; Yin, 1994) or ‘unusual’ circumstances where context is crucial (Yin, 2013). Case study analysis looks for general insights in particular cases and eschews the search for generalizable truths. It draws attention not only to context but to practices and the everyday, where any causality lies very much in the interplay of process and trajectory with context and contingency. Case studies may allow for ‘longitudinal’ study of process in context by tracing relations in place through time; or comparative analysis across places (Yin, 2013). They may be ‘revelatory’ and allow researchers to investigate phenomena that were previously inaccessible for social studies; or they may be valuable in and off themselves as rich descriptions of historical conjunctures in place (Yin, 2013).
While single-case studies are criticised as being incapable of delivering ‘generalizations’ and thus to lack ‘validity’ (Tellis, 1997, p. 4), they are no more or less falsifiable than a sample (Flyvbjerg, 2006, p. 225). Nonetheless, while a case study is an opportunity to study real world context, it is important to be careful not to over-claim or make truth claims from cases about classes of phenomena of wider processes.

The Waikato River is crucial for economic growth at both the regional and national levels. Intensive agricultural activities have, however, had detrimental environmental effects on water quality. In 1995, Waikato-Tainui was the first tribe to reach negotiate a land confiscation claim and settlement compensation (O’Malley, 2015). Nevertheless, the Waikato-Tainui’s early post settlement relationship with the Crown was unstable, in part because of the challenge of negotiating governance of the Waikato River. The iwi had a difficult time negotiating relationships with the key economic actors of the region (such as energy sectors and dairy farmers). The eventual implementation of the co-governance arrangements illustrates these tensions. In this research I was interested primarily in the case of the Waikato River co-governance and co-management arrangements as well as what they tell us about negotiating the politics of water governance or co-governance more generally elsewhere. The WRSA was the ‘first’ co-governance arrangement in New Zealand based on the equal power sharing in river management between iwi and the Crown. Waikato-Tainui have become thought leaders on co-governance in New Zealand. The early experience of this case offers interesting lessons for other examples under negotiations.

Case specific studies commonly involve multiple sources of evidence such as surveys, interviews, participant observation, archival material, and documentation (Crowe et al., 2011; Dooley, 2002; Yin, 1994). Using multiple sources of evidence yields a rich description of social phenomena, and a holistic view that can offer greater validity (Baxter & Jack, 2008; Crowe et al., 2011; Dooley, 2002). The challenge is to ensure that the different methods are used to complement each other (Tellis, 1997; Yin, 1994). My research centres on two sources of evidence: ‘key informant’ interviews and document analysis.

Interview data and documentary evidence were analysed together, both to triangulate material and to generate insights about the working out of governmental rationalities and co-production of political projects in practice. I reviewed and analysed policy documents to lay out historical and contemporary institutional and governance frameworks. Put alongside the literature, these documents were used to develop a history of the use of the river, established
colonial tensions and oppositional exchange, and early post settlement relationships and 25 years of institutionally bounded contest between Māori and Crown. The documentary analysis helped to develop understandings that informed my interviews with key informants, just as the latter helped me to interpret the documents. The interviews recorded participants’ perceptions and views about how co-governance was being understood, developed and implemented in the short term. I was able to make sense of the views and insights offered by my interviewees by comparing them with each other and with analysis of the documents, an analysis that was enriched by guidance from interviewees. For example, every time one of my interviewees referred to a specific document, I returned to that document to inspect an event in a particular context. Accordingly, the data for my case study was built in an ‘iterative process’ between interviewing process and document sources. This iterative process involved examining and classifying various portions of data to “detect and interpret thematic categorisations, search for inconsistencies and contradictions, and generate conclusions about what is happening and why” (Thorne, 2000, p. 69).

3.6.2 Semi-structured interview

Most interview techniques are based on structured, unstructured and semi-structured interviews. For my research, I applied individual semi-structured face-to-face interviews with open-ended questions with the intention of providing flexibility to allow research participants to speak freely about the topic of their interest. Semi-structured interviews consist of a series of prearranged open-ended questions that provide researchers the flexibility to ‘probe’ (Doody & Noonan, 2013; Hoepfl, 1997). The interview topics and questions were framed, based on the concept of co-governance/co-management and the literature review (see Appendix C).

Interviews were recorded using a digital audio recorder and notes were also taken during the interview. According to Hoepfl (1997) recording an interview with an audio recorder or writing notes is a matter of personal choice. In two cases, the interview participants refused to be recorded. In one case, towards the end of the interview, the participant provided a critical opinion about the government approach to co-management and he/she wanted me to assure him/her that the voice recorder was off. On some occasions after the voice recorder was turned off, research participants continued their conversations. In these situations, I took notes while I was listening to the participants. In some situations, these more candid exchanges
produced very useful insights or “unsolicited accounts” that were important sources of information (Bryman & Bell, 2011, p. 487).

3.6.3 Recruiting potential research participants: the ‘right’ participants?

For my research I recruited a total number of 37 interviewees (see Appendix B). I tried to select key informants who were by some means connected to the co-governance and co-management projects of the Waikato and Waipa rivers. Recruiting key actors enabled me to collect information that assisted my research to highlight and reflect the views and opinions of different parties; and to investigate how governance has contributed to the effective management of water in the Waikato catchment. My participants included direct participants in the co-governance process, wider stakeholders and community members, and expert commentators (largely Māori academics who offered both their views on parts of co-governance and expert readings of events and related insights, as well as in some cases reflecting their own involvement in the Waikato case). I interviewed representatives from each of the River Iwi involved, the Waikato Regional Council and the primary industrial users of the river. Importantly, however, some of the individuals spoke from multiple subject positions: institutional, political, and professional. Some Māori interviewees spoke as members of hapū, iwi leaders (even negotiators), professionals (sometimes academics, even river scientists), and agents within the new co-governance arrangements. Some Māori interviewees suggested that their multiple subject positions were difficult to negotiate, but for others they were part of a wider whole person, indeed a subjectivity tied to whakapapa. Some Council representatives were also clearly environmentalists. In reporting the views of interviewees in this thesis, and to protect the identity of the respondents, I adopt the approach of attributing views and comments to the most relevant subject position in any instance.

The Waikato Regional Council is the regional authority for the Waikato region: it is committed to working closely with iwi toward the shared goal of a clean and healthy Waikato River. WRC is also developing the regional plans which attempt to promote the sustainable management of freshwater resources. I also interviewed several key informants from the Waikato–Tainui, Raukawa Trust Board, Te Arawa, the Tūwharetoa Māori Trust Board and the Maniapoto Māori Trust Board. Each of these River Iwi groups is a partner to one or other of the Waikato River settlement Act 2010, Upper Waikato River Act 2010 and Maniapoto Act
2012, under the Waikato River settlement Act 2010 which commit the Crown and five Waikato River Iwi to develop co-governance and co-management in respect of the Waikato and Waipa rivers.

The WRSA and the WRA place emphasis on water quality and the science necessary to revitalise water quality. I interviewed scientists and science advisors from the National Institute of Water and Atmospheric Research (NIWA) who conducted the Waikato River Independent Scoping Study (WRISS) to predict the likely effects on Waikato River water quality and the health of the river. Established in 1992, NIWA is a one of the Crown Research Institutes (CRIs) aimed to maximise scientific research output and to address the important issues that challenge New Zealand’s economic value, aquatic resources and the environment (NIWA, 2013). NIWA was also the primary consultation provider to the New Zealand government regarding the allocation of the clean-up fund. In addition, with the aim of strengthening knowledge sharing between Māori and scientists, NIWA held three rounds of hui that addressed different strategies on how to integrate Māori indigenous knowledge with scientific research.

Since land use activities are among the main issues for degradation of water quality in the Waikato and Waipa rivers, it was important to identify factors that could negatively affect water quality. Due to the contested nature of water quality concepts, I selected several participants from farmers and farmers’ representatives, hydropower, forestry, fisheries, and the Department of Conservation (DoC) to understand: how they determine the potential source of degradation, what is at stake for these stakeholders, and how co-governance and co-management was perceived as a possible solution to enhancing the health and wellbeing of the Waikato River.

I drew on the insights of Māori to investigate appropriate institutional arrangements for co-governance. Therefore, I interviewed several Māori scholars to gain insight and expert knowledge and to develop a deeper understanding of the challenges confronting Māori. These scholars were all in one way or another, and more or less directly, involved in the Waikato River or other similar co-governance and settlement processes. Research has been central to the Treaty settlement process and remains crucial in the post-Treaty-Settlement period. Further, as trusted members of their iwi and hapū, Māori scholars often act as ‘mediators’ who offer insight to parties in negotiations and shape all manner of boundary work between iwi and hapū, government agencies, and professional and academic commentary. As Latour
(2005, p. 39) emphasises, the mediator can is crucial in shaping collective knowledge and relational agency as ideas shift in their travels. As one Māori academic informants stresses:

[Sir Robert] Te Kotahi Mahuta said: no development without research and no research without development. They both go together. I think that’s his major point. So I have introduced the word “robust”, no development without robust research and no research without robust development. So it is not just researching to develop something but to having robustness about it (Informant 33).

Participants were contacted personally via telephone or email. Some participants were identified by their respective websites or other available public information such as policy documents, academic literature, and newspapers. I also used the snowball technique in order to identify more potential participants. Snowball sampling or referral sampling has been widely used in qualitative research. This technique is an informative strategy (Noy, 2008) which involves asking research informants for referral to other potential interview candidates (Biernacki & Waldorf, 1981; Robinson, 2013). This technique was appropriate for my research because it connected me to individuals with strong links to the co-governance arrangement.

3.6.4 Institutional analysis

Scholars have called for institutional analysis as an analytical research framework in the study of governance (Campbell, 2006; Hollingsworth, 2000; Ostrom, 2011; Saleth & Dinar, 2004; Williamson, 2000). Analysing institutional settings at the various levels at which decision making process are made can be a valuable method to evaluate the effectiveness of existing institutional arrangements and policy frameworks (Turnpenny et al., 2008). The work of institutions needs to be examined in “the situation” in which any particular resource is managed (Schmid, 2008, p. 13). This involves identifying how behaviour, norms, and rules (formal and informal) are shaped in relation to various social, economic and political agenda; how the resources have been allocated; and how “values influence who and what are included in different types of decision making” (Hollingsworth, 2000, p. 602). In general, the literature maps institutional analysis in relation to three hierarchical levels of analysis: micro, meso, and macro. Micro-level studies entail identifying actors’ behaviour, knowledge and capability in finding solutions for specific problems (Short, 2015, p. 132); while meso analyses focus on the effectiveness of organisational processes, management configurations, administrative
structures with respect to implementation of particular policy frameworks. Macro level analyses examine broader networks of governmental rationalities at the larger scales that often are deeply rooted and embedded within the cultural, social and political realms of a society (Turnpenny et al., 2008, pp. 763-764).

Hollingsworth (2000) provides five interrelated dimensions for any institutional analysis: institutions (norms, rules and values); institutional arrangements (states, markets and communities); institutional sectors; organisations; and outputs and outcome. The performance and execution of any institutional arrangements and organisational structures are linked to the understanding of these parameters (Hollingsworth, 2000). The interactions among these dimensions provide sites and mechanisms for different actors to “engage in contests” and to confront each other in order to address their various interests, positions and wellbeing (Hollingsworth, 2000, p. 605). In addition, “the capacity of actors to mobilise and exercise power shapes institutions and influences their effectiveness” (Campbell, 2006, p. 929). Therefore, analysing institutional arrangements requires the recognition “that actors are not coordinated or governed by a single type of institutional arrangement” (Hollingsworth, 2000, p. 605). Instead, projects operate within dynamic institutional configurations, which are actively aligned into settlements (Campbell, 2006, p. 935).

The WRSA configures a set of organisational and administrative frameworks of co-governance such as the WRA and VS. Examining the generative potential of this configuration in the contexts of New Zealand’s post-colonial settlement and after-neoliberal governmental moment, this thesis adopts an institutional analysis approach. The approach is an attempt is used to explore the potentiality of co-governance by investigating how the emerging arrangements settle conflicting interests and realign competing political projects (projects of Māori sovereignty and self-determination, environmental advocacy, and economic development). The approach uses the experiences and views of key informants to examine how the co-governance apparatus is reallocating responsibilities amongst actors and what this means for stakeholder participation in water management and river rehabilitation projects. Key informants are able to offer reflections on how co-governance arrangements are being imagined, designed, interpreted and implemented by parties such as central and local government, iwi, and resource user groups, and to learn how are being aligned to settle conflicts. Examining informants’ interests, values and perspectives in relation to managing water resources will reveal co-governance at work at the micro level. At the meso level,
responses from key informants will complement document-based institutional analysis of the design, implementation, decision-making and effects of the new statutory and administrative bodies of co-governance such as the WRA and the WRC. At the macro level, key informants will also help me to explore how institutional arrangements at the national level influence policy implementation and practices at the local level.

3.6.5 Document analysis
Documentary analysis refers to a method of examining documents that hold certain information about the subject we are studying (Gaborone, 2006). Primary documents consist of original data such as legal documents, formal documents from policy processes, media articles in a media analysis, witness accounts and so on (Gaborone, 2006; Stage & Manning, 2015). In contrast, secondary documents analyse pre-existing data produced from previous research studies (Heaton, 2008). The type of document also ranges from public sources such as governmental publication that consists of parliamentary speeches, Acts and policy reports, or private sources such as personal reports, notes from meetings and advertisement created by private organisations (Gaborone, 2006).

In this research, I analysed legislative, planning and policy documents to build an account of governance and institutional frameworks, develop analytical themes, structure the interviewing process, and substantiate the interview transcripts. These documents provided a rich source of data (see Bryman, 2012). Analysing them involved a process of ‘thorough examination’ and ‘interpretation’ (Bowen, 2009, p. 32). According to Bowen (2009, p. 33), document analysis is not about ‘lifting’ words from documents and penetrating them into the research project. Instead, the first step in the document sourcing process demands researchers identify and realize the genealogy and the contribution of particular documents in respect of their bearing on the research context (Bowen, 2009). We need to know not only why specific documents are produced but “about the social world of the people who created them” (Gaborone, 2006, p. 222). In the context of this research, the genealogy of the documents is tied up with the treaty settlement process, which contextualises the relations among the actors involved, the aims and politics of the documents and the work they performed in public (Bowen, 2009). In many ways, they framed up the process and formal constitution of co-governance and are the objects of analysis in this research. Analysing these documents allowed me to describe co-governance arrangements and identify the governmental
rationalities and political projects at work (and taking form) in co-governance. They provide the institutional architecture for co-governance, as well as revealing how the details of co-governance arrangements were developed and negotiated between key actors.

The key legislative and policy documents examined in this research include the Resource Management Act (RMA), the WRSA, the Waikato Regional Policy Statement (WRPS), the Waikato Regional Plan, and documents relating to the Treaty of Waitangi. Other documentary sources included; news articles, reports, plans and policies from different government and non-governmental organizations at the regional and national level (see Table 3.1). With the exception of *The Waters of the Waikato* (Collier, Hamilton, Vant, & Howard-Williams, 2010) which was accessed through the University of Auckland library, all documents were retrieved from the internet and from the relevant organisational websites.

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The Waikato River independent scoping study (2010) provided a key bridge between the critical literature and the policy documents that it addressed. Finally, the research also drew on analysis of a range of newspaper articles, media releases and newsletters from key participants in the co-governance process, notably Tainui Group Holdings (2015) and the Waikato River Authority (2010, 2014, 2015).

3.6.6 Data analysis and the evolution of research analysis: from critical discourse analysis to thematic analysis

This research is grounded in a mix of thematic and critical discourse analysis. Thematic analysis is a form of qualitative data analysis that involves “identifying and describing both implicit and explicit ideas”, be they embedded in text or speech (Guest, MacQueen, & Namey, 2011, p. 10). Its aim is to present “the stories and experiences voiced by study participants as accurately and comprehensively as possible” (Guest et al., 2011, p. 16). Braun and Clarke (2006, p. 79) define thematic analysis as “identifying, analysing and reporting patterns (themes) within data”. The process of “pattern recognition” involves the detection of themes through deep reading and reasoning of the data (Fereday & Muir-Cochrane, 2006, p. 82). A theme can be categorized “as a coherent integration of the disparate pieces of data that constitute the findings” (Vaismoradi, Turunen, & Bondas, 2013, p. 402).

Thematic analysis uses ‘codes’ to structure interview content and guide analysis. A code is a technical term used to refer to a noticeable word or a phrase that “captures a key analytical idea in the data and conveys this to the researcher” (Braun, Clarke, & Terry, 2014, p. 100). While researchers often use the term ‘code’ and ‘theme’ interchangeably (Marks and Yardley, 2004, p. 57), the distinction is used to set up an analytical process that runs from data familiarization to generating initial codes, identifying themes, reviewing and refining themes, and data interpretation (Braun & Clarke, 2006; Ritchie & Spencer, 2002; Srivastava & Thomson, 2009). This gives thematic analysis an instrumentalist feel, which is commonly at odds with the conduct of the research in practice, when researchers often seek to identify specific patterns and meanings within the whole dataset or certain portions of the data (Braun & Clarke, 2006; Braun et al., 2014).

Thematic analysis is used to consider texts at the ‘semantic’ or surface level, but can also cross over to deeper analysis of hidden or ‘latent’ meanings and seek to reveal insights that
lie beneath the participants’ accounts (Braun & Clarke, 2006). Here it crosses into critical discourse analysis (CDA) which is a normative analysis that studies text and speech (conversations) in relation to ideological interest (Fairclough, 2013). In CDA, ‘discourse’ can be represented as ‘text’, as discursive practice, and social practice (Blommaert & Bulcaen, 2000). CDA acknowledges discourse is socially produced as well as socially situated (Blommaert & Bulcaen, 2000) which indicates that CDA needs to be performed as a method that assimilates discourse with other ‘social elements’ such as institutions, power relations, cultural norms, and so on (Chouliaraki & Fairclough, 2010).

Lees (2004) suggests that there are two main strands of discourse analysis. The first strand derives from the neo-Marxian tradition and is used to reveal hegemonic process and identify the vested interest of actors (in a certain way of doing things). The latest work in this approach highlights the feature of ‘discourse coalitions’ (Lees, 2004, p. 102) where coalitions are formed through ‘discourse and persuasion’ and not through the ‘shared material interest’ that Marxists are fixated by. The second strand engages with Foucauldian thinking and poststructural theory, both of which suggest discourses have the ability to produce ‘truth’ through their own regimes (Lees, 2004). Lees (2004, p. 103) argues modern critical discourse analysis is dominated by the idea that discourse creates actors and their relationships. Critical discourse analysis from this perspective provides a rigorous interpretation of how the world becomes fashioned by discourse (Luke, 2002, p. 103). It begins from the position that “discourse talk things into existence” rather than beginning from the “pre-given identity of political actors”.

For my data analysis, I undertook a mix of ‘surface level’ analysis and ‘latent’ analysis directed at recovering political positions and the work of political projects situated within the interviewees’ response. My approach was to conduct a ‘top-down’ or ‘deductive’ thematic analysis which targeted “less a rich description of the data overall, and more a detailed analysis of some aspect of the data” (Braun & Clarke, 2006, pp. 83-84). In this way I hoped to avoid reading cultural meaning into the responses of Māori research participants. While it is a lesson from Māori scholarship that the cultural and political cannot be meaningfully disentangled in relation to indigenous post-colonial projects (Smith, 1999), I have restricted the extent of my critical reading of participant responses. My own ‘non-Māoriness’ means that I have not experienced the conditions of Māori being as other and cannot read this cultural-political interplay. This led me to dealing with Māori interviewee transcripts.
thematically and at the surface level (see Underhill-Sem & Lewis, 2008). I found it quite challenging to apply CDA because it requires the researcher to engage with the social and cultural production of knowledge, which as a non-Māori made me uncomfortable. I could not adopt a Kaupapa Māori approach. To overcome this challenge, I adopted a more thematic form of analysis than I had expected.

I used the overall research questions to assemble interviewee responses and perspectives on the Waikato River co-governance. From the total of 37 interviews, 36 were selected for analysis. I began the data analysis by reading and re-reading of the interview transcripts and listening to the interviewees to familiarise myself with key ideas. The second stage after data familiarisation was to find and craft the basic themes. Here I drew on the genealogy of co-governance established through the document analysis.

I identified the key statements that were extracted from interview transcripts to assemble common ideas and insights. Rather than using the now ubiquitous qualitative data analysis software (CAQDAS) such as NVivo (Welsh, 2002) and related coding processes I adopted a less formal approach. My data was contained within a smaller number of interviews, which meant that I could manoeuvre the interviewees’ response, ideas and perspectives directly in my mind to identify and create themes. Theme making can be flexible and does not necessarily require the researcher to follow any hierarchal steps (Fairclough, 2013). Thematic analysis generally involves condition-dependent meaning, such that interpretation will always be influenced by contextual factors. These will also involve difference at the level of the study itself: the nature of data, the research question, the whereabouts of richest data, and the researcher’s specific interests (Fairclough, 2013). In any case, as Bazeley (2013, p. 128) elaborates, in qualitative research, coding has been used to identify and locate relevant ideas in the data rather than using as a method for “asking questions of the data”. The analytic method for most qualitative study inquire the researchers to speculate, evaluate, cross-examine, and to think over of the phenomenon, not to count them (Saldaña, 2015). As Saldaña (2015, p. 41) argues “frequency of occurrence is not necessarily an indicator of significance”.

The interviews were transcribed and I examined the text to label and categorise similar ideas and concepts under common headings, that is “to identify all data that relate to the already classified patterns” (Aronson, 1995, p. 1). Specifically, I organised key ideas under general headings of: power and injustice, how the individual was situated, cooperation and
collaboration, co-production of knowledge, and evaluation. The identification of themes was guided by the genealogy of the co-governance arrangements, the theoretical framework of political projects and the description and critique of co-governance (derived from literature review), my field notes, and notes taken from an initial reading of the transcripts (Bradley, Curry, & Devers, 2007; Gläser & Laudel, 2013). Finding themes through reading the transcripts is similar to reading academic text whereby the reader uses both his/her prior knowledge to formulate answers to research questions (Schmidt, 2004). The interviews were not only used to canvass stakeholders’ positions and experts’ views but also to reveal practice and to add flesh to the documents.

In these different ways, my analysis of interview text was mainly derived by pre-established theoretical context (Fairclough, 2013) designed to answer my research question in the dominant context of the post-settlement drive towards co-governance. I was aware that identifying “neat and fitting quotations” from interviewee transcripts (Schmidt 2004, p. 255) was not sufficient to identify and represent the work of co-governance in practice. Rather, I cautiously re-read and listened repeatedly to interviews as an analytical technique. I related interviewee comments to the notion of political projects, seeing these as both institutionally structured and constructed bottom-up by knowledge making and other actions of social actors, individually and collectively. In this way, I adopted a constructionist approach with regards to interview material, but recognise how each interviewee is positioned in relation to one or more political projects.

Overall, several sub-themes were identified which were further refined and developed into three overarching themes that were used to construct the architecture of the result chapters including: a context of contest: WRSA as a situated experiment in co-governance (second part of Chapter Four); the health and wellbeing of the Waikato River: a framework for contest (Chapter Five); and a situated politics of co-governance (Chapter Six). By applying the institutional analysis and governmentality lens, these three themes point to a way of thinking and acting that has begun to realign and negotiate contradictory political projects. These political projects thus became theorised thematics for organising the research: economic growth at the regional and national level, environmental advocacy in relation to the water quality of the Waikato River, and Māori platforms for sovereignty. Chapters Four, Five and Six examine how these projects work themselves out in an emergent relationality through co-governance.
3.7 Ethical issues

Researchers have a well-established responsibility to prevent harm, treat research participants with respect, and deal sensitively with any information that is divulged in interviews (and any affective response that might reveal itself) (Morrow, 2007). I was aware that my research needed to be conducted ethically and to take into account the cultural integrity of the participants so that my research will not harm participants who take part in my research (Dyer & Demeritt, 2009; Liamputtong, 2008). DiCicco-Bloom and Crabtree (2006, p. 319) suggest four ethical guidelines for research with interview subjects: a) reducing the risk of unanticipated harm; b) protecting the interviewee’s information; c) effectively informing interviewees about the nature of the study; and, d) reducing the risk of exploitation. These measures are commonly buttressed by confidentiality and increasingly formalised through ethics application processes (Qu & Dumay, 2011; Tolich et al., 2015).

My research required me to obtain approval from the University of Auckland Human Participants Ethics Committee (UAHPEC) prior to conducting the fieldwork. This application provides a set of measures and special requirements that need to be undertaken by researchers. The application required me to think specifically about the challenges of working with Māori in the current context, both in general terms of ethics with respect to research participants and as Treaty partners in the New Zealand context. I identified issues including respect, the challenge of cultural and political sensitivity, post-coloniality, the need to conduct research that did not appropriate knowledge or experience without reciprocity, and the challenge of seeking understandings framed in a language that I could not speak. Participant confidentiality was a particular concern in a politically charged environment, especially one in which I may fail to grasp nuances in responses that had additional meanings to others in localised context.

These ethical considerations are heightened when working with Māori participants. Questions of power dynamics and asymmetries are intensified by colonial and neo-colonial institutional frameworks that have marginalised Māori concerns and Māori actors and produced inequitable social outcomes for Māori people. They are also heightened by a colonial history of dispossession on knowledge as well as material objects and land. Each of these factors has made Māori suspicious of being researched and each is inscribed into Kaupapa Māori research principles and protocols (Smith, 1999). They are also incorporated into a powerful discourse of theft of intellectual property that many Māori actors cite in relation to research.
‘on’ Māori (see for example Pihama & Smith, 1997; Smith, 1997; Van Meijl, 2009). These various issues are part of research realities in Aotearoa New Zealand and always present in the room in any interview with Māori. They demand further layers of research sensitivity, and impose added expectations and responsibilities, and additional requirements in research design.

UAHPEC requires researchers to comment explicitly on research practices in relation to Māori and to lay out particular concerns and how they are to be addressed, including obligations to deliver returns to research participants and Māori more generally. It requires researchers to outline how they intend to respect Māori cultural and ethical concerns. In order to show respect for Māori tikanga, I consulted and discussed the issues regarding Māori ethical values/concerns with each of my tribal contacts prior to interviewing Māori participants. The interviews took place in locations that were convenient for the informants such as workplace, coffee shop or home. The interview lasted approximately one hour. Prior to any interview, I provided participants with two forms: the participant information sheet (PIS) and the consent form (CF) (see Appendix A). The PIS provided information about the research such as: the aims of the research, the nature of the method will be used for participants’ involvement, how long the interview would last, how the collected data would be used, and how the information would be presented, stored, and destroyed. The CF form was used to obtain participants’ agreement to my research.

3.8 Summary
This chapter outlined how the research methodology was developed and employed in this research. River governance and decision-making consists of complicated networks comprising multiple actors and their contested interests. As this chapter highlights, all knowledge is situated. Knowledge is not a fixed object and its making is far from a straightforward, linear or instrumental process. Rather, knowledge making is a process of partial apprehension of the world and assemblage of incomplete elements from an open set of complex interrelationships. This research is one such partial grasp and apprehension, built around the interrogation of a set of texts and documents and the conduct of a series of interviews. It is marked by a focus on a set of institutional (co-governance) arrangements that involve Māori and thus by the challenge of working with questions of post-colonial settlement and issues that cut across political, economic and cultural boundaries that include those that
exist and/or are erected between Māori and Pākehā. As a result it is marked by research engagements between myself and Māori and thus by methodological questions that arise from, and approaches designed to deal with, the challenge of working with Māori as a non-Māori. Indeed the research is founded on a set of embodied and cultural-political encounters between a male Persian immigrant researcher and governmental and social actors many of whom are Māori and also represent Māori viewpoints.
4. A CONTEXT OF CONTEST: WRSA AS A SITUATED EXPERIMENT IN CO-GOVERNANCE

4.1 Introduction

This chapter examines the emergence of co-governance in New Zealand in the context of two defining historical trajectories: the roll out and roll back of neoliberalism (Lewis, 2012; Peck & Tickell, 2007; Peet, 2012) and the successful political projects of Māori to take back a measure of control over environmental resources from the state (Coombes et al., 2012; McCormack, 2011). The two come together in the rise of environmental rationalities during the 1980s and 1990s and the formation of new institutional structures in which the state withdraws direct control over economic development (Coombes, 2003; Larner et al., 2007). The key legislative plan of this conjuncture included the Resource Management Act 1991 (RMA), the Local Government Act 2002 (LGA) and the Treaty of Waitangi Amendment Act 1985 (TWA). The RMA brought neoliberal governmentalities to the problem of environmental management while authorizing the market to make ideal use of resources (Burton & Peoples, 2014); and the LGA gave the permissive regulator of the RMA a spatial architecture of governance. Together the RMA, TWA and LGA gave Māori a prominent role in resource allocation and environmental governance.

This chapter backgrounds this conjuncture and examines the emergent architecture. It also points to how, by the early 2000s, some of the contradictions in these Acts, including regulatory and social pressure, and new discourses of participatory, shared and distanced governance had given way to interests in co-governance (Larner & Craig, 2005; Larner et al., 2007). While this legislative structure remains, by the end of the 1990s it no longer ‘settled’ the aspirations of the different groups involved: Māori, neoliberals, and environmentalist. The RMA in particular, became widely criticised because its policy instruments began to frustrate developers with their compliance cost and failed to accommodate the rise of collaborative governance or the rising aspirations of Māori. The concepts of ‘partnership’ and ‘collaboration’ emerged as ‘after-neoliberal rationalities’ with uncertain forms and future (Russell & Frame, 2013). Discourses of co-governance and co-management emerged as a set of after-neoliberal governmental rationalities to promote collaborative governance and to negotiate environmental and social justice (Larner et al., 2007).
The second part of the chapter describes the emergence of the Waikato River Settlement Act (WRSA) from these various pressures. The data for this section is collated primarily from the analysis of key documents related to the development of the WRSA, which was complemented by interviewees’ response to explain what is meant by the new era of partnership/post partnership. As the chapter demonstrates, the WRSA emerged from long line political contestation in relation to a history of colonisation. As a legislative platform for co-governance it aims to ‘settle’, or at least stabilise temporarily, issues to do with indigenous sovereignty as well as redress loss of land and reconfigure the management of the Waikato River.

4.2 Environmental management: Neoliberal spatio-institutional fix?

4.2.1 Neoliberal New Zealand

The adoption of neoliberalism in New Zealand in the 1980s displaced one of the world’s most comprehensive welfare states (Kelsey, 1995). The neo-liberal reforms initiated in 1984 resulted in substantial restructuring of local government, privatising government assets, and reinstitutionalising the economy. The reforms dispersed social responsibilities from central government to local government, as well as marketising central government and private sector (McCormack, 2011). This was a doctrine of neoliberalism, based on the deep belief in markets as instruments to deliver efficient resource management. At core, was an “emphasis on the primacy of the individual over the social and on the economic efficiency of unrestrained interaction between individuals” (Larner, 1996, p. 35).

There is always a tendency to see this as a generalised, global neoliberalism (see Peet, 2012), but New Zealand’s neoliberalism differed from those variants actualised in other geographical specificities (Lewis, 2009). Three characteristics in particular characterised the New Zealand experiment with neoliberalism (Larner, 1997). Firstly, it was a social-democratic government that orchestrated the assemblage of neoliberal strategies (Larner, 1997; Larner et al., 2007). Secondly, the appearance of “competition” state was designed less to privatise per se and more to promote “internationalization”— new political technologies were designed to create new forms of governance and economic networks (Larner, 1997, p. 8). Thirdly, these technologies were supplemented and in various ways complemented by initiatives to address a history of colonial injustice. These initiatives involved pressing claims for greater sovereignty that resulted in a return of assets, the rise of Māori economic agencies, and the
experimental will of new governance technologies to accommodate Māori aspirations. While many of the strategies behind this restructuring and ‘market liberalism’ in New Zealand were not novel, they were assembled in particular and contingent ways.

The way neoliberalism was practiced in New Zealand raised doubts over its economic and administrative efficiency. In executing neoliberalism in New Zealand, many regional and community-based development practices were severely impacted by job loss in manufacturing and state-run industries (Nel, 2015). Councils lost prospective powers and capacities to monitor and many farmers faced dramatic situations due to the elimination of all forms of subsidies (Burton & Peoples, 2014). Māori communities were stricken with job and welfare losses, which exacerbated the destruction of community principles as a result of the doctrines of “competitive individualism and hyper-rationalism” (Lewis et al., 2009, p. 169).

By the end of the 1990s, the cracks in the market-centred regulatory regime and its many negative effects became clearly evident (Larner et al., 2007), whilst concerns were growing with respect to the way poor environmental performance threatened export revenues and market access for dairy and other products.

In 1999 the election of the Helen Clark Labour Government led to the development of a new form of neoliberalism (Larner, 2009; Larner et al., 2007; Nicholls, 2011). Tagged ‘after-neoliberalism’ by Larner and Craig (2005), what emerged was a governance regime characterised by partnership, the shifting of responsibility to non-state bodies, and an advocacy for economic growth based on new sets of relationships centred around the active involvement of citizens (Larner, 2005; Larner & Craig, 2005). Partnership in this context was viewed as a new form of governance demanding networking and negotiation to promote the integration of market and community, and in which “market competition and contractual obligations are ‘re-embedded’ in an ‘inclusive’ post-neoliberal consensus” (Larner & Craig, 2005, p. 10). The discourses on partnerships were centred on an ‘economistic language’ of ‘participation’ that prefigured a new set of interactions that can integrate the environmental discourses with the economic growth agenda while at the same time promoting socio-cultural wellbeing of the community. As emphasised by Larner et al. (2008, p. 229):

> Environment, sustainability, and culture have entered into the domain of economic policy, and community, partnership, and ethnic diversity now feature centrally in social policy.
The new partnerships had “their origins in the long-standing efforts of local activists and community development, advocates to resist policies and processes associated with the earlier versions of neoliberalism” (Larner & Craig, 2005, p. 14). Thus, after-neoliberalism in New Zealand involved a complex network of actors, governmental rationalities, and related political projects (Larner et al., 2008). Contemporary public policy development seeks to align partnership and collaboration with ‘globalisation’ and tendencies towards flexible ‘economic interdependence’ and national economic competencies (Baragwanath, McAloon, & Perkins, 2003; Burton & Wilson, 2012; Nicholls, 2011). However, introducing social objectives at regional and local levels to ‘soften’ the cuts of neoliberalism was not a decisive defeat of neoliberalism (Challies & Murray, 2008, p. 240). The new partnerships were different governmental technologies and rationalities, but built into neoliberal frames of government.

4.2.2 From prescriptive planning to neoliberal environmental management

Various studies suggest that environmental management in New Zealand in the 1970s failed to deliver sustainability and environmental quality (Cocklin, 1989; Cocklin & Furuseth, 1994). There was no national environmental plan and environmental management frameworks were “characterized by poorly defined pollution controls standards, weak inter-governmental cooperation and coordination, and a lack of effective citizen participation in environmental policy formulation” (Furuseth & Cocklin, 1995, p. 284). At the national level, several organisations with sectoral roles were accountable for environmental management planning: the Ministry of Agriculture and Fisheries, the Ministry of Energy, the Department of Lands and Survey and the Forest Service (Furuseth & Cocklin, 1995, p. 249). Other non-sectoral organisations such as the Ministry of Works and Development also had responsibility for environmental policy and local government planning, engineering, and water and soil conservation (Furuseth & Cocklin, 1995). This fragmentation in responsibility led to the development of what has been characterised as asking the “fox to guard the chickens” (MfE, 1997, p. 4.5).

The reforms of the 1980s sought to relocate management to the point of decision-making and replace prescription with a permissive planning regime that emphasised transparency and clarity of function with respect to environmental, regulatory, and commercial purposes (MfE, 1997, p. 4.5). The Ministry for the Environment and the Office of the Parliamentary
Commissioner for the Environment were established under the Environment Act 1986. The former brought the governance of environmental management under a single Ministry, while the latter created an agency to provide independent opinion in relation to the performance of public agencies on environmental management issues (MfE, 2014d). With many environmental management functions located at the local level, local government reform was seen as essential to overcome fragmented administrative frameworks (Gleeson, 1994; Grundy & Gleeson, 1996). The entire territorial structure of local government was overhauled. The Local Government Act 1987 restructured local government institutions and created new territorial local authorities (Dixon & All, 1990) based on principles of accountability and the separation of responsibility among organisations.

The number of local and regional authorities was reduced from 625 to 94. Thirteen new regional councils were created with their regional boundaries based on river catchment boundaries (MfE, 1997, p. 4.7). Regional councils were given explicit environment and responsibilities. Special purpose authorities such as catchment and water boards were disestablished and a new structure for regional and district plans was created to ensure coordinated action among the newly established regional councils and local authorities (Dixon, Ericksen, Crawford, & Berke, 1997; Grundy & Gleeson, 1996). The new structure was designed to address rising global concerns with sustainability (Cocklin & Furuseth, 1994; Furuseth & Cocklin, 1995), create a “universal system of multi-purpose authorities, fewer in number than previously, and capable of running their affairs efficiently within government reporting parameters” (Wistrich, 1992, p. 133); and replace the prescriptive Town and Country Planning regime with a permissive regime (Robertson, 1993). The new structure was also understood to provide a platform for addressing Māori interests (Gleeson, 1994). At the heart of the resource management law reform (RMLR) revocation of the Town and Country Planning Act 1977 by the enactment of the Resource Management Act 1991 (RMA) was “a deliberate move to limit the role of statutory planning in resource allocation decisions” (Grundy & Gleeson, 1996).

4.2.3 Resource Management Act 1991

The RMA was developed following five years of participation among governmental official, environmental advocate, Māori, and interested groups (Robertson, 1993). After the election of the fourth Labour Government 1987, a comprehensive environmental and planning group, the
Core Group established under the Ministry for the Environment (MfE), was tasked to review the resource management law reform (RMLR) (Memon & Gleeson, 1995). The Core Group sought to integrate neoliberal principles, market efficiency, environmental management, and resource ownership in the context of an emphasis on private property rights (Memon & Gleeson, 1995). To overcome the property rights challenge, the group sought to make property rights equivalent to ownership rights. The Core Group also sought to integrate the notion of sustainability, the application of economic instruments to natural resource management, and rethinking Māori claims in relation to the Treaty of Waitangi (Memon & Gleeson, 1995). In addition to official bodies, other groups such as the environmental advocate lobby also provided input on the review and built close working relationships with the Ministers of Conservation and Environment (Memon & Gleeson, 1995).

The RMA replaced over 60 acts and many other amendments to manage air, land, water and environment in one single Act, establishing a new regulatory framework for the management of natural resources in New Zealand (Davis & Threlfall, 2006). It completed the shift from welfare state legislative planning such as Town and Country planning to new, effects-based “biophysical and technocentric planning” (Memon & Gleeson, 1995, p. 109). Spatial planning was largely replaced by an emphasis on mitigating the adverse effects of development on the environment guided by principles of sustainable management of natural and physical resources (RMA, s5) (Memon & Skelton, 2007, p. 253). The RMA promotes sustainable management as a set of principles for a holistic management of natural resources to achieve balanced social, environmental, and economic outcomes (Memon & Skelton, 2007). Sustainable management became the conceptual and (with time) applied basis for balancing the use and protection of bio- and geophysical resources so as to provide for socio-economic, health and cultural wellbeing while at the same time:

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; (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 (RMA, s5).

The RMA 1991 also introduced a ‘matters of national importance’ clause under s6. These matters emphasise the importance of preservation of natural resources, promoting environmental qualities, and the recognition of the relationship of Māori with the land and
water (RMA, s6). These matters must be taken into account in planning practices and decisions. Alongside section 6, the RMA provided other specific provisions that obliged local governments to take into account the principles of the Treaty of Waitangi (RMA s8). These included having regard to ‘kaitiakitanga’ (guardianship) (RMA s7a); and recognising and providing for the significance of Māori and their cultural relationships with water, waahi tapu (sacred sites), and taonga (treasure) (RMA s6e). Under section 33 regional councils are allowed to transfer one or more of their functions or duties to another public authority who is not part of the council, which includes an iwi authority (RMA, s33.2). In 2005, a provision under section 36B was introduced to create joint management agreements between local authorities and iwi, which enables iwi to share power and management duties with local government bodies (Coates, 2009; Lennox, Proctor, & Russell, 2011). This provision is an initiative by government to provide more opportunities for iwi authorities within management and decision-making.

4.3 Operationalising the RMA through formal plans and statements

The RMA is operationalised by a set of regional policy statements (RPS), and regional and district plans (see Figure 4.1). As specified in the RMA, regional councils are required to set objectives in their RPS with regards to the “resource management issues of significance to iwi authorities in the region” (RMA, s62). An RPS must provide policies with an overview for the holistic and integrated management of natural and physical resources of a specific region (RMA, s59). It has an important role in setting the direction for a regional council’s management of natural resources.
The RMA makes provision for national policy statements (NPS) and standards that overarch regional and district plans. Central government can prescribe standards that are of national significance. In this regard, NPS are set to provide regional councils with directions on making objectives, policies, and rules. Under the RMA, the Minister for the Environment can prescribe National Environmental Standards (NES) (MfE, 2014b; RMA s43). NES provide technical standards for environmental concerns, with each council required to enforce the same standard.

Regional plans give effect to national policy statements, the coastal policy statement, and the regional policy statement (RMA, s67 (3)). Regional Councils are not required to produce regional plans but should prepare a regional plan when there is a significant issue with regard to: conflict over the use and development of the natural resource; risk from any natural hazards; land and water related activities that have potential adverse impacts on water quality and soil conservation; activities in relation to the restoration or enhancement of ecosystem; and iwi concerns in relation to their cultural heritage and the use of land and water (RMA, s65 (3)). Regional plans provide regional councils with instruments to deliver the purpose of the

Figure 4.1: Diagram showing the planning framework of Resource Management Act 1991 (Adopted from MfE, 2015c).
RMA (RMA, s63 (1)) in relation to the whole or a specific part of their region (RMA, s65 (1)).

District plans assist territorial authorities to undertake their functions in achieving the purpose of the RMA (RMA, s72). Territorial authorities must prepare district plans, which should recognise Regional Plans and give effect to RPS (RMA, s73). In preparing or modifying a district plan territorial authorities should also “take into account any relevant planning document recognised by an iwi authority” (RMA, S74 (2A)). The district plan should be consistent with the provisions of water conservation orders (WCO)\(^{10}\) (RMA, s75 (4a)).

Applications for resource consent are considered with respect to the provisions of these various plans and statements, and their potentially adverse effects are assessed. Those judged to have minimal adverse effects on the environment are not required to be publicly notified. However, activities that are likely to have major adverse effects are required to be advertised for public notification\(^{11}\) (MfE, 2015a). This is one of two key points at which the public is invited to participate in decision-making, the other is through submissions in relation to proposed plans, policy statements, and district plans (Lennox et al., 2011). After regional or territorial authorities receive submissions on notified activities, their staff analyse the concerns raised and may ask developers to amend plans or make variations to their own district or regional plans. If complainants or resource users are not satisfied with decisions made by regional councils or territorial authorities, they can lodge an appeal to the Environment Court (MfE, 2015b). The Environment Court is a ‘court of expertise’ and the sole judicial environmental decision-making entity that provides judgments and can “confirm, amend or cancel” decisions made by the regional or territorial authorities (Warnock, 2014, pp. 2-3). Decisions made by the Environment Court may be appealed to the High Court on points of law only (Lennox et al., 2011).

With regards to freshwater management, the RMA identifies specific responsibilities for regional councils in relation to water use and allocation. These include: “the control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body” (RMA, s30 (1e)). The RMA clearly emphasises that “no person

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\(^{10}\) The purpose of a WCO is to recognise and sustain:
   (a) outstanding amenity or intrinsic values which are afforded by waters in their natural state:
   (b) where waters are no longer in their natural state, the amenity or intrinsic values of those waters which in themselves warrant protection because they are considered outstanding (RMA, s199 (1)).

\(^{11}\) There is criticism that the majority of resource consent applications are non-notified, thus limiting opportunities for public engagement (see for example Nolan, 2007).
may take, use, dam, or divert water” unless expressly permitted by the resource consent (s14) or allowed as lawful activities under the regional plan (s20A). The RMA acknowledges that a “resource consent is neither real nor personal property” (RMA, s122). It should not last for more than 35 years (RMA, s123), but may be transferred within the same catchment (RMA, s136) (White, 2012). Under some circumstances such as drought, a resource consent could consist of a ‘cut-back’ rule to reduce water usage (White, 2012, p. 83).

The NES for freshwater directs regional councils to consider the effects of activities that have impacts on drinking water, and protect the water resource using tools such as water permits and resource consents to manage developing regional plans (MfE, 2014a). The NPS for freshwater describes the need for regional councils to ‘maintain’ or ‘improve’ the water quality standards of their regions that comply with the national bottom-line standards (MfE, 2014b). It also requires councils to collect water quality and quantity data for water bodies within their regions and evaluate them in relation to the water quality objectives, while also taking into account the environmental, economic and socio-cultural values of the community (MfE, 2014b).

4.4 RMA in Action: Key contest

Contrary to its name the RMA provides an architecture for planning rather than being an operational document or an instrument for decision-making (Memon & Gleeson, 1995). In action, the purpose of the Act has led to provocative interpretations. For example, on one hand the Act is neoliberal because it limits government interference and promotes market-based development; on the other hand, it calls for sustainable management and environmental advocacy (Jackson & Dixon, 2007). This has created doubts that the purpose of the Act is to pull together ‘neoliberalism’ and ‘environmentalism’ (Jackson & Dixon, 2007, p. 107).

The Local Government Act 2002 mandates a more democratic, accountable and consultative approach to decision-making with emphasis on the community’s wellbeing. It obliges TLAs to follow a special consultative procedure (LGA, 2002, s83) in close consultation with the public (see for example Fisher & Russell, 2011). Local authorities must prepare Long Term Council Community Plans (LTCCP) based on the social, environmental and economic desires of the community. Adopting such an holistic approach for water resource management has proven problematic. This is because the main purpose of the RMA is to promote sustainable
management, while the definition in the RMA s5 is to support the concept of ‘sustainable development’. In this context, sustainable development indicates that policy makers must adopt the integrated approach when preparing and developing plans for water management (Memon & Skelton, 2007). Regional councils have tended to interpret s5 as an indication of the importance of the environmental bottom-line rather than focusing on the holistic management of water (Memon & Skelton, 2007).

Problems are not limited to understanding the purpose of the RMA, but also to the functions of regional councils with respect to formulation of water management plans. For example, the inefficiency of water allocation in most regional councils has raised concerns for resource users, as water allocation is generally permitted based on a ‘first come first served’ basis (Memon & Weber, 2010). Moreover, while the decision-making process often involves a lot of cost and time, it is argued to be dominated by particular political interests (Fisher & Russell, 2011). Water consents are often the subject of interest for both the community and consent holders because resource consents embrace different values and can have various impacts on the source of revenue and services (White, 2012). Water consents are not tradable, such that their economic values are normally measured by proxies, such as the duration of the consent and the activities associated with that consent (White, 2012). Water consents on productive agricultural lands hold more value compared to land that has low economic return (White, 2012). Since water management is strongly influenced by socio-cultural and economic activities in any particular region, any new decision-making with regards to water allocation and new consents will likely affect the existing consents’ values and the water use efficiency.

International demand for dairy products has encouraged New Zealand farmers to convert dryland farming to pastures, despite the negative environmental impacts (Memon & Weber, 2010). Farmers are also responding to government efforts to increase exports revenues (Burton & Wilson, 2012; Memon & Kirk, 2012). “A weak and fractured” RMA offers little protection against the negative environmental effects of these developments (Burton & Wilson, 2012, p. 63). The reduction of principles of sustainability to an environmental bottom line applied at the level of individual consents treated discretely has left market forces to “create the optimal situation for resource use” (Burton & Peoples, 2014, p. 85). The development of dairying in Canterbury has been dependent on irrigation and has led to the granting of water permits for farmers. Critics claim that a lack of clear planning from
Environment Canterbury (ECAN) and an unwillingness or inability to settle contests over water allocation amongst various land-use activities in terms of collective social and environmental interests has led to an unsustainable number of water permits (Memon & Weber, 2010). Indeed, the fragility of the planning process was further illustrated by the replacement of ECAN, an elected regional council body, by an unelected body due to its unwillingness to grant permits for dairy irrigation (Burton & Wilson, 2012).

Accommodating the principles\(^\text{12}\) of the Treaty of Waitangi has introduced further contests over water management. Before the RMA, Māori had limited involvement in decision-making about water management. The Town and Country Planning Act 1977 made little reference to the Treaty of Waitangi (Hayward, 1999). For Māori, wellbeing is linked to the concept of whakapapa, which recognises their connection to water resources and lands (Bargh & Otter, 2009). At the time of the preparation of the RMA, Māori sent a clear message that “the issue of resource ownership must be resolved before any issues of resource management could be addressed” (Hayward, 1999, p. 183). Their demands were based on historical grievances to do with loss of their title over land and disputes about water ownership (Hayward, 1999). The RMA made established new provisions for Māori participation in resource management but it did not resolve the issue of title. Indeed the government that developed the RMA built Treaty considerations into the legislation, but announced that there would be no further discussion on the issue of ownership (Fisher & Russell, 2011; Hayward, 1999).

While the Waitangi Tribunal began to look at issues of ownership and resource management in another forum, Māori became increasingly concerned that the RMA did not provide enough scope for their participation in decision-making in regard to freshwater management (Memon & Kirk, 2012; Ruru, 2013b). The ongoing debates over ownership continued to undermine the attempts of local authorities to include Māori interests in water management and Māori participation in it. For instance, the Ngai Tahu corporate authority insists that collaboration in water management should be conditional upon Māori retaining their “Treaty-based property rights” (Memon & Weber, 2010, p. 111). With Ngai Tahu’s increasing interest in dairying activities, economic growth has become an even more complicated issue (Memon & Weber, 2010).

\(^{12}\) For details on the principles of the Treaty of Waitangi see “Flowing from the Treaty’s words, the principles of the Treaty of Waitangi” by Janine Hayward (2004).
Efforts have been made by the Ministry for the Environment to enhance collaborative water management in New Zealand through the National Policy Statement for Freshwater Management 2011, the Land and Water Forum 2010-2012 and Freshwater Reform 2013. These initiatives have added new momentum to a collaborative freshwater management regime under a national objectives framework (Duncan, 2014). They each recognise the significance of Māori values and the constitutional importance of their participation in water management at the local or national level (LAWF, 2015). The challenge for local authorities is to accommodate the interests and values of Māori in a manner that maintains their integrity, recognises the Māori worldview and satisfies Māori development aspirations (LAWF, 2015), and balance these with other perspectives. These processes reflect the growing appreciation of the complexity of water management in New Zealand, which has led to the development of higher order objectives that emphasise the need for collaboration.

4.5 Co-management in New Zealand

On the ground, discourses of collaborative management and collaborative governance have emerged as a negotiated set of agreements amongst local authorities, Crown agencies and Māori tribes (Te Aho, 2008; Wevers, 2013). These agreements and negotiations which are increasing in number, turn over the title of riverbeds or lakebeds to iwi (Te Aho, 2008). For example, Ngai Tahu holds a fee simple title to the bed of Lake Te Waihora through an agreement reached in 1996 after four years of negotiation (White, 2012). The Ngai Tahu settlement established roles for Ngai Tahu, relevant government agencies such as the Department of Conservation, and Canterbury Regional Council in the management and conservation of the lake (Prystupa, 1998). Other examples include: Taieri catchment co-management (see Tipa & Welch, 2006) and Te Urewera National Park conservation management (see Coombes & Hill, 2005), which have also been established to promote indigenous participation in natural resource management. These examples still fall short of equal power sharing among the involved parties, but mandate Māori involvement in the decision-making process. The question of co-management, however, remains contentious.

The LGA and RMA both oblige local authorities to fulfil obligations under the Treaty of Waitangi to provide opportunity for the realisation of Māori cultural values and customary practises. In practice, however, these acts have been widely criticised for failing to do so (Tipa & Welch, 2006). Similarly, the Conservation Act (1987) determines that DoC shall
“give effect to the principles of the Treaty of Waitangi”, but even with legislation and clear signals from government, Māori roles in co-management projects have been minimal (Taiepa et al., 1997). For Taiepa et al. (1997), the problem stems from an uneven distribution of power under legislation that does not mandate co-management and partnership. Rather, it leaves open to failure certain key dimensions of the effective implementation of co-management (Table 4.1).

Table 4.1: Opportunities and obstacles for the development of effective co-management in New Zealand (Adopted from Taiepa et al., 1997).

<table>
<thead>
<tr>
<th>Steps important towards building co-management</th>
<th>Obstacles to establish co-management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental icons of collective identity</td>
<td>Sustaining specific sites such as national parks is dominated by the western approach of conservation and legislation to represent the national identity, while ignoring the significance of Māori relationship with their taonga (treasured resources).</td>
</tr>
<tr>
<td>Acknowledging the recognition of Māori rights in the wider concept of human rights</td>
<td>Slowness in acknowledging the issues of indigenous authority, self-determination and indigenous relationship with environmental guardianship which are documented in international agreements such as the Rio Declaration on Environment and Development.</td>
</tr>
<tr>
<td>Lack of recognition of different worldviews</td>
<td>The western approach to conservation favours green environment and intrinsic values whereas, for Māori, conservation practice is for future use.</td>
</tr>
<tr>
<td>Kaitiakitanga and environmental conservation</td>
<td>The concepts of Māori Kaitiakitanga (environmental guardianship) are not fully recognized by western conservation due to the minimal opportunity for Māori to implement their Kaitiaki responsibility.</td>
</tr>
<tr>
<td>Having a concrete model for partnerships</td>
<td>In partnership both parties need to have the authority to be involved in the decision-making process. However, Māori rangatiratanga aspirations have been ignored in most partnerships.</td>
</tr>
<tr>
<td>The importance of promoting capacity building and resources to develop Māori resource management plans</td>
<td>Creating iwi environmental management plans lacks sufficient funding and human expertise to enhance Māori participation in natural resource management.</td>
</tr>
</tbody>
</table>
Taiepa and colleagues argue that clear legislative mandates are required, mandates that enforce the recognition of Māori aspirations and promote capacity building. It must also include, as Taiepa and colleagues argue, financial resources that allow for genuine partnership and full engagement in the projects (Taiepa et al., 1997).

For Māori the mandate to consult under the RMA does not go far enough. It does not specify how to nurture and sustain lasting relationships, but has instead fostered ad hoc policies that rarely underpin the importance of Māori and their responsibilities as kaitiaki in resource management (Taiepa, 1999a). They neither establish nor enforce commitment from all powerful parties to engage in developing common goals (Taiepa, 1999b).

Early examples of joint management agreements between iwi and local authorities are also criticised, largely because they allow each party to withdraw from a joint agreement. This is argued to diminish determination to build trust and negotiate long-term partnerships, and to ensure that, in the case of dispute, the local authority will always have the ‘upper hand’ (Coates, 2009, p. 34). In addition, the lack of willingness from local authorities and the lack of a strong political voice from iwi authorities to pursue their aspirations have tended to oblige iwi to act in accordance with the RMA framework even when they disagree (Coates, 2009, p. 36). Further still, little is done to reconsider and negotiate historical rights important to promoting Māori self-determination (Coombes & Hill, 2005; Te Aho, 2014), or to resolve contradictory interpretations of the key Treaty concepts of kawanatanga (limited governance) and tino rangatiratanga (absolute sovereignty) with regard to natural resources (see for example, Coombes & Hill, 2005; Forster, 2014; Jones, 2013).

Thus, Coombes and Hill (2005) argue that co-management in Te Urewera National Park, established to resolve conflict between indigenous people and park management, has in practice failed to resolve conflicts but instead initiated further conflicts (Coombes & Hill, 2005). The case shows that tangata whenua are less interested in co-management and its outcome; instead, “their principal grievances are about sovereignty, self-determination, and dispossession of land” (Coombes & Hill, 2005, p. 136). Indeed, after several years of political action, in 2014, the New Zealand Parliament passed Te Urewera Act which recognises Te Urewera as a free land and not the national park. Te Urewera is now managed by Te

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13 The Te Urewera Act provides a regulation to protect the status for Te Urewera, its natural and cultural values particularly to strengthen and maintain the relationship of Tūhoe and Te Urewera; to preserve the natural beauty of Te Urewera in relation to its national importance; and to provide for Te
Urewera Board and not by the Department of Conservation (Ruru, 2014). The case points to how fostering genuine co-management requires identifying and recognising the desires of indigenous peoples before establishing any partnerships.

In January 2007, the Local Government New Zealand published a report outlining several case studies involving joint management agreements, co-management, and co-governance in natural resource management (see Local Government New Zealand, 2011). One of these cases is the recent co-management of Orakei in Auckland, which is based on 50/50 power sharing with the intention to provide a specific statutory structure for ownership and management of Okahu Bay/Whenua Rangatira Reserve (Local Government New Zealand, 2011). The Orakei co-management model between Auckland City and the Ngati Whatua o Orakei Māori Trust Board is a way to enhance communication, interaction, and positive relationship building with iwi partners so they can undertake their kaitiakitanga role and feel more involved at the management level (Local Government New Zealand, 2011). The co-governance and co-management of the Waikato River is a second example and is argued to be the first arrangement with respect to river management in which power sharing is equally distributed among Crown and iwi (Baker, 2013; Ruru, 2013b; Te Aho, 2011, 2014; Wevers, 2013). It is argued to be a pivotal and aspirational experiment because it seeks to apply co-governance and co-management principles to New Zealand’s longest and most industrialised river, and one that flows through the rohe of multiple iwi. It is a major and complicated undertaking.

4.6 The Context of a contest: Treaty is and its politics in the Waikato

For Māori of the Waikato, particularly Waikato-Tainui, questions of Treaty politics and co-governance are situated within two crucial place-based experiences of colonisation: the Kīngitanga (Māori king movement) and raupatu (land confiscation). In the following sections I examine the emergence of a new era of co-governance/co-management in the Waikato from this context of contest over indigenous resource sovereignty.

Urewera as a place for the expression of cultural, heritage, recreational, and spiritual (Te Urewera Act, 2014).
4.6.1 Kīngitanga and Raupatu: Historical injustice

The tensions between the Crown and Waikato iwi over the Waikato River go back to the Treaty of Waitangi (O’Sullivan, 2008). Not long after the Treaty of Waitangi was instituted, many Māori tribes questioned the legitimacy of a Treaty as they did not sign it (Van Meijl, 1993, 2015). The Crown, the sovereign represented by the British Government, signed the Treaty of Waitangi with a selected group of iwi, but generalised its application for all Māori tribes (Mahuta, 1995). As a result, from the very beginning the legitimacy of the Treaty was contested. Further, the concepts of authority and sovereignty were debated with the Crown interpreting the Treaty as a set of rules to be enforced, while Māori saw the Treaty as affording them the right to administer their tikanga (custom) in their own way (Informant 35).

The debate over this basic understanding of the Treaty continues to rankle and divide even today. As one Māori participant in my research suggests that politics, culture, values, and sovereignty are very much mixed in these debates:

As New Zealand has evolved Pākehā become very dominant people in this country and basically stamped out the traditional and belief systems practices of Māori. Well, they thought they had anyway (Informant 35).

Processes of European settlement resulted in widespread land alienation either through land purchase or illegal dispossession. For Māori, this was contrary to the Treaty, which they saw as assuring that any sale of land would be controlled tribally (Mahuta, 1995). Compulsory acquisition by the Crown added to Māori frustration and has, over generations, provided a record of confiscation and injustice. At the same time, the establishment of modern western parliamentary democracy in place of the Treaty has since very early on in New Zealand history caused consternation and led Māori to seek various qualified forms of sovereignty.

One of the most prominent of these forms of sovereignty was Kīngitanga, a political movement centred in the Waikato (Muru-Lanning, 2010; Van Meijl, 2015). In 1858 “searching for the king” (Kīngitanga) to unite the Māori tribes and to stop further land sales to European settlement (see Van Meijl, 2003 for more details) led to Warrior Chief Potatau Te Wherowhero of Waikato to be selected as the first Māori King. The Māori chiefs who selected Potatau as king also handed over the authority of their land and the wellbeing of their tribal members to him (WRCSA, 1995). Potatau was succeeded by his son Tawhiao (Van Meijl, 2015). The New Zealand governor opposed the idea of the Māori King movement, and viewed Kīngitanga as a threat to the Crown’s sovereignty and an interference with Crown
land purchase policies (Te Aho, 2011; WRCSA, 1995). In 1862, Waikato iwi, sensing that the Crown sought full control over the river, declared sovereignty of the Waikato River (New Zealand History, 2014b). A year later, a group of Māori warriors from Taranaki ambushed British soldiers, giving the governor reason to extend the war in Taranaki into the Waikato and to challenge Kīngitanga (New Zealand History, 2014b). In 1863, the New Zealand governor announced at Taupiri-Waikato that government “dig around the Kīngitanga until it fell” (New Zealand History, 2014a). Māori responded by declaring that, similar to European settlers, Māori also had the right to choose their sovereignty from their own tribes (New Zealand History, 2014b). In response, the Governor ordered the invasion of Waikato to punish the 'hostile natives' (Van Meijl, 1993, p. 682), and labelled Waikato iwi as rebellious (Te Aho, 2010). As Van Meijl (2013, p. 33) emphasises, the incident launched a history of the Kīngitanga as a “never-ending attempt” to recover confiscated lands.

There are two pivotal points here for my thesis. Firstly, Kīngitanga become deeply entrenched in Waikato and national politics as a definitive political movement around which concerns about injustice, dispossession, illegal confiscation and counter claims for sovereignty crystallised. Secondly, Kīngitanga is tightly bound up with Waikato-Tainui, the dominant iwi in the Waikato River catchment and a prominent long-term claimant for historical restitution. The Treaty settlement process in the Waikato has been conducted with iwi representatives working within well-established institutions and related organisational resources inherited from the Kīngitanga movement, and it has been slowly centred on sovereignty and the return of confiscated lands. Significantly for Waikato iwi, the Raupatu claim [for confiscated lands] was not restricted to land claims, but also to the Waikato River, which is crucial to iwi identity as well as economy ─the river is part of what it is to be Waikato-Tainui. As Dean Mahuta emphasises:

Raupatu was not a commonly used term by the older generation. For these people it was a concept used in relation to the history of the Land Wars and the effect of the Crown’s confiscation of Waikato lands. Today, the term raupatu is used after these events to describe the people’s feelings about the consequences of those days (Mahuta, 2010, p. 181).

Put more simply and viscerally, one Māori participant in my research observes:
The river was taking away from the people by raupatu that is what the raupatu means; ‘confiscation’, so how do you get the connection back that was taken away from the people with the river (Informant 5).

Land confiscation led to the establishment of farms and towns alongside the river restricting access to it and severing connections between Waikato-Tainui and their connection to, and authority over, the Waikato River. For Waikato-Tainui, the raupatu was seen as a form of injustice, which brought socio-economic and cultural losses that are still apparent in today’s social deprivation statistics of poverty, inequality and crime (Waikato-Tainui, 2015), but most significantly took away mana whenua.

4.6.2 From confiscation to settlement

While the contests between Waikato-Tainui and the Crown at one time were violent, on other occasions they were more negotiated (see table 4.2). The Kīngitanga had several engagements with the Crown to acquire the ownership of lost lands, but it was unable to secure fair compensation (Van Meijl et al., 2012). In 1926, a Royal Commission known as the Sim Commission was appointed and tasked to evaluate the injustice of raupatu under the New Zealand Settlements Act 1863 (WRCSA, 1995). Then, 20 years later, the Crown was obliged to pay an annual sum of money to the Tainui Māori Trust Board in response to the Sim Commission’s report under the Waikato-Maniapoto Māori Claims Settlement Act 1946 (WRCSA, 1995). From the 1980s, however, political and economic transformation in New Zealand government, brought about in part by continued Māori struggle for historical restitution and sovereignty, gave Waikato-Tainui new opportunities to negotiate their claims with the government (Van Meijl, 2013, 2015).

In 1987, Sir Robert Mahuta, filed a claim with the Waitangi Tribunal on behalf of Waikato-Tainui, the Tainui Māori Trust Board, and himself. The claim addressed the Waikato River, Waikato-Tainui land that had been confiscated by the Crown under the New Zealand Settlement Act 1863, and the West Coast harbours. In 1989, the Court of Appeal stated that the Sim Commission's report regarding Māori land confiscations had failed to acknowledge the injustice and the catastrophic impact of raupatu on the socio-economic welfare of the Waikato-Tainui. It added that the annual monetary compensation made by the Crown was
insignificant\textsuperscript{14}. Thus, in order to honour the Treaty of Waitangi there should be a more profitable amount of compensation made to Waikato-Tainui. Subsequently, the Crown and Waikato made direct negotiations in 1989 in which Waikato-Tainui requested compensation based on their long established belief of “land for land” (WRCSA, 1995). As one Māori informant stresses, the main Waikato-Tainui expectation from the settlement was to retain the lost lands that were confiscated from them:

> At the time of the raupatu settlement, the key statement that our leader at that time and principle negotiator Robert Te Kotahi Mahuta made was: I riro whenua atu, me hoki whenua mai (for land that was lost, so [land] shall it be returned (Informant 35).

\textbf{Table 4.2: Waikato-Tainui historical claims (Sources: New Zealand History, 2014; WRSA, 2010; WRSB, 2008).}

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1835</td>
<td>Declaration of Independence</td>
</tr>
<tr>
<td>1840</td>
<td>Treaty of Waitangi</td>
</tr>
<tr>
<td>1858</td>
<td>Kīngitanga gained momentum</td>
</tr>
<tr>
<td>1863</td>
<td>Invasion, hostilities, and confiscations of Waikato land</td>
</tr>
<tr>
<td>1926</td>
<td>Royal Commission (Sim) was set to investigate the effects of raupatu.</td>
</tr>
<tr>
<td>1946</td>
<td>Waikato-Maniapoto Māori Claims Settlement Act</td>
</tr>
<tr>
<td>1985</td>
<td>Waitangi Tribunal</td>
</tr>
<tr>
<td>1987</td>
<td>Sir Robert Mahuta filed a claim to Waitangi Tribunal</td>
</tr>
<tr>
<td>1989</td>
<td>Court of Appeal</td>
</tr>
<tr>
<td>1993</td>
<td>Negotiations with the Crown about land confiscation</td>
</tr>
<tr>
<td>2005</td>
<td>1995 settlement readdressed</td>
</tr>
<tr>
<td>2008</td>
<td>Waikato-Tainui Raupatu Claims (Waikato River) 2008 Settlement Bill</td>
</tr>
<tr>
<td>2009</td>
<td>The deed of the Waikato River settlement was signed between the Crown and Waikato-Tainui, which enabled the formation of a co-management agreement.</td>
</tr>
<tr>
<td>2010</td>
<td>Waikao-Tainui Raupatu Claims confirmed</td>
</tr>
</tbody>
</table>

In 1993 as a goodwill gesture, the Crown returned the Hopuhopu Military Base to Waikato-Tainui, a very small proportion of the total confiscated land. It took the Crown until 1995 to

\textsuperscript{14}The financial compensation agreed between the New Zealand government and Waikato-Tainui was £6000 per year over the period of 50 years and each year thereafter, £5000 in perpetuity (Van Meijl, 2015).
acknowledge that land confiscations were wrongful. On 22 May 1995, the Crown settled the Waikato-Tainui land claim without taking into account the historical claims of Waikato raupatu (the Wairoa and Waiuku land blocks), the West Coast Harbours and the Waikato River (WRCSA, 1995). This was a positive step in resolving the grievances of Waikato-Tainui, but the process was incomplete. To start a new era of co-operation which aimed at repairing some of the damage caused by the historical injustice of raupatu, the Crown initiated the hearing for the Waikato Raupatu Land Settlement in 2008. The deed of the settlement was signed between the Crown and Waikato-Tainui in December 2009. Finally the Waikato-Tainui Raupatu Claims were finalised in May 2010 with the intention to restore the health and wellbeing of the Waikato River.

4.6.3 The Waikato River Settlement

The Waikato River settlement compensation sought to redress past injustices resulting from war and confiscation in the Waikato. The settlements provide Māori with both compensation and rich assets for economic development. These assets have been understood as resources for tradition on the one hand and development on the other: in one sense a return to and acknowledgement of Kīngitanga, and on the other, resources for the Waikato-Tainui Trust Board to launch an economic development programme. As Muru-Lanning (2011) emphasises, these two projects parallel the discourses of ‘tradition’ and ‘economic development’, which both carry different ideologies. They require iwi leaders to perform a careful balancing act. In practice iwi authorities have built accommodations between the different impetuses to development and tradition by forging new socio-cultural principles and identities that allow Māori to negotiate platforms for legitimately managing their assets across iwi and hapū scales (Muru-Lanning, 2011).

The historical grievances over exclusion from resource management decision-making are many and deep. For example, in 1973 the power station at Huntly was constructed without consultation with Māori. Robert Mahuta appealed against this decision and in 1976 requested the Māori Land Court to investigate the granting of water rights to the power station, but the case was dismissed. Even when the 1985 Treaty of Waitangi Tribunal was established, the concern of iwi was still focused on highlighting issues of land confiscation, but as the Tribunal stated: “the claim in respect of current concerns cannot be severed from the earlier
Discourses of co-management were brought to the management of the Waikato River in 1997-1998, with the first commission report on the co-management arrangements. An official but confidential report, it was commissioned by local government to evaluate concepts of Māori partnership for natural resource management. One Waikato-Tainui informant involved in the process at the time recalls that the report sought “to capture the journey of old people; stories about why it was important from the cultural perspective” (Informant 5). The report brought together both the question of inequalities and the Waitangi tribunal findings as well as details of environmental issues such as point source discharge and non-point discharge as a basis for co-management (Informant 5). The point is that this normalised the co-existence of Māori interests and specific management concerns that had previously been kept apart in different reports for different audiences.

In 2008, when Dr Michael Cullen, the former Minister in charge of Treaty of Waitangi Negotiations, was reading the Waikato Settlement Bill (WRSB, 2008), he emphasised that the settlement aimed to address three important issues. Firstly, it was supposed to recognise “te mana o te awa and mana whakahaere”, the special relationship of Waikato-Tainui with the Waikato River. Secondly, it aimed to support this special relationship with a legal framework that maintained the connections of Waikato-Tainui and other iwi with the Waikato River. Thirdly, the settlement intended to offer an opportunity for communities with various interests in the river to take part in its stewardship. The Bill heralded itself as “a historic achievement for Waikato-Tainui, for all other residents in the Waikato region, and, because it is the largest and most significant river system in the country, for the people of New Zealand” (WRSB, 2008, p. 19156). Historically Māori have been frustrated by the refusal of the Crown and its organisations to share any decision-making with regard to water management (Informants 35 and 37). Waikato-Tainui challenged this tradition directly by advocating co-management as a basis for settling. While it is unclear what he meant by co-management, one informant from Waikato-Tainui suggests that it is “basically what we have got in place today” (Informant 34).

15 The confidential Waikato River commission report was undertaken by the leadership of historian, Dr Ann Parsonson, to support the negotiation of the Waikato River Claim 1995 (Ngāti Koroki Kahukura Trust, 2012).
For Waikato Tainui, co-management meant that they could play a part in preventing the further degradation of the Waikato River, revitalise their cultural relationship with the River and participate in decision-making about the River. At the very least, as one of my research participants suggests, “if the Crown ever does decide to do anything with our water resources then they need to talk to us about that, which is a good thing” (Informant 35).

As a later Minister for Treat Settlements was later to observe, the WRSA heralded a new commitment to settlement by institutionalising a progressive co-management relationship with iwi:

…there have been a number of Treaty settlements where the Crown has signed the deed, the legislation has been passed, and then sometimes the mistakes of previous times begin to be committed again because people have forgotten there is a new relationship, and there is an obligation on the Crown to act according to the terms of the deed and the legislation (Parliamentary Debates, 2008, p. 19110).

As I will explain in Chapter Five, continued systematic failures in the management of the Waikato River are argued to have been instrumental in degrading the environmental health of the Waikato River. The new settlement was perceived as a ‘solution’ and an ‘ideal’ practice to achieve sustainable management, as well as part of the settlement process with river iwi. As Michael Cullen states:

This settlement provides the framework within which that degradation can be properly and adequately addressed and funded, the river returned to health and well-being, and a sustainable management regime implemented, so that our children and grandchildren will inherit a healthy river (WRSB, 2008, p. 19156).

Submissions on the WRSB 2008 raised concerns about the effectiveness of the co-management arrangements given the fragmentation of roles and responsibilities (WRSB, 2008). The Minister appointed an independent review panel to evaluate their efficiency and prompted further discussions between government and the Waikato River iwi. In 2009, the Crown and Waikato River iwi signed a revised Deed of Settlement (WRSB, 2008). A single co-governance body, the Waikato River Authority, was established with responsibilities for the co-governance of the Waikato River and charged with promoting ‘focused governance, good process, and effective outcomes” (WRSB, 2008, p. 3).
4.7 Co-governance: A flawed concept?
Some commentators have viewed the Waikato River co-governance arrangements as inherently ‘flawed’ and undemocratic. They are concerned with the shifting of decision-making responsibility from elected representatives to the co-governance board consisting of government and iwi members (Nicolson, 2010). The former head of Federated Farmers, Don Nicolson, criticised the arrangements as “based on a misunderstanding of the common law around water, a faulty analysis of the Treaty, and an interpretation of case law well beyond what the courts have actually said about the Treaty (Nicolson, 2010)\(^{16}\). The lack of democracy, Nicolson argues, makes it impossible to balance the socio-economic and cultural demands of the current resource management issues (Nicolson, 2010). Nicolson (2010) suggests that if Waikato-Tainui had a genuine concern to restore the Waikato River, then they must set aside co-governance ideology and reinstate “democratic principles”.

Industries such as the farming sector fear that co-governance will bring more restrictions for water allocation and discharges into the river. However, Chris Finlayson, the Minister for Treaty of Waitangi Negotiations, suggests by contrast that the overarching purpose of the WRSA is to improve the wellbeing of the river because:

Iwi insisted this must be the goal of the settlement. A healthy river is a must for a productive agricultural sector. This is not an issue of separatism. The interests of the iwi here are the same as the interests of all New Zealanders - and that should not come as a surprise (Finlayson, 2010)\(^{17}\).

In response to Nicolson’s argument about the lack of democracy in co-governance, Finlayson stresses that all parties in the Parliament, with the exception of the Act Party, supported the WRSA Bill. He goes on to add that:

My ministerial colleagues, officials and I met Federated Farmers a number of times to consult on changes to improve the original version of the bill that had been promoted by the last government (Finlayson, 2010).

For Finlayson democracy is associated with “accountability and responsibility”. There are 11 local and regional authorities alongside the river. Although each is democratically elected and

\(^{16}\) The New Zealand Herald (Tuesday May 11, 2010).
\(^{17}\) The New Zealand Herald (Tuesday May 18, 2010).
responsible for its own region, not one is accountable for the river as a whole (Finlayson, 2010). The Waikato River Settlement Act established one co-governance body which was to be responsible for setting the ‘Vision and Strategy’. Finlayson argues that the Vision and Strategy statement will harmonise the plans of all local authorities alongside the river (Finlayson, 2010). It represents a different form of democracy.

In New Zealand, co-governance and co-management are designed to accommodate not just principles of efficiency and accountabilities in river management, but the sovereignty aspirations of iwi. This is not to say that these aspirations are fully recognised or incorporated into governance in legislation or practice. The WRSA deliberately avoids any statement which links the ownership of the river to iwi. As Georgina Te Heuheu suggested at the time in Parliament:

No doubt some questions will be asked outside this place about who has the ownership, and, happily, no one need be concerned about that. Although there are some provisions in this settlement that foresee possible ownership interests being raised in the future, that is not the thrust of this bill today. The thrust is about the well-being of the river and the well-being of a people who, since the 1860s, have been deprived of access to it and their rights to protect it, not just for themselves but for the wider community (WRSB, 2008, p. 19156).

For Waikato-Tainui, the ‘ownership’ of the river is something that does not need further discussion, no matter what the new legislation offers. For Waikato-Tainui negotiator, Tukoroirangi Morgan, Waikato-Tainui the river belongs to them and they do not require any legislation to give them the right to control it:

For our tribe it was never about getting the title of who owned the river, we didn’t need a piece of paper to tell us that the river belongs to us because we are the only tribe that took its name from the river (Morgan, 2012).

The question of ownership is present in every negotiation, but iwi tend to articulate their concerns around cultural redress and environmental degradation. This allows them to avoid direct confrontation with government as representative of the Crown (Informant 37). Co-management discourses enable them to secure community support around discourses of ‘participation’ and ‘inclusion’ in a regime that will clean up the river and improve the wellbeing of the future generations. As one informant from Waikato-Tainui observes:
So what we tried to do in setting the settlement was to make sure that we could renew and reconnect our connection with our ancestral river and try to make up for all the time that we have been excluded but also [advocating for] the restoration program. And it is a very practical approach that Sir Robert Mahuta took because he could have argued about the ownership, he could have gone on and on about historical relationships and he did to a degree but I think the thing that he was brilliant in doing was setting the scene for everybody to become involved and passionate about it (Informant 34).

Waikato-Tainui strategically assembled discourses of restoration and sustainability to mobilise support for co-governance and to suggest mutual benefit with respect to economic, environmental and recreational matters. As I will discuss in Chapter Six, they became thought leaders in the development of co-management in New Zealand. As they recognise, irrespective of the unresolved issue of ownership, the new partnerships shift the meaning of participation from the fraught notion of “consultation” to active participation (Informant 37). The Waikato River co-management arrangements are the first New Zealand example that expressly declare that a river should be financially co-managed (Informant 34). In practice, this means that co-managers control water resources. Any project to rehabilitate any part of the river must be co-developed between River Iwi and the Crown (Informant 15). The challenge remains, however, that there are multiple iwi, multiple councils and several powerful business stakeholders involved. For a senior legal consultant from Waikato-Tainui this makes it a “bold step and I think quite unique” (Informant 34).

4.8 Te Ture Whaimana o Te Awa o Waikato (Vision and Strategy for the Waikato River)

In March 2008, Treaty Negotiations Minister Michael Cullen announced the Guardians Establishment Committee (GEC) membership. He described it as “an important milestone and that he was pleased to see strong iwi, community and local government representation on the Committee”. The GEC was charged with fostering “kotahitanga or unity” among Waikato River Iwi, its community and the Crown in setting a Vision and Strategy (VS) for the river. In 2009, the GEC presented the Te Ture Whaimana o Te Awa o Waikato (TTWTAW - Vision and Strategy for the Waikato River). The TTWTAW is a high level document designed to
provide direction and an overarching purpose for the WRSA. This was in short to restore and protect the health and wellbeing of the Waikato River; to promote the restoration and protection of the Waikato River while enhancing the sociocultural, economic, and spiritual wellbeing of the Waikato iwi and its communities.

The VS was finalised after a consultative process through several hui (meetings) with local government, iwi, the Waikato community of interest, industries and key stakeholders, where further submissions on the initial VS were received and helped GEC to complete the final version of this document. Following this process, the first GEC report identified four major issues (WRA, 2010, p. 2):

1. The degradation of the Waikato River and its catchment has severely compromised Waikato River Iwi in their ability to exercise kaitiakitanga or conduct their tikanga and kawa;
2. Over time, human activities along the Waikato River and land uses throughout its catchments have degraded the Waikato River and reduced the relationships and aspirations of communities with the Waikato River;
3. The natural processes of the Waikato River have been altered over time by physical intervention, land use and subsurface hydrological changes. The cumulative effects of these uses have degraded the Waikato River; and
4. It will take commitment and time to restore and protect the health and wellbeing of the Waikato River.

After considering the above issues the GEC provided the overarching vision for the Waikato River:

Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri “The river of life, each curve more beautiful than the last”. 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 (WRA, 2010, p. 4).

The Vision calls for all communities to take on shared responsibility and encompasses a set of defining principles, protocols, and practices for co-governance (WRA, 2010, pp. 6-7):
- Restoration and protection of the Waikato River’s health and wellbeing; as well as the protection and restoration of the relationship of the Waikato Region’s communities with the Waikato River (including economic, social, cultural, and spiritual relationships).
- The integrated, holistic and co-ordinated approach to the management of the natural, physical, cultural, and historic resources of the Waikato River.
- The adoption of a precautionary approach and recognition and avoidance of adverse cumulative effects.
- The integration of “mātauranga Māori” and “the latest available scientific methods” to deliver sound knowledge.
- The recognition of the Waikato river’s degraded yet strategic status and its importance to New Zealand’s social, cultural, environmental and economic wellbeing.
- The protection and enhancement of significant sites, fisheries, flora and fauna.
- The application both mātauranga Māori and the latest available scientific methods.

The Waikato River Authority (WRA) was then formally established as the co-governance body to implement the VS and allocate the contestable clean-up fund (Informant 31). WRA is a statutory co-governance entity created in accordance with the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, the Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010 and the Nga Wai o Maniapoto (Waipa River) Bill 2010 which came into effect in April 2012 (Waipa River Act 2012). The WRA came into operation on 25 November 2010. In terms of the co-governance arrangement, the WRA is an entirely new organisation but has a connection with the history of the pervious GEC in terms of the purpose and objective of the VS (Informant 31).

4.9 Conclusion
This chapter has reviewed how, in New Zealand, the emergence of neoliberal and environmental rationalities during the 1980s and 1990s has given rise to the formation of new governmental rationalities in which the state has withdrawn direct control over economic development. While emphasising principles of sustainable development, the RMA applied neoliberal rationalities to the management of natural resources (Burton and Peoples, 2014). It
has been widely criticised for facilitating economic development at the expense of environmental interests in an environment where government has pursued economic growth through productivist agriculture (Campbell et al., 2009). Dairy production is at the core of this growth project and fundamentally implicated in the degradation of New Zealand rivers through nutrient discharge. The RMA has also fallen short on achieving collaborative governance and giving voice to Māori aspirations in natural resource management. The co-governance arrangements to do with the Waikato River emerged out of these failings of the RMA in a context of intensifying contest surrounding Māori historical grievances and drive towards enhanced participation in natural resource management if not resource sovereignty more generally. The Waikato River co-governance and co-management arrangements are a pioneering initiative to develop power sharing in river management in New Zealand. In the next two chapters I will examine how these arrangements have been implemented and how they have come to promote the health and wellbeing of the Waikato River and realign the interests of different stakeholders in the Waikato.
5. WHAT IS AT STAKE IN THE MANAGEMENT OF THE WAIKATO RIVER?

The river is so dirty, I make sure that my children and grandchildren don’t swim in the water. We made a little pond at our home and we called it the Waipa iti (the little Waipa) and the kids can swim in there … and we make sure that it is clean (Informant 33).

5.1 Introduction

As discussed in Chapter Four, the Waikato River Settlement Act, 2010 (WRSA) established co-governance and co-management of the Waikato River with the stated objectives of improving the health and wellbeing of the peoples of the Waikato River catchment. Despite the multiple potential contributions the river might make to economic growth and the socio-cultural wellbeing of the region, what this means and how decision-making around water management in the Waikato River catchment might best be organised and practised remain highly contested. Understanding how people manage in order to enhance wellbeing and how this might be organised through river governance depends on a close analysis of what is at stake around water resource management in the Waikato River. The Waikato River is an important part of what iwi consider to be their ‘wellbeing’. The river is bound up in multiple economic, socio-cultural and environmental issues that in turn influence debates about river uses, and the restoration of its health and wellbeing. Addressing these issues and the questions that arise with regard to managing the Waikato River requires sound understanding of the socio-cultural, economic and environmental values held by communities and how these are attached to, or emerge from the river itself. Moreover, understandings of how policies will impact on these values are also important for water resource management.

In this Chapter I discuss the values and contested discourses of governance at play in debates about the management of the Waikato River. These can be reduced to three key issues framed discursively about river values and their underpinning ideology of governance: indigenous cultural values (mana whenua), environmental qualities, and socio-economic use (be it sustainable, for development or growth). The interrelated issues between the mana whenua, water quality and economic growth that emerged from this research offer a particular framing understanding of Waikato River co-governance. The chapter points to long-term management failures that have given way to a new regime of management and a period of river restoration.
and restorative justice for the river’s traditional owners. The purpose of this chapter is to describe the relationships at play and issues at stake in the management of the Waikato River. It shows that the health and wellbeing of the Waikato River is a contested concept in which water quality is only one component. The information presented is derived from interviewee responses and from analysing documents to interpret the competing political projects in the Waikato. As heuristic devices, I have tried to tease these projects apart to see how they interacting with each other.

5.2 The health and wellbeing of the Waikato River: A framework for contest and co-governance

The WRSA established, by law, a commitment to restore and protect the health and wellbeing of the Waikato River. For both Māori and the Minister, as representative of the Crown, the act hailed a new era of governance. For Māori it represented a new commitment to the river and to its restoration, one that derived from a new “sense of aroha, of caring—a sense of respect, care, and commitment to improving the status of that water” (Tariana Turia quoted in WRSB, 2010, p. 10830).

In general, the rehabilitation\textsuperscript{18} of a river involves revitalising cultural as well as biophysical and socioeconomic values of a river and interactions among them (Fryirs & Brierley, 2009; Naiman, 2013). River rehabilitation must bring together ‘experiential’ and ‘aspirational’ values, and indicate what is desired and what is achievable in terms of moving toward a ‘new natural’ state of any particular river or stream (Fryirs & Brierley, 2009). It should consist of a social process as well as a technical process in which the relationship of sociocultural, economic and biophysical values determine the rehabilitation objectives (Fryirs & Brierley, 2009; Hillman & Brierley, 2008). This process itself points to highly sensitive transitional governance and reinforces the need for a new regime of governance and management to replace failed regimes of old, especially if we consider degradation to be governance failure. Political authorities point to the same issues and requirements for something new and more sensitive. WRSA and the Waikato Regional Policy Statement (WRPS) recognise that the Waikato River and its catchment have been subjected to continuous degradation. The WRPS

\textsuperscript{18} - Although there is a turn in the literature to use the term ‘rehabilitation’ in preference to ‘restoration’ (see for example, Brierley et al., 2008), the participants in this research spoke of restoration rather than rehabilitation. The term ‘restoration’ will be used where referring to the view of participants who use the term, while rehabilitation or revitalization will be used in my own commentary.
expresses concern over environmental, economic, and sociocultural dimensions of the health and wellbeing of the Waikato River. The 2012 ‘Proposed’ WRPS presents the challenges as:

a) adverse effects on the mauri of the Waikato and Waipa Rivers;
b) the ability of the Waikato and Waipa Rivers to sustainably and safely provide food and cultural, economic and recreation opportunities;
c) the effect this has on the relationship of Waikato-Tainui, Ngāti Tūwharetoa, Te Arawa River Iwi, Maniapoto and Raukawa and the regional community with the rivers; and

d) the need to restore and protect the health and wellbeing of the Waikato River while providing for the existence and continued operation and output of the Waikato hydro scheme (WRC, 2012g :1.6).

The WRSA clearly emphasises commitments to the health and wellbeing of the Waikato River, but this has different meanings for different actors. Some want to improve the water quality of the river, while others want to ‘reconnect’ with the river or emphasise matters of economic productivity or environmental quality. One of the participants brings together some of these disparate views with his/her observation that “part of the aspiration for the settlement was certainly about restoration and degradation of the water body, but it was also about reconnecting people with their ancestral river” (Informant 34). While at some level this simply shifts the point of contest to the definition of ‘connection’, it does enrich discussion. The challenge then becomes one of rebuilding the values of connections to those of water qualities and water use. As one Māori informant from the Waikato-Tainui elaborates:

Everyone worried about [and] focused on the restoration and health of the river in terms of water ways... but I said what about the health and wellbeing of the relationship of people with their river... We are worried about these riparian management plans and making sure that we have fenced [the river] ... but is there a fencing matrix equivalent of with the thinking of the people and their relationship with the river... I was told by kaumatua when other tribes came to our rohe they could define where those people came from by the smell of their skin. They smell like their river because they lived with the river, they breed with the river, they swam, and they drink. So the smell of their skin was representative of their river ... it was the smell of aroha (love) and respect (Informant 5).
5.3 Māori and the river

For Māori, water is deeply ingrained in traditional knowledge systems while the concept of wellbeing is irreducible to social and cultural aspects. As one informant recounts:

For Māori water isn’t taken as a commodity. The term water is ingrained in our very language and therefore that is the sort of connection that we have with water and so we must treat water accordingly (Informant 35).

Māori worldviews build on an ontology centred on relationships with the natural world (Harmsworth & Awatere, 2013; Harmsworth & Roskruge, 2014). Mātauranga Māori or Māori knowledge is derived from key concepts such as whakapapa (genealogy), kaitiakitanga (guardianship), rahui (prohibition) and the importance of mauri (life force), each of which establishes intimate and integrated, even co-constitutive, relationships people and the natural world (Harmsworth & Awatere, 2013; Muru-Lanning, 2012a, 2012b). As one Māori historian to whom I spoke in the course of my research observes:

The Waikato River is a source, it has a cultural significance, it has a historical significance and it has a spiritual significance… That is the place that they did their ceremony, the cleansing ceremony which they called it ‘Pure’, that is where they did their baptisms, that is where they did their naming ceremonies, marriages as well. So all those important ceremonies were dwelled at the river (Informant 19).

Another informant highlighted the rich and diverse relationships that Māori have made with the river and how the river has sustained them:

There is a very strong spiritual connection with the river…it is this long and centuries of living in a particular area… If you grow up next to the river, it is that affinity that you have with it and that could be established because you swam in it, bade on it, you get food from it. It is a recreational playground…ceremonial purposes [and] many of the kids on the river paddle on the river… I suppose you can call them benefits (Informant 12).

The river is, thus, far more important for Māori than just a source of revenue, a collection of environmental qualities, or sites for cultural practice. The river is part of who they are; their whakapapa and the knowing of the world and the nature of being that flow from these relationships. Their river is said to flow through and define iwi, their individual and
collective bodies, spirituality, culture, and place (Te Aho, 2010; Tipa, 2009). The mountain and the river of any place connect its people to the land, to generations, past, present and future, and to the spiritual world. By contrast with western worldviews, which focus on the wellbeing of the ‘individual’, Māori views emphasise the wellbeing of the group (see for example, Berghan, 2007; Haar & Brougham, 2011). When Iwi introduce themselves, they refer to the mountain and the river as their connection to Ranginui (sky father) and Papatuanuku (earth mother). As one research participant from the Waikato-Tainui emphasises:

Ko Taupiri Te Maunga; Taupiri is my mountain, Ko Waikato Te Awa; the Waikato is my river. What I have just articulated, was I made a reference to the land in terms of the mountain and I made reference to water in terms of the river. That is who I am (Informant 35).

This participant cited an old Whakataukī (proverb), “Ko au te awa, ko te awa ko au: I am the river and the river is me” to express the close connection of Waikato-Tainui with the river (Informant 35). If the environment is unhealthy, then its people will also be unwell (Informants 19 and 35). The river and its water cannot be treated as commodities.

Wellbeing necessitates ‘inclusion’ in terms of managing the river. Colonisation meant ‘exclusion’ from resource management and thus, in turn, from the river as a defining part of the group and the social system (Informant 36). Iwi wellbeing was compromised and, in the views of many, was irreversibly damaged (Informants 35 and 37). The WRSA was purposely created to revitalise the relationship of the Waikato-Tainui people with the river and to involve them in the decision-making process. The importance in regaining formal access to decision-making was emphasised by one Māori participant from Waikato-Tainui:

So what we’ve done in setting the settlement was to make sure that we could renew and reconnect our connection with our ancestral river and to make up for time that we have been excluded (Informant 34).

For Māori, the river and the water has its own ‘mana’ (prestige, authority and spiritual power) where mana refers as much to the energy and power of the natural word as the authority, 19

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19 This proverb originated by those from the Whanganui tribal area to identify the unity of their people with the Whanganui River (Bargh, 2007).
status and spiritual power that iwi draw from their relationship with the river. They argue that the concept of the mana of the river has been neglected:

So many reports that I have seen actually reflect the importance of ‘mana’ not ‘money’. I think that what we sometimes miss though is that the river, the waters themselves have a mana. We tend to talk about the mana of stakeholders, we tend to talk about the mana of political power dynamics, but the mana of the river is sometimes again not totally ignored but marginalized (Informant 33).

One interviewee stressed that by ignoring the mana of the river itself, non-Māori have undermined the wellbeing of the river and created disquiet among Māori. He suggests that Māori are

...very worried about ... the water to be used for dams, for farming [and] for irrigation... It is a huge, huge, huge concern for local Māori down there... They worry about the mauri or the life force of the river [that] almost been emasculated. That is how they see it (Informant 13).

For Māori then, as for others, the challenge is to enhance environmental quality and connect to the river, while also drawing on the river for their livelihood and prosperity. There are complex tensions here, often within iwi, and these must be worked out through iwi river management. Taking a Mauri perspective, the crucial question:

... is about the survival away from the pollution but prospering and moving into another level of health, and the whole environment not just the scientific and the water quality, but the quality of life, of the people and flora and fauna who are associated with the water (Informant 33).

The concept of kaitiakitanga demonstrates Māori duties and obligations to enhance and protect the mauri (life force) of the environment (Fa’aui & Morgan, 2014; Forster, 2011b, 2013). To practice kaitiakitanga, individuals or a group known as kaitiaki (guardian) with a spiritual and a physical connection to the natural environment are responsible for preserving those environmental resources (Forster, 2012; Whyte, Brewer, & Johnson, 2015). For one informant from Raukawa, the concept of kaitiakitanga extends beyond mandatory obligations to look after the river as an iconic identity:
As a Raukawa person, I believe, I have an obligation to the Waikato River... If you are receiving a benefit and if you are being sustained by your land then you have an obligation to ensure that you take care of that land. So it is not just about responsibility, it is about obligation. We are obliged to look after the river because we gain some sort of benefit from the river, it is our spiritual, our cultural and our heritage (Informant 19).

The Raukawa informant went further to suggest that Māori have a mandate to practice their kaitiaki responsibilities to safeguard the wellbeing of land, water and their people:

Raukawa have actively opposed these super-farms removing thousands and thousands of litres of water, in the Environment Court...it is the obligation of Raukawa as kaitiaki, as those who should be caring for the whenua and for the awa... which is what the general public don’t necessary understand. We are opposed to anything that will adversely affect firstly, the whenua and the awa, and secondly affects our people (Informant 19).

In the traditional Māori view, as one Māori scholar emphasises: “to become a good kaitiaki it was necessary to ensure that a resource such as water would be passed on to the next generation in as good condition if not better than when you became the kaitiaki (Informant 2). In contemporary times, trustees of hapū have taken on the role of kaitiaki (Forster, 2011a; Hikuroa, Slade, & Gravley, 2011). Under the Waikato River co-governance arrangement, the River Iwi have mana and are the kaitiaki responsible for protecting and enhancing the health and wellbeing of the river. This role of guardianship is not new (Muru-Lanning, 2010). Waikato taniwha (water creatures) are recognised by Waikato River iwi as the metaphysical icons that symbolise concepts of kaitiaki (Muru-Lanning, 2010, 2012b). A well-known Waikato tribal proverb states: “Waikato-taniwha-rau He piko, he taniwha He piko, he taniwha; Waikato of a hundred taniwha. At every bend a taniwha can be found” (Te Ahukaramū Charles Royal, 2012). As one Māori research participant stressed, in pre-European times different iwi and hapū claimed rights to specific sections of the river, and stories such as taniwha served to “reinforce” their rights and responsibilities to these reaches. The taniwha linked them to “the ancestors who had rights and responsibilities to the river and with the river” (Informant 33). As one informant, observed the concept of taniwha is both physical and metaphysica:
Māori are talking about taniwha [spiritual monster but really what they are talking about is a guardian [and] a chief. It can be something metaphysical being that looks after that particular stretch of the river, but they are also talking about a physical person as well and that is the chief on that stretch of the river (Informant 13).

For Maniapoto, the taniwha is both physical manifestation and guardian of the ethics underpinning Māori physical and spiritual connection with the Waipa River:

Waiwaia being the principle of taniwha of the Waipa River and its tributaries and the other waterways, the swamps, the lakes, the ponds that feed into the Waipa [River]. Waiwaia is the taniwha and the relationship that people have with Waiwaia. So that’s another Māori interest which I would say is not a physical interest as such but it has applications and it has impacts on the way that we physically relate with the river (Informant 33).

The concept of the taniwha, however, transcends Māori worldviews. Taniwha live on and have a growing influence in wider communities (Muru-Lanning 2010). As one Pākehā farmer remarked in interview:

People make fun of taniwha… but it is all about their history and a story of their life and their ancestors. Naturally their marae are close to rivers and streams because they needed water. The taniwha build the story and give history… at the local school because they have the stream care group, and the kids like the stories and they draw pictures about it (Informant 27).

5.3.1 Mana Whenua: Indigenous relationships with the Waikato River

Not only is restoring the health and wellbeing of the Waikato River argued to be necessary for iwi to reconnect with their past, but restoring mana whenua is argued to be necessary for the wellbeing of the river.

We are worried about what has been released into this river and if we want to look at how we are going to improve the quality of the river then we need to understand… what are the relationships, what are the aspirations of the people… that have the mana here (Informant 13).
The WRSA captures the importance of the relationship of River Iwi with the Waikato River. It recognises enduring links between the river and its peoples, and the pressures placed on them by colonial governance. Each of the five River Iwi recognise kaitiatikanga, tikanga, mana whakahaere and Waiwaia beliefs which stress the importance of the Waikato River as an important icon of cultural, spiritual, and physical wellbeing (WRC, 2012g :1.5). However, while the different Waikato River iwi are closely related and all view the River as an important life source, participants in this study suggest that different iwi have different connections to the river (see also Muru-Lanning, 2010). This complicates co-governance.

The Act makes particular reference to the Waikato-Tainui belief that the Waikato River is their tupuna. It reflects the emphasis placed by Waikato-Tainui on river restoration and reconnection with their ancestral river in their settlement negotiations. The belief that the River is tupuna establishes an intrinsic as well as cultural connection between iwi and river and renders Waikato-Tainui inseparable from the river. The point is used to emphasise the difference of such a worldview from the western worldview:

We are indivisible; the intent of the statement is that I am connecting with the river as it is with me, we are one entity. But I think from the science point of view many scientists and academics find it difficult to understand that (Informant 35).

Another of my research participants of Waikato-Tainui descent emphasised that:

We don’t see [the river] as a thing to be exploited as a part of us. [It is a] tupuna and ancestor. It’s got spiritual nature, you know, it’s got historical characteristics and not everybody sees the river that way (Informant 34).

…just like an ancestor provided for your people in the past, the river too provides for the people in future. So by looking at ancestral perspective, and there are many interpretations but one is that; because of the strong link with the river and because the river looks after you like your parent… because it provides sustenance to the people (Informant 12).

Others see the river differently:

Ngāti Raukawa … don’t regard the river as their tupuna. For them [Waikato River] is not about that ancestral connection, for them [Waikato River] is about the links to the ancestors who had rights and responsibilities to the river and with the river.
… Waikato-Tainui always say that Waikato River is their tupuna, but to be tupuna you actually need to have descendants and no one descends from the river… I don’t see it as being tupuna it is something that we use. I cannot show a clear whakapapa, a clear genealogy to the river, I can show the whakapapa and clear genealogy to the ancestor that came and used the river (Informant 19).

For Muru-Lanning (2010), these different worldviews are important in mapping the relationships between the River and iwi among Waikato River iwi. With Waikato-Tainui regarding the Waikato River as a tupuna, the river has its own status. Muru-Lanning argues further that it is irrational to divide the river into parts. Fragmenting the river would “alienate some tribes from the river” (Muru-Lanning, 2010, p. 66). While Māori emphasise the difference between shared philosophical understandings and those expressed in scientific worldviews as a platform for presenting unified political positions on the river, difference exists among iwi beliefs and related political positions. For Muru-Lanning this means that “it is the rights to the river that must be shared out among tribes” (Muru-Lanning, 2010, p. 66).

The point for this thesis is not to try and unravel this complexity and the way it plays out politically; as an outsider that would be inappropriate and as a non-speaker of Te Reo it would be impossible. Rather, it is to recognise this difference and its significance for the co-governance arrangements that have been negotiated. In negotiating and implementing the WRSA, each tribe sought to exercise their own customary authority and mana whakahaere (the authority established over many generations by each Waikato River Iwi to ensure and balance the mauri or life force of the Waikato River) (WRSA, 2010). The issues at stake here are a highly complex fusion of ontological belief, political claims to territory, the hydrological materiality of water through catchment and along river, and the ontological uncertainty of any river. ‘What is a river’ is equally as disputed a question in western politics and science. Moreover, the material worlds of Waikato history generated contested claims mana whakahaere and mana whenua in relation to the same stretch of the river.

The tensions created by the contests around power-knowledge have been exacerbated by the use of defined spatial units to think through questions of responsibility and to reallocate authority and to calculate and make redress. They are not unusual in the process of Treaty settlement:
Unfortunately the political environment that we live in and the treaty settlement process pits whanau against whanau, you know. There is a line drawn on maps that says this is ours and that is yours and if you don’t agree on that line, then it is all on i.e. there is going to be a problem (Informant 36).

In the historical Māori political makeup, Māori did not have iwi authorities or fixed rohe (Informant 36). Māori society was set up by each hapū. Rohe boundaries were continuously negotiated and often contested (D’Hauteserre, 2005). This fluidity was progressively broken down by colonial thinking (Informant 36). Settler government has territorial local authorities with defined boundaries and clearly delineated borders (Informant 36). As emphasised above, Māori philosophical worldviews are based on genealogical and sacred connections to the natural world in which spiritual and physical worlds are bound (Harmsworth & Roskruge, 2014; Mika & O'Sullivan, 2014; Panelli & Tipa, 2007). The modification of landscape boundaries over the past 100 years together with the colonial resource management approach that favoured economic values over Māori values (Tipa & Nelson, 2008) is argued to have fractured Māori connections to land and removed established rights to manage resources and responsibilities to steward them. As Forster (2014, p. 73) recalls, “the systems and institutions associated with British colonization destabilized Māori social order, identity, and authority through colonizing the mind and the physical landscape”. The colonising force of ‘colonial mentalities’ (Forster, 2014) has yet to be fully exorcised from iwi views of the river:

We talk about for the benefit of the river, and to be blunt, that sometimes means the river gets forgotten in that conversation, which is disappointing but it’s a reality. People say you have been fighting for so long that sometimes you can take the eye off the prize, which is the restoration and health and wellbeing of the Waikato River. It becomes more about mana than anything else, that is become again [about] if I can get more than you, it is better for me (Informant 36).

The ongoing intensive land use activities and environmental degradation associated with colonisation have been identified as significant factors in weakening hapū relationships with their rohe and thus preventing them from exercising kaitiakitanga (Forster, 2012, 2013). Therefore, the acknowledgment of mana whenua and their role as kaitiaki to protect the environment is directly associated with Māori wellbeing (Panelli & Tipa, 2007). Protecting the mauri of the river will sustain and nurture a healthy ecosystem that supports various traditional and customary practices such as mahinga kai (traditional food practices) and
hauanga kai (harvesting seafood) which provides Māori with a sense of kinship with their environment (Panelli, 2009). The WRSA conveys a clear message that the health and wellbeing of the Waikato River iwi is directly associated with the health and wellbeing of the Waikato River (WRSA, 2010). The question of whether the current environmental resource management regulations would promote or obstruct the mana whenua relationships with their tribal land and natural resources is still uncertain (Forster, 2013).

5.4 Debating water quality issues in the Waikato

“…clean water is becoming more valuable than gold. These are the kinds of discussions and conversations which are affecting the co-management arrangement and connecting us [to the river] (Informant 33).

Environmental scientists use scientific measurements and monitoring techniques to evaluate the state of the environment in relation to concerns such as pollution and water quality. Environmentalists, including some prominent scientists, focus on environmental issues in order to promote conservation of the natural environment such as river and lake restoration. While the first group uses science to study the environment, the second group connect scientific evidence to social and community concerns about the natural environment to make a political argument.

Under the Local Government Act 1987, which restructured local government around river catchments, and the RMA, regional councils have responsibility for regulating, monitoring and intervening in river quality issues. These responsibilities necessitate measuring the water quality of the rivers and streams and related research. The WRC has a group of technical staff in charge of monitoring environmental resources (WRC, 2015c). They conduct routine research on water quality, mostly low-level, on-going monitoring of Waikato’s fresh and coastal waters and simple investigations of ecological processes to ensure compliance with RPS (Informant 22). The monitoring group reports to policy and decision makers about water quality issues and has a public education role (Informant 22).

In situations where the WRC identify a matter that is beyond their scientific capabilities or resources, they engage other contractors and organisations or work with national government science funding agencies to fund and carry out the research. Prominent among these external
agencies are Crown Research Institutes (CRIs) the National Institute for Water and Atmospheric Research (NIWA) and AgResearch, which carries out agricultural research in the national interest. CRIs are government owned entities and the equivalent of government science labs elsewhere in the world. Both have major facilities in Hamilton, reflecting the centrality of the Waikato River and Waikato’s dairy industry to the national economy. Geothermal and hydroelectric energy, water supply to Hamilton and Auckland, upstream forestry, and discharges from Waikato dairy farms are all pivotal national issues that absorb national science funding and require on-going scientific research. Both these agencies have close and on-going research relationships with the WRC. The WRC scientist comments:

In Lake Taupo we are required to do the routine water quality monitoring of Lake Taupo to [monitor] what the conditions are. Technically it is a very challenging task [because] Lake Taupo is large, you need specialised instruments to make measurements down the bottom of the lake which tends to be around 150-160m deep. We actually contracted NIWA to do that routine monitoring for us… we do some level of collaboration but it is more at the level of sharing ideas rather than working alongside in a field situation (Informant 22).

Relationships with other agencies introduces other actors who have short or long term interests in the Waikato River, and a range of other interests that complicate any sense of a neutral science that might be brought to water quality issues. For NIWA and AgResearch, these contracts and the relations they promote with the WRC are important, as is the expertise that they have built up in and of the Waikato River. There is of course a politics to all of this, as there is to the involvement of scientists who are often environmentalists. Water quality in the Waikato River is the point at which these various interests have become aligned, and aligned with the positions taken by iwi and by the environmental monitoring group within WRC. All this of course leads to added political complexity, short-term alignments among different groups, and complicates the work of the WRA.

5.4.1 The state of water quality
From the WRC’s scientific and monitoring point of view, there is no sound information about water quality 200 years ago. As the WRC’s scientist states:
There are no written records for 200 years ago. There are “hear say” information … my own approach is to bear it in mind but I am not going to give it as much weight as if I can actually see numbers written down and I am obliged to take that view. My job is to weigh evidence and if the evidence is not clear I have to give it less weight (Informant 22).

By looking at technical matters from the WRC’s water quality report, it is obvious that the water quality of the Waikato River changes dramatically from the starting point of the river at Lake Taupo to the lower part of the river at Port Waikato (see Figure 5.1).

**Figure 5.1:** The graph shows the water clarity from 2009 to 2013. The water clarity on the upper part of the Waikato River is much higher than the lower regions of the river (Source: WRC online, with permission).

While the WRC’s Technical Report 2013 on 10 sampling sites reveals that the pressures from wastewater have substantially decreased, intensified dairying and other agricultural land use
activities have seen the overall level of total nitrogen has increased significantly (WRC, 2013e) (see Table 5.1).

Table 5.1: The trends of water quality of the Waikato River from 1995 to 2014. (Source: WRC, Technical Report 2013/20 online, with permission).

In the current version of the Proposed Waikato Regional Policy Statement the WRC identifies the upper Waikato River and Lake Taupo as outstanding water bodies, bacteria levels are quite low so the lake and streams are suitable for swimming and recreational activities (WRC, 2012g) (see Figures 5.2 and 5.3). However, from an environmentalist perspective, this ought to be norm rather than an achievement, and many concerned commentators now point to growing pressures from dairying on water quality in Lake Taupo and the upper reaches of the Waikato River. In relative terms, however, they remain among the best water bodies within the Waikato region (Informant 22). For example, the Blue Springs (Waihou Springs) in South Waikato that flow into the Waihou River provide 60 per cent of New Zealand’s bottled water (Caitlin, 2014)\(^\text{20}\). The Waihou River is considered as taonga for Raukawa. Over 600 years, hapū of Raukawa have maintained a strong relationship with the Waihou River (REMP,

\(^{20}\)stuff.co.nz. September 2014.)
These water bodies are considered as pristine environmental gems in the Waikato (Figure 5.4).

Figure 5.2: Left: The narrow canyon of Huka Falls with crystal clear water. Right: Jet boating adventure is a popular recreational activity at Huka Falls (Photos: Author’s own).

Figure 5.3: Lake Taupo, New Zealand’s largest freshwater lake (616 km²) which has clear water suitable for swimming (Photo: Author’s own).
Figure 5.4: Photos A and B show the Waihou Stream with clear blue water flowing from Blue Springs in the Waikato region (Photos: Author’s own).

The story is very different downstream. One informant from NIWA recalls a testimony given by a tribal elder in the process of developing the Waikato River Independent Scoping Study (WRISS):

One of the kaumatua said, if we view the river as a human body and then we got the digestive tract, excuse my language but we are down by the back end there. Why? They talk about different parts of the lower end of the Waikato River where
you couldn’t walk from one part to the other but now you can [because of the blockage]. That is how blocked up it is. So there is a lot more pollution down there and that is a real big worry, a huge, huge worry (Informant 13).

The reflection has two important dimensions. First, it highlights graphically that there are water quality issues, to which I turn shortly. And second, it raises the issue of how oral history ought to be treated in assessing water quality changes and revitalisation debates. Thus, while saying that knowledge of the river is poor from more than 200 years ago, scientists marginalise indigenous knowledge that has been handed down orally over multiple generations. It demands instead evidence generated by scientific monitoring and research. In response to the question posed about whether the water quality of the river had changed over time, one Māori research participant stated:

> Based on my own knowledge, farming practices have had major impacts on the quality of the river, as has the hydroelectric dam that has been established. Obviously you cannot turn the clock back, but those changes are designed to reduce the area of the river itself. Whereas in the past, prior to those dams the whole Waikato basin used to be flooded and provided actually a habitat for fish, now there is a reduction of fish habitat (Informant 12).

Another informant extended this concern:

> In the past, they used to catch whitebait on the river. You don’t even hear about it today. In living memory we have seen changes in the river, not me because one of the problems with colonisation which my family suffered is that we become disconnected from our roots. So I have to find my way back to sort those things out. People have seen significant changes in the river due to the dams and so on and so forth (Informant 36).

This is one of the many tensions surrounding the status of indigenous/oral ways of knowing at play in the co-governance debate, and will echo through the discussion to follow.

### 5.4.2 Stakeholder concerns with the degradation of the Waikato River

Scientific reports (WRC’s water quality technical report 2013, WRISS and *the Waters of the Waikato*, 2010) have made it obvious that there are numerous dimensions to the degradation
of the river, which are linked to a number of drivers. There are different sources of discharge that can impact on the water quality of the Waikato River. Point-source discharges include industrial discharge, farming effluent from ponds/cowsheds and storm water runoff. Non-point discharges arise because of the application of agrichemicals, fertiliser, and surface runoff. Non-point discharges associated with intensive land use have severely impacted the ecological habitat and water quality (WRC, 2012:3.9). When asked to identify the cause of water quality degradation, most informants perceived five key ongoing sources of pressures: urban water use and industrial waste, land use, sediment movement, hydro systems and forestry. One interviewee from Raukawa suggested that from her perspective, the main cause of the Waikato River water quality degradation:

…is a combination of everything been dumped into the river. Everything finds its way into the river. I mean it’s the towns [and] the urban areas that are adding to the pollution into the river. It’s the agriculture adding to the pollution into the river, forestry adding to the pollution into the river and so as the geothermal and the hydro [dams] (Informant 19).

These kick in below the dams, making the celebration of water quality in the upper reaches of the river somewhat disingenuous. In the next section I explain how these pressures on the river have created a contested discourse regarding the degradation of water quality in the Waikato River.

5.4.2.1 The impacts of urban water use
The WRC water quality reports from the 1950s suggest that the increasing growth of towns, coupled with processing industries such as meat works, meant that parts of the Waikato River became “grossly contaminated” by waste dumped into the river (Informant 22). The 1950s saw the public health authority express concerns about the risk of illness from drinking the river’s water. Measures were taken of the levels of contamination (Informant 22). Samples were taken every month at multiple sites mainly in areas around the Waikato River with poor sewage systems, and in industrial processing plants such as dairy and meat works. The results from the collected samples suggested that water was extracted for drinking at sites where waste was discharged (Informant 22).
Until the 1970s, Hamilton City lacked a proper sewage treatment system. The city had sewers so human waste from toilet flushing and other waste water flowed underground via a pipe network downstream. The waste eventually reached one of twelve major rudimentary tanks alongside the Waikato River (Informant 22). The solid waste settled to the bottom and the liquid filled with contaminants was decanted into the river. Three or four times a year, the solid waste was pumped into the river and the tanks were emptied (Informant 22). It wasn’t until the 1970s that Hamilton City developed suitable sewage treatment systems and since then it has been continuously upgraded\(^1\). At present, the infrastructure of Hamilton’s waste water treatment plant is of very high quality and the treated waste water that is pumped back into the river is also of a very high standard (Informant 22). As one senior environmental manager suggests, since the 1970s the water quality of the Waikato River has improved significantly because of improvements in urban wastewater treatment:

> I had staff working for me few years ago who never have seen a thing called the sewage fungus. All these rivers had sewage fungus in them until the late 70s. [Now], you don’t see it anywhere. These are the indicators of things getting better. Sewage treatment from all the towns is a lot better now so huge progress has been made (Informant 16).

This improvement was further stressed by one WRC councillor:

> A friend of my father in the Hamilton City water treatment plant and I am guessing probably it was in the 50s, had to redesign their property water intake because it was getting blocked up with dead cows. Obviously we have made a massive improvement since then. In contrast we also had a massive population increase and pressure for those resources is much higher and it continues to get worse (Informant 24).

\(^1\) In 1975 a primary treatment facility – a wastewater treatment plant – was constructed. In 2001 the plant was upgraded to provide secondary treatment to enable enhanced treatment for wastewater discharge into the Waikato River. The last upgrade was completed in 2014 to ensure that the plant has enhanced capacity and is able to comply with resource consent requirements (Hamilton City Council, 2013).
5.4.2.2 Land use activities

Most of my interview participants expressed their concerns for the effects of extensive dairying as the primary factor for water quality degradation, and in their opinion, outweighs the impacts caused by any other land use activities in the Waikato River catchment. Through intensive dairying, the increasing nitrate from nitrogen fertilizer, effluent discharges and urinating grazing animals have contributed to the formation of waste products that leach or runoff into the freshwater (Foote, Joy, & Death, 2015; Mosier, Syers, & Freney, 2013; Pow, Longhurst, & Pow, 2014; Scott, 2014). According to a farmer who was a winner of a sustainable environmental award in the Waikato River catchment, the main problem with water quality degradation is intensive dairying:

We have got some inherently, almost impossibly, unsolvable problems with intensive dairying and that is because every time a cow urinates, it is putting on about an equivalent to 1200 kg of nitrogen ha\(^{-1}\) into the ground. You cannot stop a cow from urinating or put a urinating spreader underneath which would make it a lot better. The nitrogen tends to go into the groundwater and then finds its way into the waterways (Informant 28).

In terms of farming activities, the main authority of the WRC is to have control over the right to discharge waste into the environment and not to manage intensive dairying operations (Informant 16). Any forms of discharge must firstly acquire resource consent. Nevertheless, the resource consent does not necessarily indicate that such discharges have no impact on the environment. Through the application of resource consents, resource users obtain the right to discharge waste into the river. However, as one of the participants stresses, the consent is just a permission for causing more pollution:

They have the right to legally dispose contaminants into the river. They have consent to discharge or someone might say ‘the licence to pollute’ (Informant 20).

Despite extensive monitoring of waste in the river and waterways, the effects of livestock grazing on the Waikato River water quality have not been widely studied. Instead, environmental management draws on two broad schools of thought, the management of waste and the effects of intensive grazing. One senior environmental manager (Informant 16) observes that at the moment attention is focused on intensive grazing. However, rather than seeking to directly control the extent of farming or farming practices, the WRC provides
farmers with information on how to practice Integrated Catchment Management (ICM) (see section 6.5 Chapter 6), manage waterways on farms, and exclude livestock from streams and rivers (WRC, 2004, 2014b). DairyNZ representatives add that they too have been providing farmers with information on how to reduce the amount of nitrogen leaching into groundwater and waterways. While a Dairy NZ is at pains to point out (Informants 3 and 4) that farmers recognize that the cumulative effects of unsustainable farming practices can place the cost and burden to everyone, others are less convinced. One interviewee from Te Arawa for example argues that:

If you are farming today, you must think about tomorrow because the resource that we have, the land and water are finite, it is not going to expand. We are saying the water is a common resource and everybody is entitled to it. So if you are doing your activity in the land why would you want to put your externalities into the water with no cost? It affects everyone else who is not a farmer and wants to go swimming (Informant 20).

Another informant, however, distinguishes between farmers who respond by fencing and planting riparian strips, and others for whom:

“…every blade of grass is money and so they want to maximise that as much as they can. At the same time they irrigate for their crops and for their assets in terms of their animals beef, cows, sheep and whatever. In the summer irrigation is an issue, so why would you want to fence off access to the streams. The river offers an endless supply of water. However, by sustaining the health and wellbeing of the stock, they are … at the same time, you know, their stock are traversing through this and they are dropping their faecal matter in it and that is all accumulating and accumulating at the northern end of the river, at the Puaha o Waikato which is often refer as to the toilet end of the river (Informant 35).

Nonetheless, one farmer respondent, a winner of a sustainable environmental award, insisted that while there are farmers who ignore the importance of protecting the environment, the majority have accepted that they need to protect the streams and waterways:

I do believe the majority of farmers now understand the need to be far more protective of their water and their water ways, and aquifers than they have ever been. But there are always a handful of them that abuse the system, and those are
the ones that media loves and then we can hear the dirty dairy, dirty farmers, and all the things than can go with it (Informant 27).

Informants also suggested that currently, there may be little incentive for farmers to change their practices. On the one hand, government and farmer owned dairy producer Fonterra are encouraging farmers to increase on-farm productivity. Informants suggest that Fonterra, and even government, might do more to incentivise farmers to maximise environmental performance (Informants 4 and 23). This point was emphasised by a senior WRC manager in reference to the Dairying and Clean Streams Accord (DCSA) in which farmers agree to fence streams to exclude stock from waterways as part of their Fonterra contract:

For example, if I am Fonterra and you are a farmer, and you need me to pick up your milk but you are not complying with the Clean Streams Accord then I could say: sorry I am not going to pick up your milk. So that is a good incentive for you to improve [your farming activities] (Informant 23).

5.4.2.3 Levels of sedimentation and sediment transport

During the course of the interviews, some participants acknowledged that is not possible to have a healthy Waikato River without a healthy Waipa River. The following picture (Figure 5.5) shows the point where the Waipa River joins the Waikato River in Ngaruawahia. The picture indicates the degree of clarity and colour between the Waipa and the Waikato River. It shows that the Waipa River is increasingly turbid with its colour changing from green to brown. Scientists suggest that the reason for the different colours between the two rivers relates to their geology.
The Waikato River catchment is characterised by pumice soil which is susceptible to erosion (McCraw, 1967; WRC, 2008). When the rain falls, the land erodes and the silt flows down the Waipa River and then joins the Waikato River (Informant 22). In the case of the Waikato River, over the past 100 years the hydro lakes have acted as traps for sediment and, therefore, less sediment flows down through the river (Informant 22). For this reason sediment is building up behind the dams, whereas, in the case of the Waipa River there is no settling pond to trap the sediments.

In some of the hui and Waikato River symposia I attended during my fieldwork, the image known as “Waipa and Waikato rivers meet” (see http://www.teara.govt.nz/en/photograph/15516/waipa-and-waikato-rivers-meet) was used (by Māori and non-Māori) to highlight the Waipa as the source of the Waikato River’s degradation. However, the image was taken after flooding (personal communication, 2012); during the dry seasons the Waipa has more clarity and is less turbid.
5.4.2.4 Hydropower systems

In its policy and planning document, the Central Waikato River Stability Management Strategy 2008-2058, the WRC highlights the need to recognise the importance of the Waikato River as a significant national source of hydro power. However, it also stresses the importance of understanding the impacts these hydro systems have at the regional level on river wellbeing (WRC, 2007). Historically the dams were built to capture the capacity of the Lake to generate electricity (see Figures 5.6 and 5.7). By building dams to generate electricity in the upper Waikato River, the hydro system has transformed environments in the upper and lower river.

**Figure 5.6:** The topography of the eight hydro-dams located on the Waikato River (Source: The Waters of the Waikato, 2010, p. 4, with permission).
The use of dams for water storage has often been associated with changes to the morphology of river systems, biodiversity and the degradation of river water quality (see Young, Smart, & Harding, 2004). Dams trap suspended sediment and organic matter and change concentrations of suspended sediment and organic matter that would normally travel downstream and impact on the ecology and the ecosystem of the river (Young et al., 2004). If the natural state of the river contained very little sediment, trapping sediment would be likely to degrade the river’s quality and negatively affect the ecology of lower reaches. It may also have negative impacts above the dams. One informant had this to say:

The sediments have been trapped behind each of the dams. We also have geothermal in this area, natural occurring geothermal and as a consequence of that the poisons starting to rise and it’s not been flushed through to the sea. So I believe there are poisons stock behind each of the dams that is basically in amongst of sediments at the bottom of the dams. We also have the problem the weeds growing around the dams. I think the weeds are picking up much of the poisons and as a consequence of that it could be causing other issues. And because we are intensively agricultural and because of land use, the spraying and things like that starting to reach into the Waikato River and causing real issues (Informant 19).

Further, as a WRC scientist confirms:
We know that once you hold water back then microscopic algae tiny little cells begin to grow. Cells that would normally just be flushed down the river and wouldn’t be successful in the river, become successful in the series of hydro lakes. This is the process of nutrient enrichment and algae growth, and the science of that in lakes like Lake Taupo and Rotorua Lake is very well developed (Informant 22).

If potentially harmful nutrients from human activity enter above the dam, they too are trapped and water quality may improve below the dam. However, if they enter below the dam this increases their overall concentration in the river and intensifies the effects on ecosystems and water quality (Informant 16). In the Waikato River, this is also the case.

The issue is contentious and several of my research participants expressed a belief that the hydro-dams had a negative impact on the Waikato River’s water quality. For example, an informant from Raukawa expressed her belief that the construction of hydro-dams restricted the release of toxic substances from geothermal energy operations in the upper part of the Waikato region through the river into the sea, thus increasing the level of toxins in the upper river (Informant 16).

The WRC scientist described the appearance of algal blooms as the result of complex phenomena induced by different factors. Some of these are considered part of the natural environment, while others are caused by the hydro-dam and nutrients such as nitrogen and phosphorus (Informant 22). Whilst the condition is rare, the Waikato River has experienced two harmful algal blooms in the last 10 years. The source is likely associated with nutrient enrichment, which is concentrated more in the lower part of the Waikato River around the hydro lakes.

Given the historical context it is difficult to assign responsibility, however, as one environmental manager suggests:

Mighty River Power will say it is not their issue because the hydro system existed before we had environmental regulation in New Zealand (Informant 16).

5.4.2.5 Forestry

In New Zealand forest production is primarily based on exotic pine plantations (*Pinus radiata*) which contributes to nearly 3% of New Zealand’s gross domestic product (GDP)
(Davis et al., 2012). Despite the economic benefit of plantation forests (Budiharta et al., 2014), when practised unsustainably, it would create negative environmental impacts (Foley et al., 2005). In the Waikato region, there is always some level of plantation forestry that makes this activity the subject of criticism. For example, as one senior scientist emphasised, the negative impact of plantation forestry in the Waikato region is associated with “forestry monoculture Pinus radiata, and its growth and harvesting practices” (Informant 1). In terms of freshwater management, the scientist added that removal of indigenous forest cover can reduce the natural capacity of the ecosystem to filter water from rain fall and, therefore, can increase the erosion and high sediment level in waterways and in rivers (Informant 1). Moreover, the WRC Technical Report 2009/18 also highlights the conversion of forest to agricultural land, particularly in the upper parts of the Waikato region, can maximise flooding, increase surface runoff, soil erosion, and the transportation of sediments, nutrients and contaminants to waterways (WRC, 2009). Thus, afforestation which includes: planted indigenous, exotic afforestation, and assisted reversion can mitigate the effects of surface runoff in erosion prone regions and also protect the sensitive soils (WRC, 2012a).

In contrast to the debates around negative impacts of plantation forestry, one environmental manager from Hancock Forest Management (HFM) in the Waikato region explained that, in terms of nutrients, the science is clear; plantation forestry delivers significantly lower nutrients than other ‘productive’ land uses such as agriculture and pastoral farming (Informant 8). The HFM’s informant also added that because plantation forestry takes place in compressed time frames, its effects are very visible, and therefore it is easy to observe any changes (Informant 8). From a forestry point of view as the informant explained, over the full cycle, it is clear that forestry plantation is delivering cleaner water than other productive land uses. Likewise, during the growing phase, science has shown similar water quality to native forests; further studies have also shown the temporary increase of sediment at the two year mark after harvesting drops back down (Informant 8).

While some studies suggest that forestry plantations can have similar impacts on water quality as native forests (Baillie & Neary, 2015), yet, conversion of native forest to pine plantation can have noticeable impact on stream morphology and water quality (Larned, Scarsbrook, Snelder, Norton, & Biggs, 2004; Quinn, Cooper, Davies-Colley, Rutherford, & Williamson, 1997; Quinn & Stroud, 2002). These impacts differ significantly during forest cycle phases depending on management approaches and the degree of disruption they create (Baillie &
Neary, 2015). Besides, since many forest sites in New Zealand have insufficient nutrient levels required for optimum growth, forest productivity is closely dependent on the need for inputs such as fertiliser (Davis, 2014; Davis et al., 2012) which can deteriorate the water quality. Thus, to reduce the adverse impact of forestry on the water quality of the Waikato River, understanding factors such as the region’s hydrology, geology, former land use activities, and harvesting methods is crucial (Baillie & Neary, 2015).

5.4.3 Environmentalist concerns

As described by one conservationist, managing and restoring the Waikato River is a “formidable task” (Informant 28). The problem of the Waikato River water quality is not merely limited to nutrients, sediments or contaminants entering into the river (Informants 22, 28 and 32). For example, the introduction of exotic fish species such as koi carp (Catfish) has concerned scientists and environmentalists about the future of the water quality of the Waikato River catchment. One informant described koi carp as “appalling polluters” that stir up mud at the bottom of the river and shallow lakes, deteriorating the water quality and impacting the native plant and invertebrate habitats (Informant 28). However, to date no solution has been found to reduce the number of koi carp in the Waikato River catchment.

Recent changes in New Zealand conservation strategies indicate that restoring and protecting ecological habitat requires support from the local communities, farmers, landholders, and hapū/iwi (Jay, 2005). Several environmental initiatives and voluntary organisations have been formed in the Waikato region. According to one informant:

There is an enormous amount of voluntary work going on in the community. In the Waikato alone, I don’t know what the most up-to-date figure is, but 3 to 4 years ago there were 40 different groups and organisations in the Waikato, all involved in land and water care groups which is pretty extraordinary (Informant 28).

These environmental care groups include South Waikato Environmental Initiatives. Described by one research participant as a “real community-run initiative” (Informant 28) and consisting of farmers, and members of Fish and Game and Forest and Bird, it was established in the late 1990s to encourage farmers to plant the stream banks, protect wetlands and native bush. Other examples include Waikato River Care, established in 1999 as a non-profit organisation that aims to “re-establish native vegetation on the banks of the Waikato River from Hamilton to
the Port Waikato, a long-term project” (Informant 32). The group builds on the skills and knowledge of volunteers who give their time “on behalf of the river” (Informant 32).

These environmental care groups recognise the work of institutionalised initiatives to improve water quality such as the Farm Management Plan (FMP) and Dairying and Clean Streams Accord (DCSA). While environmentalists are not convinced that such initiatives are either currently making significant improvements or are ever likely to be enough, they welcome them. The member of Waikato River Care described the positive impact of fencing the waterways:

One thing that just absolutely spring to mind for me is fencing of the waterways. The one of the single biggest things that can have a positive effect on the waterways because even if you don’t plant, you have excluded stock from the waterways and plants will come up, whether they are weed or not and will form a filter (Informant 32).

My discussion with a representative of Federated Farmer revealed a position that was on the one hand refreshingly pragmatic also raised concerns that its members are far from fully behind such initiatives. In relation to fencing waterways, he suggested that while positive such plans need to be approached differently with different farm owners:

One of the things that we really trying to get across to Regional Council and anyone else is, you cannot just have one rule for all as there is no one answer. Every farmer is different and how they manage their farm is different (Informant 7).

Environmental care groups continue to advocate initiatives to deal with invasive species, water quality degradation, and habitat loss. As one research participant who is a member of such a group reflects, the environmentalist and volunteer groups in the Waikato “saw a problem and they came together as a group to solve the problem” (Informant 28).

5.4.4 Iwi concerns

From both the iwi and the environmentalist’s point of view there is an understanding that the river is polluted. Iwi argue, however, that Māori activities are not the source of the pollution. Rather, my research revealed, there was a general understanding from the River Iwi
informants that the current degradation of the Waikato and Waipa rivers is associated with the unsustainable management of these rivers by non-Māori. The iwi blame this on the systematic failure of the Crown to manage the Waikato’s water bodies over the past 100 years (Informants 35 and 37). For iwi, the commercial activities that extract water from the river and then discharge the effluent back into the river do not consider the mauri of the river. A leading Māori researcher and public commentator on Māori, with reference to the work of Muru-Lanning (2007) on the sustainable resource use of the Waikato River, expresses her scepticism about business claims to be acting sustainably:

[When] a power generation company framing the river as a renewable resource to tie the sustainability thinking, a lot of it is about marketing image. They want to continue exploiting characteristics of the river and make money without too many constraints on their activities involved (Informant 1).

Often power generation companies in their environmental reports emphasise their activity as being sustainable and environmentally friendly. According to Muru-Lanning (2007, p. 2) the “terms “sustainable resource” and “renewable resource” are part of a new commodifying river language”. In using these terms, commercial industries emphasise the value of the ‘water’ and the ‘river’ for their economic benefit. According to Muru-Lanning (2007, p. 2):

While Mighty River Power is reliant on the River’s “water-flow potential” for their generation processes, Genesis Energy is dependent on the River’s “watercooling potential”. Because Mighty River Power and Genesis Energy are competing in the same market their “sustainable resource” and “renewable resource” knowledge systems need to be slightly different. Ultimately, however, the two commercial knowledge systems attend to the needs of their companies.

However, this is neither inadvertent nor unguarded as the terms ‘sustainable’ and ‘renewable’ speak directly to environmental concerns, and to consumers and others concerned with the environment. Māori concerns are always appended in a statement addressing iwi interests. Arguing that dairy or electricity are ‘sustainable’ activities connects a discourse of economic sustainability to environmental sustainability. This fails to convince commentators committed to ecosystem health or to long-term resource use. Māori in particular, adopt a reading of sustainability that discounts the value of short term economic gains, especially where those are being advocated by powerful interests. As the same Māori commentator reminds us:
... [that these economic users of the Waikato River are]…the economic powerhouse of New Zealand … [is] a weak argument, I believe, to justify their continued negative behaviour. But I don’t believe money is as important as those advocates would make it seem to be. I think the health of the ecosystem actually provides a lot more potential for our future existence than money. Once you destroy these ecosystems, it doesn’t matter how much money you spend, you are not going to get it back (Informant 1).

5.4.5 Contest over use value of water

The contests over the state of water quality in the Waikato point to how actors view water quality and to how their views are framed in the context that gives meaning to their value (see Sinner & Berkett, 2014; Vant, 2010). For example, in the interview with participants from hydro-system and forestry, the participants emphasised how scientific research shows that the majority of water quality issues in the Waikato River are associated with dairy activities. In contrast, while some participants such as the Waikato River Care group and River Iwi supported these statements, they also added forestry and hydro system activities and consider all these activities as unsustainable. When I asked MRP environmental manager, why others were blaming MRP for the degradation of the Waikato River, the participant responded: “because attack is the best form of defence they think, but they will be sadly disappointed when they find that their attack has no substance” (Informant 11). When I asked the participants from MRP, how they would respond to the criticism? In this sense, the interview respondent felt that the criticism has been made was unwarranted since MRP had obtained resource consent which means all adverse environmental effect have been identified and adequately dealt with. Thus, for the MRP, resource consents were granted on the understanding that negative environmental impacts, remedied, avoided or mitigated. This point was reiterated by MRP environmental manager:

The effects of the Waikato hydro system cannot be hidden, everybody can see them, they can see the positive effects, [and] they enjoy the positive effects. To those who say the Waikato hydro system is the problem, the effects of Waikato hydro system have been scrutinised rigorously at length and in my new detail by very transparent resource management processes; so the resource consenting process, the regional planning process, [and] the regional policy statement
development process. If there was fact that was pointing at the Waikato hydro-system being the major driver of any these problems it would have been disclosed, and if it wasn’t disclosed, it would have been identified through that very open transparent process (Informant 11).

As observed, there are many contrasting views which draw on various forms of evidence, often contradictory. What is evident is that water quality is not only scientifically contestable, but is caught up in a contest over values. At one level this contest involves instrumental questions of how people or resource users value water and for what purpose are they going to use the water resource. For instance, a scientist from the WRC draws on the example of the Huntly Power Station (HPS) (Figure 5.8) to illustrate the way water quality is influenced by how people or resource users value water for their purpose:

At the Huntly Power Station … they extract a large quantity of water from the river. They pass it through the cooling system and then they discharge it back to the river. So what they want to be able to do is dump the waste heat into the river and for that whether or not the water has got E.coli level that would let people swim in it or not is no matter, they don’t care (Informant 22).

![Figure 5.8: Huntly Power Station on the Waikato River is New Zealand's largest thermal power generation plant (Photo: Author’s own).](image-url)
Water quality means something different for power stations than it does for people who want to swim in the river. The point is that water that is suitable for particular uses may be unacceptable for other uses (Informant 22), such that measuring relative values must take into account anything from cultural meanings of water to indigenous values, environmental aesthetics, and economic values. For the WRC scientist, water quality “is not a very healthy term to have a conversation over” (Informant 22). Not only is it so value dependent, but the systemic dimensions are more complicated than is generally assumed. It is crucial to ask “what aspects of water quality are we talking about” (Informant 22). The WRC’s scientist reflects that:

The lower [Waikato] River has been managed to avoid floods and it has been done by building flood banks, stop banks along those sides of the river. There are drainage systems through the stop banks which carry water from the land into the river and then away it goes. But those systems through the stop banks involve barriers that prevent fish moving from the river backwards and forwards into an area that used to be naturally flooded seasonally. Now those barriers, those things are part of the flood control systems are clearly interfering with the natural movement of native fish species such that native fish in the lower region are not in such a good condition as they may have been in the past before we built those barriers. To me using the word water quality is not appropriate, it is irrelevant. So managing for flood control has interfered with fish migration, but no way can I call that the water quality. But someone may say they want to restore the ability of native fish to move, that is fine and restoring that aspect of the ecology of the river system is fine but talking about it as water quality is in my mind using the wrong words. We can restore aspects of the fishery without using words like water quality… The health and wellbeing of the Waikato River is a nice [and] very high level phrase. Water quality is only one component of that and I am afraid too many people are fixated with this phrase ‘water quality’. Because the other phrase you used is almost unwieldy (Informant 22).

For a scientist, discourses of water quality are framed by people’s perceptions and prejudices about particular resource uses, when they ought to be based on ‘solid science’.

Despite the importance of value in defining water quality, it is also important to recognise the source of pollution and the cause of river degradation if river restoration is to be achieved.
The ongoing intensification of farming and conversion of forestry to farmland can further deteriorate the future water quality of the Waikato River. However, the WRC scientist insists that there is no water quality crisis in the Waikato and there is no need to restore water quality to the state that people may consider it as it was in the past:

I don’t see strong evidence that the river was in a much better state in the past, and this is the distant past, rather than 50 years ago. I don’t see evidence that it was in a much better state and that we necessarily need to try and return it to that state. I don’t see that we have a water quality crisis. Fish are not dying, in much of the river the water is swimmable, and in fact at hydro lake is eminently swimmable (Informant 22).

However, a lack of appropriate management may spell a future water crisis:

If there is going to be a crisis, it will be a crisis in terms of the failure to take action to deal with threats. I think the action needed is to protect the situation that we have currently got, particularly in the face of ongoing pressures that could cause deterioration in the future (Informant 22).

The water quality of the Waikato River is above national bottom lines. Meeting these bottom lines ought not to be taken, however, as either a measure of success or a target. That would only lead to further degradation (Informant 22). According to the WRC’s scientist, “the first step and quite frankly the only step at this stage is to use the Regional Policy Statement to identify that the Waikato River is of high quality” (Informant 22). The WRC’s Policy Effectiveness Reports 2011 on evaluating existing policy suggests there are gaps in policies that prevent them from being effective. One of these gaps is centred around water quality and WRC faces challenges to address water quality issues in terms of rules and regulations (WRC, 2015b). Since the enactment of the WRSA (2010) and the VS for the Waikato River, the WRC has begun to have conversations on improving the water quality of the Waikato River catchment. Through the Healthy Rivers/Wai Ora (HRWO) project (see Chapter 6), the Regional Council has begun to develop changes to the Waikato Regional Plan to work with iwi and other stakeholder groups in order to set limits and targets to improve water quality issues in the Waikato region. The purpose of the plan review process includes objectives to:

- fulfil legal obligations under national legislation and policy
- address declining water quality
- achieve Waikato Regional Council’s strategic direction
- meet the objectives and strategies set out in Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River (WRC, 2013c, p. 3).

The above objectives are aimed at restoring and protecting the health of the Waikato and Waipa rivers, while at the same time they are aimed to parallel the WRC’s strategic direction and increase regional economic growth (WRC, 2013c).

### 5.5 Sustainable management?

The Waikato Regional Economic Profile (WREP) 2012 emphasised that “neither business as usual nor more of the same is sustainable” (WRC, 2012h, p. 5). It adopted an approach that appears to have three prongs: using the RMA to emphasise sustainability; reinterpreting water governance by leadership; and, green growth.

Under the RMA the WRC is responsible for promoting sustainable management of the Waikato’s natural resources. To achieve sustainable management, the WRC includes two key themes in its RPS. Firstly, the RPS has to outline the adverse environmental issues that have or could have impacted the Waikato’s natural resources. Secondly, the RPS is an ‘effects based’ regulation, which indicates its policies and methods have to be developed and applied to preserve and improve the environmental conditions (WRC, 2000). Thus, to achieve sustainable management the WRC must promote the economic, social, and cultural wellbeing of the Waikato communities while at the same time mitigating, avoiding and remedying the adverse effects to the environment (WRC, 2000).

In 2011, the WRC adopted a leadership that commits it to supporting “strong local communities with healthy environments” (WRC, 2012h, p. ix). This in turn commits it to collaborating with the wider public, businesses and industries, government and non-governmental organisations to manage and regulate the use of natural resources (WRC, 2012c). In order to deliver the desired environmental and economic outcomes, the WRC recognized three significant goals: (a) sustaining land and water values; (b) facilitating regional development; and, (c) meeting co-governance requirements (WRC, 2012c, p. 21). Each comes with specific challenges. These are respectively: to develop and implement management practices that support land-owners and commercial users to reduce the discharge
of contaminants to the environment; to collaborate with wider stakeholder groups towards to construct a shared development vision; and to meet the legislative requirement of co-governance by engaging in good faith with River Iwi in the decision-making process.

To meet these goals, the WRC adopted a “green growth” strategy:

   Green growth is economic development that has positive environmental outcomes (or at least no negative environmental outcomes). Or put in other words, “green growth means a shift to more sustainable, or greener, ways of operating and developing modern economies (WRC, 2012h, p. 6).

The approach was to advocate for sustainable environmental outcomes with a focus on better economic principles in natural resource industries. Green growth is centred on the concepts of sustainable management and sustainable development and is consistent with purpose of the RMA and Local Government Act 2002 (LGA). The WRC has started to implement the green growth strategy to allocate water resources but seeks to implement the green growth approach across all WRC activities.

One problem in measuring sustainability is the need to apply appropriate indicators capable of providing guidance that can monitor the effectiveness of policy implementation in promoting economic, environmental and social wellbeing (Li et al., 2009; Mitchell, 1996). Despite that, economists have argued the inappropriate use of Gross Domestic Product (GDP) as a specialised instrument of measuring wellbeing and economic growth in particular (see Costanza, Hart, Talberth, & Posner, 2009), yet GDP is the primary method used to measure the economic growth of the Waikato region. Although, as the WRC emphasises, this measurement does not take into consideration the environmental, social and cultural values important for the community’s wellbeing (WRC, 2012h, p. 5). As the WRC clarifies in the WREP, in order to achieve sustainable management and to improve environmental qualities, it is important to recognise that economic, environmental, and social values are interconnected. In dealing with river restoration, it is imperative to adopt a holistic approach that can improve the efficient management of water, while safeguarding the environment and the wellbeing of the communities (WRC, 2012h). The next section explains how the complexity and variety of values associated with water management have challenged the authorities in finding good strategies capable of integrating both the economic and the non-economic value of water in the decision-making process.
5.6 Managing economic values

The Waikato River is an economic asset for economic actors ranging from urban water supply to households, hospitals, trade and manufacturing, to dairy, forestry and energy industries. There are nearly 400 statutory bodies dealing with industry organisations and the hydro dams, and more than 5000 farms in the Waikato and Waipa rivers catchments (WRC, 2013c, p. 3). Waikato River governance is closely linked to the reliance of the dairy and energy sectors on the river, both as a mechanism for taking waste away and also as a source of irrigation and power generation. The sectors place multiple demands and bring to bear the competing values involved in the region (WRC, 2013c). One important task for local authorities is to achieve democratic processes of decision-making that encompass the different values and interests of stakeholders across competing social and economic use values. This presents significant management challenges, as one group manager from the WRC elaborates:

"We have got limited resources— that is the river. There are different values attributed to the one resource. So there is an economic value, there is a spiritual value, there is a recreational, intrinsic and ecological [values]. Only one river but different values and they are competing...If we all had the one value, if we all had a cultural value and it was no economic value and no recreational value it would be easier. But simply because there are different values that are competing, [this] requires some value judgments to be made (Informant 23)."

The WRC must exercise these judgements in the context of an RPS that aims to support and maximise Waikato economic growth. The WREP outlines the importance of key resource economy sectors, agriculture, dairy farming, and energy. These are pivotal to the regional and national economics, but also have significant negative impacts on the Waikato River’s health and wellbeing (WRC, 2012h). Narrowly expressed, the environmental politics of farmers is simple, as one farmer observes:

"We have to get a return not just as the farmers but as the nation because so much of the country’s wealth is based around pastoral activities and so there has to be a balance (Informant 27)."

The WRSA complicates this position. Farmers are losing their dominant voice in questions to do with water management and are worried that they may lose their traditional water rights in the new management regime, and that this may place new pressures on their bottom line.
Indeed, the contest between farmers, Māori and environmentalists over control of the river is beginning to take shape. As one Māori respondent reflects:

They think that Māori are coming to change the way they make money. What farmers do is to make more money and that is the fact. It is all about economics because farmers think that they are the economic backbone of New Zealand (Informant 5).

Reinterpreted narrowly by iwi, who have long been unable to have their own voice heard, this position is commonly seen as an unthinking commitment to returns that is incompatible with environmental guardianship. As one iwi environmental advisor remarked:

DairyNZ, Fonterra, Federated Farmers are not going to improve the health and wellbeing of the Waikato River, their responsibility is to their shareholders (Informant 20).

The other actor in this drama is government. One Te Arawa informant places responsibility for addressing the state of the river firmly at the feet of the local government and its close relationship with dairying interests:

First of all, the blame it goes to the government. These are the people who should have regulated the things but instead they deregulated… and they say people should have done anything possible as long as it brings money. It is all about export, dairying and industries. As long as they bring foreign currency, their pollution doesn’t matter. Same as power [station], it is all about giving electricity to the country… So the government to begin with, wasn’t doing enough to protect the environment. So these farmers, they came and they found the system wasn’t working so they do their best to make as much money as possible while the sun is still shining. So today’s system is embedded over long time. So to tell them to do things in a different way is not very easy (Informant 20).

The lines of contest are clearly drawn and pose major challenges to institutions of co-governance. These are of course complicated further by competing urban claims, social uses such as fishing and recreation, and conservation and restoration. Different values create a great deal of interest in the river from those economic actors (see Marsh & Mkwara, 2013;
Sharp & Kerr (2005). Some efforts have been made to link stakeholder values and interests along cross-cutting lines such as restoration (e.g. Waikato Joint Venture Project)\(^{23}\).

In response to assessing the health and wellbeing of the Waikato River, and in the context of the WRSA, the Ministry for the Environment released the Waikato River Independent Scoping Study (WRISS) on 21 December 2010. The study was conducted by NIWA. The WRISS report outlines the costs, and prioritised the actions required to achieve the overarching purpose of the WRSA. The WRISS emphasises that non-market values are as significant as market values, and the need for both be incorporated in decision-making. Sharp and Kerr (2005) use the concept of Total Economic Value (TEV) to conceptualise a single measure of economic value that might include both use and wider values (Figure 5.9). Table 5.2 expands on their schematic representation of TEV to show how they go on to use the concept. Significantly, the diagram is heuristic and they do not place monetary or market values on non-use value and while they do measure option value and existence value they cannot even in their own terms, measure TEV (see Sharp & Kerr, 2005).

**Figure 5.9:** The Total Economic Value of Water (Source: Sharp & Kerr, 2005, p. 4).

\(^{23}\) Recently, the Waikato Joint Venture Project, a joint study undertaken by central government, the Ministry for the Environment (MiE), WRA, WRC and DairyNZ to evaluate the influence of national and local government’s water quality policies on the non-market values of freshwater in the Waikato region (see Doole, 2013; Marsh & Mkwara, 2013).
Table 5.2: A framework for categorizing the different types of values that might be related with water resource management (Source: Sharp & Kerr, 2005, p. 3).

<table>
<thead>
<tr>
<th>Use values: the values that derived from the actual use of the water resource.</th>
<th><strong>Commercial value:</strong> water can be used as a source of production (e.g. input into dairy production and generating electricity).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In situ use value:</strong> direct (e.g. swimming) or indirect (e.g. hunting) use of a service such as water where the output is not subjected to the market price.</td>
<td><strong>Option value:</strong> while the users are not currently using the specific services, they might have option to retain right to use the resource and service in the future (e.g. water resources).</td>
</tr>
<tr>
<td><strong>Non-use values:</strong> these are independent of the individual's present use of the resource</td>
<td><strong>Existence value:</strong> the value acquired from the knowledge that specific environmental good exists (e.g. endangered species).</td>
</tr>
<tr>
<td></td>
<td><strong>Bequest value:</strong> the value ascends from the willingness to preserve certain resources to benefit future generations (e.g. preserving natural habitat).</td>
</tr>
</tbody>
</table>

These approaches attract criticism (Smith, McDonald, & Murray, 2015; Young & Loomis, 2014), especially when they are adopted as the basis for value pricing models that in turn are advocated as management solutions to an essentially market governance approach. Critics highlight the inappropriateness of giving non-economic values economic values or imputing prices. The Waikato River, for example, offers many values that cannot be measured based on market values, yet need to be incorporated into a management framework. Historical, social, cultural, and spiritual values are not subject to price since there is no market to sell and buy them (WRISS, 2010). The main challenge is to balance these competing values to manage the water resources. As one academic commentator remarks, achieving economic return is becoming more important in today’s decision-making:

If you look at the economic return based decision-making, in a lot of cases those industries no longer exist because the ecosystem that supported those economic ventures no longer sees them. So making decisions based purely on economics is not sound, and I believe is inconsistent talking about sustainability and economic returns in the same mind-set or in the same frame of thinking. Because sustainably is about forever and money always loses value. So if you try to make a decision based on money the validity of your decision will be eroded by inflation from the
day you make it. If you try to make decisions based on economic equivalence even if you use the net present value and that sort of thing the validity of the decision will diminish every day, from that point onward. So in 5 years’ time it is unlikely to be a valid decision (Informant 1).

However, economic valuation is an important tool for decision-makers and in environmental restoration plans. New initiatives such as the River Values Assessment System (RiVAS) are being developed to find ways of making use and cultural values commensurable (Hughey & Baker, 2010; Tadaki & Sinner, 2014). RiVAS for example, is a multi-criteria evaluation, expert panel based method that applies quantitative and qualitative information to identify and prioritise certain river values based on the importance of a specific set of values such as water quality, recreational and commercial value (Hughey & Baker, 2010). The WRISS uses a cost of restoration basis to measure the overall restoration value of the river for priority actions and clean-up funding. The WRISS estimates a total cost of $1,930 million for current value and additional cost of $4,840 million over the next 30 years needed to restore the Waikato River (WRISS, 2010). Through the WRSA, the New Zealand government will provide $7 million per year over a period of 30 years, which is far less than the restoration value proposed by the WRISS. The WREP and WRISS identify the significance of the Waikato River economy and the centrality to regional and national economies; however, the reports struggle with the problem of valuing the full economic restoration of the Waikato River. Furthermore, WRISS indicates that the economic analysis is ‘pessimistic’ as there is not enough information to measure the non-market values such as cultural, spiritual and biodiversity, and to estimate the cost of carbon markets resulting from afforestation and reforestation beyond 30 years (WRISS, 2010, p. 8). Moreover, the WRISS reviews nine case studies in New Zealand, including three cases in the Waikato, and suggests that all nine cases neglect the true non-market benefits of restoration because of omitting some important values, including fisheries, and ignoring the spiritual and cultural values that are essential for the community’s wellbeing (WRISS, 2010, p. 8). Thus, the total benefits of society wellbeing and ecosystem services are higher than the direct costs of restoration for some of the restoration actions.

The WRISS estimates of the full economic cost of restoration of the Waikato River suggest that more information is required on the different classifications of value and their impact on
the Waikato River before anything like a TEV can be calculated. Two issues emerge from the WRISS report: firstly, the framework is compromised even in its own terms; secondly, if some variant attempting to measure TEV is deployed, it will likely privilege economic over social, customary, and restoration values. Also, it provides resource users and stakeholders an opportunity to point unproblematically at the large dollar sign attached to economic benefits. This effect is compounded by the broader political context in which the current National Government in New Zealand is emphasising economic growth over any other concern. Notably, the WRC (2012h) cites the growth argument and its legitimation in falling national income relative to others in its resource management settlements. It is obvious that the agricultural industry is a very sensitive topic not just to the Waikato farmers but also to New Zealand as a whole. The challenge must be to work towards reframing these claims in ways that emphasise sustainable and healthy use and management of water resources. It is important for these industries to continue their business but should also minimise their impacts on Waikato’s natural resources.

5.6.1 Iwi economic management

Māori are increasingly corporatized users of environmental resources for economic purposes (Rata, 2011; Van Meijl, 2012). This threatens to create tensions between economic values and traditional worldviews and practices that spiritually and physically connect kaupapa Māori to the land, water, and forest. One Māori scientist from NIWA elaborates on how Māori do not see the river as a commodity:

The way that Māori think is totally different from the way that farmers and other stakeholders view the river. Māori had a longer relationship with the river and they don’t see the river as the way of making money (Informant 13).

Market based management approaches are at odds with natural resource management based on Māori philosophy or mātauranga Māori (Māori knowledge). This can place enormous

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24 In a recent review of the study of the non-market value of freshwater sources in the Waikato region, Marsh and Mkwar (2013, p. 5) suggest that with respect to non-market values, non-use values and Māori special values for freshwater sources, there is a lack of knowledge and data for freshwater such as the Waikato and Waipa rivers.
pressures on iwi who are at the same time corporate farmers and kaitiaki. One respondent in
the study, a Māori academic reflects on this dilemma:

When you have that kind of connection in natural resources and you have this
notion of wanting to maintain that natural resource in perpetuity for your
descendants, that type of ethic will lead you down to a different part of resource
management and allocation of water. If you have the ethic of maximizing
efficiency within an economic sense, then you have different drivers influencing
the way you manage natural resources such as water (Informant 9).

Another informant extended this concern:

… Those pink areas on that map behind you, that’s all Tuwharetoa land…So this is
the upper Waikato and these are all our farms. These are all large dairy and beef,
sheep units… these are individually managed by trust and incorporations. So
technically not Tuwharetoa land but we say its Tuwharetoa land blocks because
they are in our rohe... In the area of co-management when we’re talking with the
regional council around managing issues like defuse pollution and maybe some
capping on land use, then we need to keep in mind hey, we don’t want to shoot
ourselves and we need to find a balancing act… it is not the environment or the
economy, it is the environment and the economy… So we are on both sides of the
equation. So yes we have got interest in the river but we also have interest to
protect the interest of our economic…(Informant 21).

There are potential tensions, then, between indigenous values and commercial values.
Compromises must be struck to develop economic benefits, and tensions between traditional
and marketised conceptions of ownership, between hapū rights and responsibilities and the
Trust Board economic model will need to be managed. Māori authorities have responsibility
to manage the distribution of assets on behalf of their tribal members with the aim of
developing opportunities for improving their communities’ wellbeing (Harmsworth, Barclay-
Kerr, & Reedy, 2002). Many iwi authorities such as iwi trust boards set their strategic
frameworks in four main areas: social, cultural, economic, political, ‘to achieve self-
determination’, and to promote the fundamental elements of iwi wellbeing (see Harmsworth
et al., 2002, p. 4). Iwi economic governance and management are highly dependent on trust
structure. The trust is comprised of individuals mandated to vote as a governing body on
behalf of tribal members. This suggests that the role of kaitiaki falls in the hands of trust boards who must manage tensions between kaitiakitanga and fostering economic development (Informant 2). Much of these tensions now reside within the trusts set up to manage economic resources. They must manage these resources in relation to significant intra-iwi inequalities in income and access to resources and services within the wider economy. Trusts must manage the (new) inequalities generated by market based approaches to natural resource allocation, and a new iwi elite managing growing economic wealth, based on iwi natural resources. As one Māori academic stresses:

The efficiency and the superiority of market based approaches to natural resource management i.e privatisation of the management of those rights, be the common public assets through the communal assets that managed by iwi. The iwi trust board or a corporation is less efficient in managing natural resources than a business entity such as iwi holding corporations… for me that scares me, because I know that currently Aotearoa has not got it right in terms of the allocation of the benefits of natural resource management or the management of assets on behalf of the group. So redistribution is poorly done. So while some tribes can make quite high turnover, what I am not seeing is how the returns from those assets equitably distributed (Informant 9).

Thus, a continuous challenge for tribal organisations is to balance their role in providing social responsibility or to promote market efficiency or a market based approach. The tribal boundaries, iwi interests, hapū interests and individual self-interests make it difficult to measure the subjective dimensions of wellbeing. These issues are high on the agenda of the independent Māori Economic Development Panel (MEDP), which was established in 2011 by the Minister for Economic Development and the Minister of Māori Affairs to address the performance and productivity of the Māori economy (MEDP, 2012). The MEDP aimed to develop a Māori Economic Strategy and Action Plan with objectives that:

- provides recommendations to improve the performance and productivity of the Māori economic sector;
- clarifies the role and identifies the contribution that the Government can make to improve the performance of the Māori economic sector; and
- considers the role and contribution of Māori to their own economic development (MEDP, 2012, p. 5).
The MEDP was instructed to ensure the Māori Economic Strategy and Action Plan were consistent with government’s economic goals that emphasise the importance of the Crown-Māori relationship established by the Treaty of Waitangi. Therefore, the Māori Strategy and Action was instructed to be:

- aligned to the Government’s economic priorities; and
- founded on the Crown-Māori relationship (which is defined by the Treaty of Waitangi), and on securing and enhancing the rights, interests, and reciprocal obligations, of whānau, hapū, iwi and Māori as tangata whenua, and as Treaty partners (MEDP, 2012, p. 5).

The MEDP insisted that their work and recommendations be linked to wider questions of Māori economic growth and economic welfare. The panel helped the Māori community and iwi-owned business organisations to strategically invest and maximise their cash assets by participating in property development and fisheries. The assets that have been transferred as part of the settlement agreement between Māori and Crown, have provided Māori with opportunities to strategically engage a number of commercial business corporations to maximise their shareholder returns. The data from Business and Economic Research Limited (BERL) 2014 indicates that Waikato Māori held $6.2 billion in assets and the majority of these assets has been invested in agriculture, forestry and fishing; property development and business services; and manufacturing (WRC, 2014a). From the total Māori assets in the Waikato, 54 percent is held by Māori businesses, while the rest is held by Māori Trustees and Treaty of Waitangi settlement organisations (WRC, 2014a).

Through land confiscation, Waikato-Tainui lost 1.2 million acres (480,000 hectares) of land (Orange, 2011, p. 255). Tainui Group Holdings Limited (TGH) is the business corporation of the Waikato-Tainui that manages investment for development projects and is also responsible for managing the Waikato-Tainui Fisheries Limited (WTF). More than 80 percent of TGH's assets is invested in property development (TGH, 2015a). From early 2002, Waikato-Tainui moved to separate their commercial interests from the regulatory, social, and cultural undertakings of the tribal organisation. To maximise higher returns to Waikato-Tainui’s 64,000 registered iwi beneficiaries, TGH developed its commercial business philosophy based on the clear separation “between the organisation responsible for wealth creation, TGH, and those responsible for distribution of that wealth, the Waikato-Tainui tribal authorities” (TGH, 2015b). Waikato-Tainui commercial entities made significant progress in developing
properties (see Table 5.3) by increasing the $170 million received from 1995 land settlement to more than $1 billion in assets by 2014.

Table 5.3: The major investments by the Waikato-Tainui commercial entities (Source: TGH, 2014).

<table>
<thead>
<tr>
<th>Investment Property</th>
<th>Development Property</th>
<th>Financial Investments/Joint venture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tainui Auckland Airport Hotel</td>
<td>The Base</td>
<td>Hamilton Riverview Hotel (HRH)</td>
</tr>
<tr>
<td>TGH holds 70% of shares. The hotel consists of 263 rooms.</td>
<td>Largest retail development in New Zealand with 52,000m2 floor area developed for trading.</td>
<td>Novotel Tainui Hotel is located in central Hamilton, operating since 1998.</td>
</tr>
<tr>
<td>University of Waikato</td>
<td>Huntington</td>
<td>Go Bus</td>
</tr>
<tr>
<td>Tenant: University of Waikato</td>
<td>Huntington is the residential subdivision consisting of 650 sections.</td>
<td>TGH is in partnership with a leading New Zealand passenger transport operator.</td>
</tr>
<tr>
<td>Interest in property: Leasehold and freehold</td>
<td>Land: 65 hectares</td>
<td></td>
</tr>
<tr>
<td>Land: 65 hectares</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huntly Power Station</td>
<td></td>
<td>Waikato Milking Systems</td>
</tr>
<tr>
<td>Tenant: Genesis Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest in property: Leasehold</td>
<td></td>
<td>A leading designer, producer and supplier of dairy systems and equipment.</td>
</tr>
<tr>
<td>Land: 64 hectares</td>
<td></td>
<td></td>
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<tr>
<td>Centre Place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenant: Kiwi Income Property Trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest in property: Leasehold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land: 1.4 hectares</td>
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<td></td>
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<tr>
<td>Ruakura Estate</td>
<td></td>
<td></td>
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<tr>
<td>Occupier: AgResearch</td>
<td></td>
<td></td>
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<tr>
<td>Interest in property: Leasehold</td>
<td></td>
<td></td>
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<tr>
<td>Land: 480 hectares</td>
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<tr>
<td>Wintec City Campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenant: Waikato Institute of Technology (Wintec)</td>
<td>Interest in property: Leasehold</td>
<td></td>
</tr>
</tbody>
</table>

According to Rahui Papa, the Chairman of Te Arataura o Waikato-Tainui, the tribal development projects are the result of efforts made by Waikato-Tainui on behalf of its people to foster their sovereignty: “We want to build the empire of the Waikato region to be at its optimum again and we want to be part and parcel of it and to do that we have to be a player” (Rahui Papa quoted in Smallman & Henson, 2015).

Efforts to increase treaty settlement assets are also central to developing economic growth/potential for other River Iwi. The Tuaropaki Trust, which consists of seven Mokai
hapū associated with Ngati Tuwharetoa and Ngati Raukawa, is another example. Its investment activities include sustainable farming, horticulture, geothermal energy generation, and telecommunication. It is also associated with the whole milk powder plant, Miraka Limited (Miraka, 2013), a dairy processor controlled by a group of Māori Trustee organisations. As one Māori principal environmental consultant from Tuwharetoa points:

We’ve just built a new dairy milk powder processing facility at Mokai, called Miraka. It is a Māori initiative that processes milk for milk powder and it has around 80 farms within the upper Waikato catchments supplying it and that is one of our businesses (Informant 21).

What is obvious is that Māori interest is not limited to river restoration but also to seeking ways to resource-based corporate economic development.

Māori are not just the environmentalist or cultural people. We are actually big players in the economy… We have got both environmental, social, cultural, and commercial imperatives. So it is very important to us whilst we developing our policies that we don’t lose the ability for our economical areas such as our farming entities, our forestry, or whatever. That is really an important point because a lot of people don’t realise that (Informant 21).

While Māori economic development is consistent with opportunities at the national level, it adds new layers of complexity to the tensions between customary and economic values of the Waikato River. This has direct consequences for river management, a contest in which Māori are both major corporate players and potentially small business owners; and also customary takers of fish and other resources. Economic development trusts and Rūnanga must embrace the challenge of different economic demands in all of their detail, and contradictions between these and cultural and environmental values. This is an on-going challenge and one that cannot be resolved by formalised planning processes. One possibility, is that Māori principles of resource management and governance processes may prove more effective in providing the flexible, open-ended approaches and long-term horizons necessary to secure a genuinely sustainable sector.

Results from the interviews suggest that the question of economic values and benefit is more complicated than the TEV can accommodate. There is far less independence among the use value and non-use value in Figure 5.9 than TEV models allow for. Māori trusts are key
players but do not separate use value and non-use value. Food production matters because it is directly associated with land and water, and is important for Māori economic development. One example here is harvesting of the river for food. Through enhancing the river there is a possibility of fisheries, eel farms and whitebait for example, to create a source of food for Māori (Informants 25, 33 and 34). Interviewees explained that iwi want to catch eels and feed them to their family as they have been doing that over many generations. Taking eels for customary, cultural, and economic purposes is part of a complex economy of exchange (monetary and non-monetary), subsistence and koha (FitzHerbert, 2009). Commercial over-fishing in the Waikato, however, has put eel populations under pressure (Informant 22). Again, there are tensions to be overcome and balances to be struck between environmental goals and economic interests, and some of these will lie within iwi. As a WRC scientist observes:

> My biologist colleagues tell me that the main threat to the native eels in this river system is commercial harvesting. Fishermen catch eels for the market and my biologist colleagues tell me that the view is that there is too much harvesting just like with often in fisheries in the ocean [that] too many fish have been taken. So a suggestion is that if you want to restore the eel population in the Waikato system … one way to do that is simply to say well we will not allocate any fishing quota to the commercial fishing (Informant 22).

Once again there are competing values to be considered, uncertain environmental knowledge, complex ecological feedbacks and overlapping legislation such as the Fisheries Act 1983\(^\text{25}\). Action is required to ensure sustain and improve the balance of interests, posing further challenges to co-management arrangements.

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5.7 Variation 6: Water quantity management in the Waikato

Water quality degradation is directly associated with the demands and pressures upon using the available water resources. Thus, to prevent further water degradation, the efficient management of available water resource is an important approach for any river rehabilitation project (Del Tánago, De Jalón, & Román, 2012). In the mid-2000s, the WRC began to develop plans to balance the competing interests in water allocation. These types of contest involve intransigent problems that must be addressed if not resolved. Variation 6 is an example of one regulatory initiative in this regard, and an example that illustrates the contests at the core of governance and management concerns with respect to the Waikato River.

Nearly half of the New Zealand's peak electricity is generated in the Waikato region (McAuliffe, 2012) while its dairy farmers are fundamental to regional and national economies. At the same time dairy activities such as dairy shed wash down and stock water supply affect both the demand for and the supply of good quality water. Auckland draws most of its water from the Waikato River. Fresh water resources are finite; tensions exist between interested groups or individuals that use the water resources (e.g. water for electricity production versus dairy activities) (McAuliffe, 2012). Efficient management and proper resource consents are required. The longer term settlement of contests around water has been disturbed, both economically and politically. There has been a significant change in land use activities in the Waikato over the last two decades. The area where land has been irrigated has nearly doubled within the last 10 years. Politically, the RMA has come under pressure, while iwi interest in regulation has intensified. Planning documents guiding resource consent applications have become overwhelmed by changes and the Waikato Regional Plan lacks policies that can deal with water shortage and water use efficiency in the region. Some parts of the Waikato River catchments in the region are now fully allocated or are already over-allocated. The RMA allows water to be used in cases of where:

- an individual’s reasonable domestic needs (s14(3)(b)(i))
- the reasonable needs of an individual’s animals for drinking water (s14(3)(b)(ii))
- firefighting purposes (WRC, 2012f, p. 18).

Section 14 necessitates permits for activities that include “take, use, damming and diversion” of water resources. Such activities must be permitted by a regional plan or resource consent (WRC, 2012i 3.4) The implementation of the RMA in any setting is, in turn, subjected to the
“National Policy Statement – Freshwater Management” a national level strategic intervention to ensure that there is no over-allocation of freshwater resources by 2030 (WRC, 2014h). WRC is obliged to comply with the National Policy Statement or rely on the Environment Court decision on how to prioritise water allocation (Informant 23).

5.7.1 Current water take
The WRC reported in 2014 (WRC, 2014h) that it has granted around 1300 permits for water uptake (WRC, 2014i). Most consented water uptake at limit levels is for surface water, which reflects the bulk consumptive water use. Daily demand, however, runs at about 1.64 million cubic meter per day compared to a demand for groundwater uptake of approximately 472,000 cubic metres a day (WRC, 2014h), while there are more consents in absolute terms for groundwater (WRC, 2012e).

Prior to Variation 6, which was initiated in 2006, there was no government guidance on freshwater management in New Zealand (McAuliffe, 2012). This has raised political and technical criticism about the capability of the WRC to allocate water resources in an efficient way. Many resource users complained that the Waikato Regional Plan failed to respond to the competitive demands for water supply in the Waikato region (WRC, 2012e). In response to the criticism of stakeholders and the increasing demands on the water resources, WRC released Proposed Variation 6 to institute changes to the Proposed Regional Plan.

5.7.2 Variation 6 Policy development
Variation 6 was framed by the Waikato Regional Plan as a guiding policy to set rules to manage water allocation and consumption within the Waikato region. Variation 6 was notified in October 2006 and became operational in April 2012 after 6 years of development (see Table 5.4).
Table 5.4: The process of the formation of Variation 6 policy development (Sources: McAuliffe, 2012; WRC, 2014g).

<table>
<thead>
<tr>
<th>Date</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>The WRC project team reviewed the regulations and policies in regards to water allocation.</td>
</tr>
<tr>
<td>2004</td>
<td>A discussion paper on Variation 6 was distributed among key region’s stakeholders and individuals who held consents to take water.</td>
</tr>
<tr>
<td>2006</td>
<td>At the end of September 2006, the WRC received an approval to publicly notify Variation 6 and to fulfil Clause 5 of the First Schedule of the RMA 1991. Eventually, Variation 6 was publicly notified in October 2006.</td>
</tr>
<tr>
<td>2007</td>
<td>The WRC received 143 submissions. A summary of submissions was publicly notified on February 2007 for further submissions. Another 48 submissions were received mostly from entities that had earlier lodged submissions. The hearings began at Hamilton in December 2007.</td>
</tr>
<tr>
<td>2008</td>
<td>In a public-excluded meeting, the Hearings Committee deliberated over a period of seven months (March 2008 to September 2008) to provide its recommendations to the WRC. In October 2008 the WRC adopted the hearing committee’s recommendations and the decisions were publicly notified in November 2008.</td>
</tr>
<tr>
<td>2009</td>
<td>In March 2009 the Environment Court received 37 appeals.</td>
</tr>
<tr>
<td>2011</td>
<td>From February to August 2011, the Environment Court hearing for Variation 6 was held in Hamilton. The Environment Court’s decision on the appeals for Variation 6 was released at the end of November 2011.</td>
</tr>
<tr>
<td>2012</td>
<td>In January 2012, no appeals were received by the High Court. Variation 6 became operative in April 2012.</td>
</tr>
<tr>
<td>2013</td>
<td>The WRC started to develop a resource consent implementation strategy to facilitate the resource consent applications for water allocation.</td>
</tr>
</tbody>
</table>

After Variation 6 was notified, a large number of parties appealed the WRC’s decisions at the Environment Court. The main concerns raised from the appeals were associated with the use of electricity generation versus water for irrigation, the HPS water use, priority for water for domestic and municipal supply, iwi allocation of water for unspecified uses, ground water use, the use of common expiry dates, transfer of water permits, temporary takes, and concerns about the ambiguity of various definitions (WRC, 2014g). Contests over Variation 6 pitted various individuals and social groups against each other, sometimes on the basis of values, commonly along a simple axis of narrow self-interest. As one WRC group manager emphasises:

When we go to the court the people who generally don’t like new proposals are [actually the] existing user, people who already have resource consents. They are
generally individuals as opposed to community users such as Hamilton City Council which has resource consents for the community to provide water (Informant 23).

The WRC proposed two key policies for the Proposed Waikato Regional Plan. One was that all resource consents expire at the same time. The rationale behind a common expiry date was that, no matter how long the resource users have had their resource consents, all resource consents must expire at the same time. The WRC had a second policy that WRC would prioritise and consider all resource consent applications together against priority criteria to enable them to be assessed simultaneously (Informant 23). They also sought to secure the criterion that community use be prioritised over individual use (Informant 23). However, Variation 6 was compromised by statutory and financial concerns.

The Resource Management (Discount on Administrative Charges) Regulations 2010 led the High Court to reject the common expiry date proposal (WRC, 2012d). The discount regulation requires that the WRC processes resource applications within a fixed time frame, or face a financial penalty (WRC, 2012d). In respect of the common expiry date policy, some catchments would face a common expiry date for as many as 50 to 60 consents and it would be very difficult for the Council to process these within 20 days simultaneously (Informant 23). In the case of any delay, the WRC would be forced to pay 50% of the consent costs. According to the WRC group manager, the WRC had to cancel the common expiry date policy because “half way through the Environment Court process, there was a High Court decision, calledSynlait that said you cannot have a beauty parade; the RMA is about first in first served” (Informant 23).

5.7.3 The Environment Court’s decision on Variation 6

The Environment Court sought to balance the value of dairying and other uses against that of electricity generation. It made more water available for uptake from the catchments upstream of the Karapiro Dam by increasing the allocatable water from 3.6% to 5% of Q₅ (low flow) to increase potential water for future growth for sectors other than hydroelectric power.

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26 After evaluating the effects of the discount regulations on the common expiry date, the WRC understood that it was unable to process many applications within the required timeframe without escaping the cost enforced by the regulations. For example the WRC had to pay nearly $140,000 for 55 consents in just one catchment (WRC, 2012d).
generation. At the same time, the Environment Court made any takes for stock water and domestic consumption after the 15th of October 2008 consentable so as to ensure that individuals’ domestic needs and stock water does not create adverse environmental issues for water. The Agricultural Working Group\textsuperscript{27} and the Wairakei Pastoral parties opposed this decision and argued that this requirement is \textit{ultra vires} (unlawful). But the Environment Court decision concluded that:

\begin{quote}
[T]he provisions are not ultra vires and that the authorisation to take water pursuant to s14 (3) (b) is not unlimited. The provisions in Variation 6 define the point at which a take, that would otherwise be allowed by s14 (3) (b), has, or is likely to have, an adverse effect, and therefore requires resource consent (Environment Court, 2012, p. 44).
\end{quote}

Waikato iwi, in particular Waikato-Tainui, opposed the transfer of water permits between commercial users and argued that this rule would lead to negative impacts on the health of the Waikato River. Waikato iwi argued that the transfer of water permits would increase the sense that water is an economic good that exists for economic purposes, and thus contravenes the overarching purpose of the Settlement Act in relation to the health and wellbeing of the river. Commercial operators countered that the transfer of water permits would increase the flexibility and efficiency of water usage (Environment Court, 2012, p. 131). Finally, the Environment Court supported the commercial parties’ argument and ruled that Council provide opportunities to transfer water permits “either by way of a permitted activity or restricted discretionary status” (Environment Court, 2012, p. 133). The Court also acknowledged that these enabling transfers need to be consistent with the health and wellbeing of the Waikato River and Council must ensure that any possible negative impacts on the Waikato River are to be “avoided, remedied or mitigated” (Environment Court, 2012, p. 133) in line with the VS of the Waikato River.

The Raukawa Charitable Trust requested that Variation 6 explicitly allocates water for iwi development, mainly for iwi fishing and farming activities in the Coromandel Peninsula. This request was objected to by the WRC. Under the RMA, the WRC does not have any authority to allocate special access to water for iwi. The Environment Court agreed with the WRC and stated that, in the RMA, there is no reference to water take by any group or community and

\textsuperscript{27} The Agricultural Working Group includes Fonterra, Federated Farmers and the Upper Waikato and Waihou Irrigators’ association (Environment Court, 2012).
therefore, allocation needs to be regulated “by the status of the activity not the status of the applicant” (Environment Court, 2012, p. 127).

5.7.4 Variation 6 as an instrument of Settlement

In general, the WRC staff were satisfied with the Environment Court decision in which the Court mainly approved the version of Variation 6 between the WRC and other stakeholders. In addition, in the last paragraph of the decision the Court pointed out that:

“We have already referred to the intensive and rigorous participatory process of this Variation and the integrity of that process. A process that culminated in the 8 August 2011 version of Variation 6. That version and the few amendments to it as a result of this decision, reflects the quality of the Council’s experts and advisors. They exhibited a fair and objective approach to their task. This has been appreciated by the Court” (Environment Court, 2012, p. 135).

For the WRC, this statement by the Environment Court vindicates the participatory process under which Variation 6 was developed with other stakeholders. However, the challenge is to implement Variation 6 and organise a consenting process for the allocation of water in the context of the WRSA and other institutions of co-governance.

After Variation 6 became operative, there were about 2600 dairy farmers who needed to obtain consent for their activities, which mostly included dairy shed wash down and milk cooling. Most farming activities take place in fully allocated catchments (nearly 70 per cent). The Environment Court ruling requires consent for water takes of more than 15 m$^3$/day), although it set a grandparenting clause for existing consent until 1 Jan 2015. The WRC prefers to process farmer’s applications on catchment-by-catchment basis (WRC, 2013f). It also provides incentives for farmers, as a normal consent process may cost $1500 to $3000, but rather than assessing individual consents, grouping and assessing similar consents in terms of their characteristics and environmental impacts may cost around $800. The consent is valid for a period of 15 years, which then needs to be renewed (WRC, 2013f). Despite catchment group processing timeframes for all catchments in the Waikato region not being closed yet, the WRC provides “catch-up groups” processing to allow other individuals to be able to apply for resource consents by late 2015 to mid-2016. Currently, in the Waikato
catchment 1200 consent applications are pending (WRC project manager, personal communication, 2015).

While enforcement of Variation 6 was new, the consent requirement had been in place for some time even if it had not been enforced. Farmers have effectively been taking water illegally, although Council has not had the resources to process all the consents that have been lodged. As a result, the WRC still lacks enough information about the consents ratio in terms of who is taking groundwater and who is taking surface water to enable it to allocate water effectively, and to provide information to the public. The new ruling will eventually correct this informational deficit, and in the meantime the WRC is providing consents at below transaction cost so as to incentivise farmers to apply for consents.

The process of policy formation of Variation 6 in the Waikato draws on the complications of measuring the competitive values of resource users. There are different methods proposed by experts to measure the value of stakeholders in relation to water resources either through economic models or political preferences based on specific environmental outcomes (Tadaki & Sinner, 2014). However, appropriate measuring of actors’ values within the historical, cultural, and social setting underlie a wide range of preferences that cannot be “measured by experts in ways that are immune from contest in places like council hearings or the Environment Court” (Sinner & Berkett, 2013, p. 3).

Notwithstanding, government agencies such as the WRC have tried to determine a matrix for stakeholders’ values in relation to farm management plans and effective use of water resources. In practice, the complexity of wicked problems (Sinner & Berkett, 2013) and knowledge gaps in water management affects efforts to design and construct a framework to deal with different values. For example, in different farming systems, water consumption by stock varies depending on the availability of pasture. This means that during rainfall, food intake is mainly associated with stock consuming pasture. Whereas during drought, food intake is mainly based on dry matter and other supplements (WRC project manager, personal communication, 2015). Hence, during drought, stock are more likely to consume water, resulting in a substantial increase of water intake, which will exceed the 70 l/cow/day projected in the WRC Technical report (WRC project manager, personal communication, 2015). This highlights the uncertainty that arises when determining water allocation, which suggests the need for more research to understand on-farm variability and water demand.
5.8 Conclusion

This chapter has sought to outline that which must be governed under the new co-governance arrangements: competing interests and values, historical connections between iwi and their river, and the land-use activities that have greatest effect on river quality. I have discussed these values with respect to debates over mana whenua, water quality issues, and economic growth. Co-governance arrangements must resolve a set of specific concerns in each of these domains and balance contradictory interests and tensions across them. The river represents being, cultural identity, spiritual guidance and heritage for River Iwi who narrate themselves in relation to different parts of it and over which they claim rights and responsibilities of guardianship. Yet, colonisation and contemporary environmental regulation have fractured connections between iwi and river. More exploitative connections have also been formed with the Waikato River by the residents of Hamilton and other towns, and by nationally significant industry. These connections negatively affect water quality, although this is contested, and undermine iwi connections.

The WRC has set strategic directions to achieve sustainable management of natural resources by providing regulations to improve economic growth and prevent environmental degradation, particularly water. However, in practice, the WRC is faced with the difficulty of evaluating the interrelationship of economic values with non-economic values. Variation 6 highlights these challenges and illustrates how WRC has responded. Iwi organisations are also challenged to find strategies that can balance traditional and economic values for tribal members. These are the practical issues that highlight just how difficult settling co-governance has been.

The material examined in this research points to the co-constitutive relationships and ongoing tensions between discourses of co-governance and the political projects of environment, economy and sovereignty. The relational agency at work in each of the (notably scientists-regulators, farmers-regulators, and Māori-regulators) mobilises different elements of co-governance discourse into distinctive strategic political narratives each with a particular governmental rationality. The pivotal proponents of, or advocates for, each of the projects are entangled in the other projects, creating a vibrant, complex and contested political terrain in which co-governance means different things. Much of the contest comes down to seeking influence over the micro-details of what is in broader terms a co-governance settlement.
For example, iwi are entangled in all three political projects. They are economic actors who are committed to the export agenda just as they are committed to the wellbeing of the river and tino rangatiratanga. Tino rangatiratanga has been mobilised by a group of Māori leaders and supported by Māori academics and iwi organisations to pursue Māori sovereignty and self-determination. Tino rangatiratanga projects can be aligned with government projects of productive agriculture and export vision (doubling export by 2025), but also with visions of more holistic forms of farming and post-productivist resource management. They seek the sovereignty necessary to manage the implications of these entanglements themselves, and to at least co-govern their relations with the environment and with the interests of other users. Iwi development boards are mobilising capital from the Treaty settlement process to invest in business, including resource-based developments on Māori land and more broadly. In this case aspirations for sovereignty are tightly entangled in regional and national government economic and environmental projects.

Likewise key commercial actors in agriculture and energy sector must now deal with Māori organisations around question of investment as well as resource management. Business, scientists, environmental advocates and iwi are all keen to be able to make claims about water quality and a clean river. The different political projects are entangled, as are the related discourses of co-governance.
6. A SITUATED POLITICS OF CO-GOVERNANCE?

6.1 Introduction
Chapters Four and Five described how the Waikato River Settlement Act (WRSA) has initiated justified co-governance/co-management negotiations from particular historical circumstances and on very specific grounds: historical tensions with regards to the relationship of mana whenua with the river; and environmental concerns in relation to the water quality of the Waikato waters. Based on the themes derived from interviews and the analysis of documents this chapter portrays the deeper politics of representation and building platforms for multiple emergent and messy initiatives. This chapter will consider how the apparatus and practices of co-governance/co-management have been implemented and have come to operate in practice, and will make some initial reflections on how effective they have been to date in dealing with these tensions. The Vision and Strategy (VS) is the main apparatus of the co-governance arrangement but is complemented by a redistribution of rules to do with managing environmental quality in the Waikato and Waipa Rivers; and a reworking of responsibilities that has encouraged stakeholders/actors to accept the VS as a shared project. The new special version of integrated catchment management, the Healthy Rivers/Wai Ora (HRWO) one encouraging an early attempt to institutionalise co-governance (the VS) in practice, while efforts to enhance the whitebait fishery reflect a shared commitment of different organisations and local people to the idea of collaboration. Despite these successes, however, implementing co-governance in practice has proven challenging, especially with respect to questions of accountability. As the data suggest, while the establishment of the WRSA was positive in creating a shared vision, basic tensions are not resolved by co-partnerships and historical tensions are not fixed.

This chapter presents four main axes of contestation as obstacles for effective co-governance. The first barrier for effective co-governance is the institutional arrangements, and in this case the Resource Management Act (RMA). The WRSA involves local authorities in setting new rules and regulations to integrate the VS of co-governance into their plans. These plans and policies need to be prepared through the RMA processes of notification, public consultation, and appeals. This has in turn subjected them to contests ‘interpreted’ and ‘implemented’ in practice. These issues have created a ‘hard conversation’ for key stakeholder groups and a barrier for promoting collaboration. Secondly for the Waikato River Authority (WRA), the measure of the success of co-governance, and for the Waikato Regional Council (WRC), the
measure of effectiveness of co-management is contested because of the technical difficulties regarding the environmental footprint and the nature of farming. Thirdly, despite the legislative force of the WRSA and the ethic of co-governance as a partnership in water management however, the Crown is reluctant to share the management of the river with the WRA. Its prevailing view is that the ‘real management’ of water resources is still the responsibility of the Regional Council and that the WRA is only a ‘watchdog’. Fourthly, iwi participation in decision-making is contested for two reasons: the politics of knowledge and how to integrate mātauranga Māori in decision-making; and on-going tensions between hapū and iwi over the appropriate balance of sometimes conflicting interpretations of the economic and cultural significance of water resources.

Under co-governance there is a risk of creating more constraints for some key actors (particularly the farming and agricultural industries). However, this chapter will suggest that co-management and co-governance have helped to create a framework that promotes stakeholder participation in river management. As the study reveals, the Waikato co-management model has initiated wider stakeholder participation in water management and a new basis for the practice of co-management that has iwi at the centre.

6.2 The contested terrain of co-governance

6.2.1 Legislative lags
To implement co-governance, one of the roles of the WRA is to oversee the VS of the WRSA and to make sure that it is incorporated into an ‘integrated and co-ordinated approach’ that promotes the health and wellbeing of the Waikato River. While the WRC has a Regional Plan and Regional Policy Statement (RPS) as a framework to guide the management of water, these have yet to be made consistent with the VS (Informant 25). The VS was initially set under the Labour Government and it was thought that it will overarch the RPS in the same way as National Policy Statements (NPS) (Informant 25). Reviews of the co-governance and co-management arrangements in the legislative process suggested structuring the provisions of WRSA in the form of a NPS. However, the government eventually settled on positioning WRSA as an independent overarching set of provisions to which the RPS must give affect (WRSB, 2008). For iwi respondents this ensures that the VS will have its own mana and its own legislation and will if necessary prevail over NPS, whilst being implemented through
regional and district level planning practice. As one Māori informant and a member of the WRC reflects:

What they agreed on was: there wouldn’t be a National Policy Statement but it will have its own mana and called it Te Ture Whaimana, which means no future legislation can come and override that and Waikato Regional Council still have to give effect to it (Informant 25).

However, from the establishment of the VS in 2010, the WRC had to wait for quite some time to integrate the VS into the RPS because the Ngati Maniapoto legislation had yet to be finalised. Maniapoto sought to add three additional objectives into the VS (Informant 25). Eventfully the Maniapoto River Act (2012) was finalised in 2012 using the same VS as the other Waikato River Acts.

6.2.2 From legislation to enactment in plans

In accordance with Section 11(4) of the WRSA, the WRC is currently reviewing the Regional Plan as to its consistency with the VS (WRC, 2010). WRC staff consider that the review will help to achieve the objectives of the VS, which are in themselves not open to review by any form of submission. The review of the regional plan is also understood to be fundamental to a subsequent review by TLAs of their District Plans to ensure that they are also consistent with the VS (WRC, 2010). In practice therefore, the WRC and other Waikato TLAs are still trying to create a framework for developing their decision-making and policy writing. The WRSA has in this way introduced a sense of uncertainty into Waikato water management. For many, this has caused a sense of concern and frustration that it will result in changes in WRC regulation, and industry practices with regards to their activities. As reflected by one environmental advisor:

At the moment the Vision and Strategy is very high level. It talks about some general objectives and strategies to achieve some change in the Waikato River catchment. Until Regional Plan and District Plan give effect to that… that particular document (Vision and Strategy) is going to have limited scope for change (Informant 17).
For others, however, this uncertainty offers creative potential. It forces water onto the policy table and subjects it to an unfamiliar vision and set of objectives. And for iwi these are aspirational objectives that foreshadow a different river and a much improved environment, as well as more just forms of government. As Borrini-Feyerabend and colleagues (2013, pp. 325-326) suggest, co-management is a “social experiment” process that indicates its architectural foundation must be framed based on mutual communication, negotiation, and compromise amongst all parties involved. This provision points to co-management as a “learning by doing” experiment which consist of “acting together, creating knowledge, and developing an active institution through trial and error”, rather than focusing on a set of fixed and predetermined objectives (Borrini-Feyerabend et al., 2013, p. 326). As one Māori environmental consultant from Ngāti Maniapoto reflects, co-management is an experimental process that requires time and patience to see the end result:

I told our Trust Board, Ngāti Maniapoto…do what it needs to be done and then we are trying to figure it out later. So for us, we are looking at the long-term, always looking towards the end of things, rather than what is up front. Because it is going to be a trial in everything. We have to give it a go and see how things work out. And no doubt that there would be some ‘knocks’ and ‘bruises’ (laughing out loud), but I am sure as we get further and further out things should improve (Informant 10).

6.2.3 Adding the ‘Co-’ to ‘governance’

In the field, my research participants tended to use the terms co-governance and co-management interchangeably. While WRC staff, academics, and members of the WRA distinguished between the two terms, the distinction was less clear for many of my interviewees. This has added to levels of anxiety among those who expected immediate and instrumental changes from the WRSA, but has also yielded political opportunities.

The WRA has both governance and management roles: a strategic thinking responsibility for the long term future of the river and responsibility for ensuring that it is delivered via an annual work plan and day-to-day management (Informant 31). Management roles tend to involve funding allocation for monitoring, evaluating, and consenting the normal work of the council which might involve scientists, planners, and managers.
From a post treaty settlement perspective, adding the ‘co-’ to governance changes the dynamic of the governance role towards more consensus based strategy making (Informant 31). In practice, strategy and any related decisions are made once everyone around the table comes to an agreement. This means that sometimes it takes longer to reach decisions than in a conventional approach, which would reach decisions via majority vote. As one of the representatives of the WRA explains:

Co-governance … is about setting the strategic direction, planning, leadership [and] thinking perhaps over longer term… In reality everyone has been on the same page when decisions were made rather than people dissenting or voting in opposition. It does take a little bit longer because you tend to work through things, but at the end of the day what it does still spin on is the quality and the merit of the arguments and the discussions put forward by respective members around the table (Informant 31).

A two-chairperson model can complicate and extend decision-making processes further. Having co-chairs can create different dynamics if the chairs have different strategies and styles of thinking (Informant 31). There is no template or ideal model. The Waikato River co-governance is not a pure form of governance as the WRA does not have full and final decision-making authority in the Waikato catchment. Rather it is a “co-governance model which is underpinned by collaborative governance which will ultimately translate to co-management on the ground” (Informant 11). This form of governance will ultimately blur the boundaries of hierarchical forms of command and control towards a newer power configuration that is more centred on collaboration and partnership.

6.2.4 Negotiating the ‘co’: A deeper politics of representation

At the heart of the co-governance apparatus is the co-governance board (See Figure 6.1). The co-governance board oversees the VS. It consists of ten members; five members are appointed by government and five members are appointed by the five River Iwi organisations. In addition two appointees, one from government and one from the River Iwi, act as co-chairmen.
The WRA differs markedly from the former Guardian Establishment Committee (GEC), recognising both the evolving understandings of co-governance, and the stepped process of its implementation. The GEC effectively created the co-governance model that was finalised by the WRSA and the establishment of the WRA (WRSB, 2008).

Despite the 50/50 partnership between government appointees (representing the Crown to the extent that the arrangements are seen as a Treaty solution) and iwi appointees on the WRA, some argue that it has structured unequal representation into co-governance. That is, the five seats were allocated to River Iwi to represent the river from different tribes, each with its own tikanga and interests (Informant 34). However, the government appointees also come from different organisations, with diverse interests. For instance, the co-chair of the WRA is also the chair of Dairy New Zealand and the WRC has a representative on the co-governance board.
Waikato Tainui had two members on the GEC, but only one on the WRA, leading them to claim that this fails to recognise their mana whenua along the river. Respondents from Waikato-Tainui claim that it was they who initiated and completed the ground breaking work of developing and advocating for co-management, applying for funding, and paying the legal costs to get the deed of settlement signed (Informants 34 and 35). As one of the Māori respondents from the Waikato-Tainui explains:

I don’t think that the makeup of the Waikato River Authority is the best it could possibly be. It is better than what existed previously which was nothing, I mean prior to the settlement, but it is not as good as the original makeup which recognised that half of the river, half of the spanning of the river is within the mana whenua area of the Waikato-Tainui. So I think… it is inequitable that the Crown did make the determination like that based on politics and negotiations and not on the purpose of the settlement which was to have representation from all parts of the river (Informant 34).

Other River Iwi respondents accept the solution of one member to represent the tribe, as long as that member has the required skills and knowledge to collate and provide the right advice to the co-governance body (Informants 21, 34 and 35). One of my research participants emphasised that in the “purest sense” or in practice there is no indication that any iwi organisation holds more power than the others (Informant 11). Nonetheless, another informant was inclined to agree that Waikato-Tainui has more corporate financial resources and when “Tukoroirangi Morgan and his team walk in the room they have a $600m cheque book in their back pocket” (Informant 36). For the informant, Waikato-Tainui is a heavily resourced corporate actor, and a powerful figure in negotiations. DairyNZ and the WRC are also powerful organisations that command significant political and financial resources. Others may be less well resourced.

Despite this structural imbalance of power, however, participants recognised that the challenge facing the board is for representatives to work with other parties. It is about “compromises” (Informant 36). Indeed, despite the fact that the representative of Waikato-Tainui will hold the role of co-chair for five years, one informant suggested that, from the formation of the GEC to the development of the WRA, no iwi organisation had exercised undue political advantage:
I don’t detect any dominance of any party and in fact quite the opposite, Māori as a general observation, attempt at all times to run decision-making on a consensus bases. I didn’t see in the Guardian Establishment Committee or subsequently where there was a division within the ranks of those leading the entities. Division would suggest that one party was taking a dominant role in my mind, they are certainly thought leaders. I think that is more a matter of the individual representatives as opposed to the particular power positions that are taken by any of the contributing organisations be they either iwi or Crown representatives (Informant 11).

Nevertheless, several interview participants identified the extensive influence over the process of a particular actor, Tukoroirangi Morgan, who led Waikato-Tainui negotiations over the WRSA for the government in an advisory role on Treaty settlement. Other respondents highlight issues to do with capability and entrenched ideology in respect of particular members. As one Māori scholar emphasised:

… until they actually free themselves of that doctrine that they have been trained in and open their eyes to alternatives particularly the worldview that is supposed to be inherently within them and define them as Māori, then there is going to be some large barriers (Informant 9).

### 6.2.5 Accommodating Multiple Settlement Acts

In the wake of the WRSA, government has continued to prepare Settlement Bills for the other River Iwi. The challenge of accommodating multiple Settlement Acts continues to frustrate the templating of co-management from co-governance arrangements. Opinions are divided as to whether the different Acts will hinder development of co-management practices or whether, as a potential necessity, they may encourage a more effective template for co-management. Waikato-Tainui iwi are argued to be wary of the threat posed by multiple settlements to effective co-management on the upper Waikato and the Waipa River (Informant 35). One respondent suggests that the Waikato-Tainui Settlement Act might be used to restrict other iwi objectives, and that it amounts to inappropriately “fast tracking the settlement process” (Informant 35). Another suggests that there should be a single settlement for the river (Informant 36). For their part, Waikato-Tainui argue that their intention is to reconnect with their ancestral river, redress grievances, and secure a voice in decision-making.
making, and they have no intention to affect the claims of other tribes (Waikato-Tainui, personal communication, 2012).

However, timing has been a major problem in the Treaty settlement process generally, and has had an influence in this case. Other iwi have sought to use the WRSA as a precedent. As one Māori informant from the Waikato-Tainui explains:

Te Arawa had already reached their settlement (that signed deed of the settlement)… all they could negotiate was the statutory acknowledgement of the river and perhaps the deeds of recognition and other kind of inferior forms of redress, weaker forms of redress in terms of Treaty settlement kinds… My point was Te Arawa actually had a settlement and so their grievances are in relation to the river they had reached in their settlement. Then they were made aware of the stronger legislation of Waikato-Tainui, [and they said] actually we want that too. Crown said you have already settled, you are not eligible, you have settled through the Treaty claim. As it turned out they did get the co-management and co-governance arrangements and funding (Informant 34).

An interviewee from Te Arawa confirmed the view that if there is going to be a co-management for the lower part of the river there should be another one for the upper part of the river and the same for the Waipa River (Informant 20). In the Waikato setting, the upper Waikato River Act and the Waipa River Act have drawn on and expanded the WRSA so as to achieve holistic management of the Waikato River. As the same Māori respondent from Waikato-Tainui observes:

I actually think that the ‘thinking’ and the ‘framework’ is really helpful and beneficial to others. I think some people might get a little bit miffed about it, but I actually think that one of the beautiful things about Māori is often we are quite generous and we do want to help others, you know? Strategically we want to make sure that we get good benefits from our own hard work but I think I am proud that our template is useful and helpful to other iwi (Informant 34).

A scientist from Ngati Maniapoto attributes Waikato-Tainui with placing an accent on river revitalisation over ownership so as to deal with the Waikato River separately in the WRSA (Informant 14). This allows Ngati Maniapoto and other iwi to speak about their interests in
relation to the Waikato and Waipa rivers. An informant from Ngati Tuwharetoa confirms that the WRSA helped them to their own Settlement Act:

We are very similar to the other iwi of Raukawa and Te Arawa and that we followed Waikato-Tainui. They were the first cab off the rank. They had a number of settlements for their river and I believe it was around the October 2010 that Waikato-Tainui River Settlement Act talked about the notion of co-management and mana whakahaere which was primarily talking about holistic approach to managing the river (Informant 21).

While the WRSA model has the capability to be an appropriate template for river rehabilitation, the notion of co-management can get more complicated at the catchment level, particularly for those iwi whose rohe have overlapping boundaries. For example, Ngāti Koroki Kahukura is one of the Waikato iwi in the Maungatautari that has overlapping rohe with Maniapoto and Raukawa. Because of their boundaries Ngāti Koroki Kahukura settled their raupatu claim by the Waikato-Tainui Raupatu in 1995 (NKKCSB, 2013). As one respondent affiliated with Ngāti Koroki Kahukura stresses:

We think we have the right to be at the Waikato River Authority table … and we would like our interests covered by Waikato-Tainui which they are anyway within the raupatu and the Waikato-Tainui [settlement area] but our interest extends outside of the Waikato-Tainui settlement area and nobody represents us in that space (Informant 36).

In response to Ngāti Koroki Kahukura claim for having a title role in the co-management of the Waikato River, the Crown replied that they ‘carefully’ took into consideration the interests of Ngāti Koroki Kahukura in safeguarding their rights and responsibilities as the kaitiaki for the Waikato River (NKKCSB, 2013). The Crown took the view in the Ngāti Koroki Kahukura Settlement Bill 2013 that Ngāti Koroki Kahukura had overlapping rohe with Waikato-Tainui, Te Arawa, Raukawa, and Tuwharetoa River Iwi, meaning that the Upper and Lower Waikato River legislation provide sufficient opportunity for Ngāti Koroki Kahukura to participate in Waikato River clean-up projects (NKKCSB, 2013).

Despite the desire for iwi to co-manage their rohe and practice their kaitiaki roles, government has taken the view that too many co-management arrangements are problematic because of up-stream and down-stream connections. They have limited co-governance/co-
management to three settlement acts and one Vision and Strategy. While in the short term this is complicating the development of co-management templates, it hopes that it will guide the development of a more holistic integrated management approach.

6.3 From co-governance to co-management
My field research was conducted against a background of uncertainty over what the VS meant for stakeholders and how it should work in practice. Neither the WRSA nor any nominated actor set had responsibility for laying out how the VS was to be integrated into decision-making. When I was in the field, the WRC was preparing to review new plans and polices to give the VS effect, while the WRA, which is responsible for its implementation, was struggling to identify its own place in the planning and legal framework (Informant 18). Understandings of both co-governance and co-management and their interrelationship were very much in the making, and in the context of significant challenges.

6.3.1 Defining co-governance/co-management in a context of distrust
Much of this uncertainty centred on the ‘actual role’ of the WRA. Many of the actors as well as the wider Waikato community saw the WRA as the ‘manager’ of the river, with responsibility for managing resource use and related contests. However, legally “the regulator is still the regional council, which is where the decisions get made” (Informant 16). The WRA remained occupied with its task of ensuring that the VS became articulated for integration into plans, but had spent less time on making that happen (Informant 18). Co-governance awaited the writing of regional and district plans to give effect to the VS (Informant 17). An informant from Raukawa stresses:

When people think about the Vision and Strategy they are pretty much thinking about water quality, and they haven’t actually put the thought of what it means for the whole catchment (Informant 17).

The uncertainty was also fuelled by deep iwi mistrust of the consultation processes with the WRC. While the WRC emphasises “honesty of intention; certainty of purpose; clarity of information; a clear statement of what is required; and provision of resources” as important elements for good consultation (WRC, 2000, p. 16), iwi have long pointed to a lack of
capability and willingness on the part of government agencies to operate in this way. Despite twenty years of consultation provisions under the RMA and an increasing body of understandings as to how councils might better practise consultation, they had not learned, in the view of a number of participants, how to engage for effective collaboration. As one Māori participant observes of the expected conduct of Māori:

When [Māori] go to council meetings, they should sit there, shut up and say nothing, except in the public speaking section. That may not work. If I invite you to my place to talk to you or talk with you on my terms and my ways and my language with my food and my process how is that a conversation? I am telling you how I will engage with you without giving you the benefit saying that how would you like to do this? I don’t think it is intentional, it’s been a carryover of I don’t know, [like] paternalistic attitudes and thinking that we have got the buildings, we have got the suits and all these sorts of this stuff and therefore, we know what is going on, we have been doing this for long time. There is definitely a disconnection with Māori and government processes (Informant 36).

The WRSA extended the challenge of appropriate consultation and enveloped local authorities in a set of responsibilities to co-manage the river with iwi, but in a context in which they had developed neither the understandings nor protocols to enter into such arrangements openly. While it was unnecessary for the government to create new legislation, given the RMA allowed for local authorities to cede authority to iwi, “they had to be forced by new legislation to actually see the world in a different way” (Informant 34). Iwi participants in my research argued that the new co-management agreements would force a reappraisal of what consultation with iwi in resource management actually entailed, but that much would need to be learned before appropriate practices could be established. As one senior environmental advisor from Waikato-Tainui recalls of consultation with local authorities:

Usually we used to get the draft and we had to make submissions, just being informed and then you could make submission or not, or you might not even been informed and it just comes out in the public and you even didn’t receive it yourself in the mail, you found out about it, you found out that information, and that happened quite a lot (Informant 34).
The omens for rapid learning were not good. As the same environmental advisor remarks, it was difficult to see how Council would come to co-management quickly from its position that:

We don’t need to do the settlement this way, we think we are doing a good job, we think we can restore the health and wellbeing of the river, just give us the money and we will do it because our problem is that we don’t have enough money. They didn’t get the point about the partnership … They [WRC] kind of came to the settlement and kicking and screaming all the way really. However, there were individual in there that really excited, some of the staff exited but others are really like: this is more work and we haven’t got a bigger budget we cannot charge more rates… so we have more work to do, no extra budget and we don’t like it (Informant 34).

Further, these issues of institutional lags, historical mistrust, and contests over responsibility concealed deeper challenges of articulating what co-management might mean in practical terms. As one environmental advisor from Raukawa speculated:

When it gets to the regional and district plans stage, which is talking about rules and the impact on what people can do, that is when the opposition is going to come up (Informant 18).

Even with the best will to act quickly and decisively, the Regional Council and District Councils would still need first to interpret co-governance, before providing for its implementation in their plans and policies. As the same informants from Raukawa stressed:

All of the councils that we have been working with are very respectful and aware that the Vision and Strategy is there. They don’t recognise the full impact of it, they are not aware of legislative requirements but they know the Vision and Strategy exist and in terms of operating with them, if you mentioned Vision and Strategy they sit and listen, they know they have got to do stuff, but they don’t know what to do (Informant 18).

Despite the emphasis on working collaboratively and consensus building in its deliberations, the WRA argues that co-governance will not be achieved until it achieves a measure of authority over water management. Its co-chairs agree that for co-governance to be effective,
the WRA must be able to exercise influence over co-management; that is to translate the views of its stakeholders into the management of the river (Informant 15). This would require central government to find a mechanism for relocating responsibility for water allocation and usage. However, they do not share the same view as to whether the WRA should be given that responsibility. In an interview with TV 3 News (Front Page Ltd, 2012), Livingston suggested that the absence of legal responsibility for management ‘was probably a positive thing’ and that ideally he did not see the WRA as a ‘regulator’ (Livingston, 2012 in Front Page Ltd, 2012) while his co-chair Tukoroirangi Morgan reflects that:

What the co-management doesn’t give us is the management of the “water” per se. It doesn’t give us the ability to allocate water and that is the role that Regional Council has. And for that to change its got to go to another set of negotiation with the Crown and that comes under the ambit of the “who determines” and “how ownership” is determined between both parties [Crown and Māori] (Tukoroirangi Morgan in Front Page Ltd, 2012).

While the harshly critical participant quoted above observes that he/she has witnessed a “shift in the desire, expectation and capacity and capability to be involved [in consultation] (Informant 36), the question of what this means for co-management remains clearly both sensitive and unresolved by the statutory provisions of the WRA. Iwi recognise the separation between ‘governance’ and ‘management’, but are determined to identify frameworks for co-management that are analogous to representation on the Waikato River co-governance board (Informant 21). They seek institutions that allow them to exercise and safeguard provisions related to their deed of settlement in respect of accords, integrated environmental management plans, fisheries regulations, and joint management agreements (JMAs) (Informant 21).

The results from interview participants suggest that co-management should be able to deliver plans that are capable enough to cope with different aspects of water management such as the water quality, landscape, biodiversity, and the socio-cultural values of the community (Informants 21, 33 and 35). For catchment management this certainly would be challenging because there are new legislations and “new theories” which need to be aligned with “new practices”, and the issues of estimating ‘cost and time’ for the restoration program (Informant 27).
Many participants believed that it is difficult for both WRC and the WRA to evaluate whether the ‘regulation’ and ‘funding’ they spend on restoration has a positive outcome. Regardless of the many new initiatives that have been taking place to comply with the new legislation, at the moment most of these initiatives are in the stage where the authorities are establishing relationships in a way that stakeholders can trust each other (Informant 23).

6.3.2 Overcoming entrenched practice: Building coordinated thinking

Many informants seem to understand that there is a need for collaboration, but the majority are unsure as to who has the responsibility to bring this about among multiple parties. Some believe that it falls to the WRA, which has the ability to provide direction for stakeholders, while others suggest that it is part of the WRC’s responsibility for managing water. As one participant from the WRA stresses:

People are quite scared of what we were going to do. A lot of people have different aspirations for water. We have to make a political decision and judgment with all the knowledge that we have got. If Waikato Regional Council doesn’t make the decision the Waikato River Authority will make the decision, so somebody got to put the hands up and be brave enough to say (Informant 30).

The problem is exacerbated by the multiplicity of organisations and agencies with responsibility for particular activities in the catchment, without any overarching requirement that they coordinate different activities (Informant 30). Collaborative management requires some coordination with and consistency between the goals and objectives of the other organisation (Informant 24). Without such coordination, the potential for ‘siloed’ effort becomes a major barrier to collaboration, and one that participants claim is a problem in the Waikato catchment (Informant 24).

All agree, however, that the process of learning to collaborate takes time and patience, and that this needs to be institutionalised, through making time, building a learning process into institutional practice, and resourcing partners. Working in partnership with river authorities is new for regional councils, and requires a period of learning about new ways of working and collaboration as “it is not the business as usual” (WRC project manager, personal communication, 2014). One informant from the WRA emphasised collaboration as important way to:
…find out what people want. And there is going to be people right over to the left and people in the right over to the right and we have to bring all that together (Informant 30).

This process is neither easy nor quick. As another senior manager from the WRC stressed:

Our biggest challenge is how do we address water quality and we are currently looking at preparing a plan change for Waikato River catchment as a priority and we are working with iwi to say how do we work together to change the rules. And we are also talking to industry, talking to energy companies and all that saying; how do we together, get the right rules in place to address this issue… One of the real challenges with policy at the moment is, it takes time. It is a slow process (Informant 23).

Iwi may not be well resourced to engage in a process of co-learning. This commonly involves not only limited financial resources relative to other interested parties such as dairy farmers, electricity generators, fishers, and Council, but also access to trusted scientific advice (Informant 12). Iwi groups may be represented by only one person in charge of environmental issues. This may mean that iwi struggle to exercise their voice fully and make informed commitments. One environmental advisor from Waikato-Tainui observed:

When you want to bring a wide range of interest groups to the table, there is a wide range of skills you need and there is certainly time required to do that. And then on top of that, there is the cost to doing that…. calling up and ringing people on the phone and having a chat is a little bit more complex these days in terms of diarising’s people's time, getting them to the table and have a genuine Kanohi ki te Kanohi (face to face) discussion (Informant 35).

It may also mean that Council may struggle to get iwi partners to the table as often as would be ideal (WRC, personal communication, 2014). However, this ought not to be overstated or posed simply in deficit terms. As another participant emphasised, the ‘capability issue’ is wider, and can be used unfairly to attribute responsibility for failures in consultation to iwi:

Sometimes we don’t have the skills. Even across the iwi authorities they do have revenue, they do have quite high staff or consultants; even they have capability and capacity issues. But no more I think than Council. I think there is a refrain that
Council keep on bringing up that is hard to engage with Māori. No, they [Council] make it hard, or they putting it in too hard baskets because their [Māori] time doesn’t fit with Council to doing things (Informant 36).

While Council may have difficulty in working with iwi, the WRA has enabled a much closer working relationship between the various groups. The boardroom has proven a structured space of co-learning. The individuals have come to know each other and to understand the rationale for and rhythms of their interactions in an environment in which co-learning is institutionalised. They have had to learn how to work collaboratively in order to meet their objectives. As one environmental manager from the MRP emphasised:

They are both significant stakeholders to each other and I guess in a management sense they would ignore each other at each other’s peril and I am not critical of that because I see the opposite happening, I think the [Waikato] River Authority seems to understand that regional council is very important to their ultimate delivery of their aspirations. They understand that they are in the same business. They perhaps have subtly different drivers sometimes perhaps less subtle and I certainly see them working together. I think the reciprocal of that it is also occurring. The regional council at all of the levels that I see, full well understand that is a need for them to work collaboratively with the [Waikato] River Authority and in fact there are opportunities that arise out of working collaboratively with them (Informant 11).

Of particular significance, the WRC has come to recognise the importance of learning to collaborate in a wider sense. It is trying to work more systematically, for example, with other regional authorities. Both the WRA and the WRC visited the Canterbury Regional Council to observe their water management plan and talk about collaborative management forms (Informants 26 and 31).

6.4 Making co-management work
Parties have thus come from different directions to recognise that effective co-management requires a bedrock of goodwill and an extended period of stepping back and taking time to rethink basic principles. As interaction has continued, the same Māori participant, who above talked about the difficulties, reflects that the inability of the Council to collaborate:
…is changing; councils are shifting in my view. I have seen a shift in behaviour and attitude in this area but still hard work and it is made hard by the attitudes of the people around those tables that say it is hard to engage with Māori. They can even talk amongst themselves. So it is a bit rich to say that it is hard to engage with Māori and get iwi into the table (Informant 36).

6.4.1 Joint Management Agreements
The 2005 RMA Amendment made it possible for regional councils to voluntarily establish JMAs and thus to transfer responsibilities to iwi organisations (Baker, 2013). The initiative built on principles of collaborative governance drawn from the international co-governance literature as well as the iwi consultation provisions embedded in the RMA and Treaty of Waitangi principles and obligations. Local authorities are obliged to take into account the principles of the Treaty of Waitangi in exercising ‘functions and powers under it in relation to the use, development and protection of natural and physical resources’ (RMA, 1991 s6). In practice, this is interpreted as involving a partnership in management, built on three pillars: “good faith, the sharing of power and decision-making, and mutual respect; active protection of resources of importance to Māori, in accord with Māori cultural and spiritual values”; and recognition of “tribal rangatiratanga, which encompasses notions of tribal autonomy, authority, control and self-determination” (WRC, 2000, p. 16). Incorporating these principles into decision-making has proven challenging for TLAs, which also have statutory responsibilities to all their communities. Co-management focuses these challenges.

The WRSA (2010) legislates for the formation of individual JMA between local authorities and the relevant Iwi Trusts to develop planning documents to regulate activities that affect the upper and lower Waikato and the Waipa rivers catchments. These JMAs are to “promote the principle of co-management” (WRSA, 2010, p. 37), defined as: (a) the highest level of good faith engagement; and (b) consensus decision-making as a general rule (WRSA, 2010, p. 85).

As one group manager from the WRC reflected, the WRSA “is clear on partnership or co-governance for resource consent but policy is unclear. It is unclear what co-governance means for policy” (Informant 23). In this regard, the group manager added that with the formation of JMAs between the Council and River Iwi, it “becomes clearer what co-governance means for policy and for resource consents (Informant 23).
While forming JMAs in these terms simply shifts the point of contest to a lower spatial and institutional order, the JMAs does offer a vehicle for a more focused issue and iwi specific framework for co-management (Informant 21). Several years later and with the JMAs established as a framework for co-management, the omens look better. Learning to work with the WRSA has better positioned local authorities to work with iwi on co-management. Indeed, as one participant in the research argued, involving grassroots stakeholders can create consensus decision-making in contrast to a traditional adversarial approach where decisions were impelled by legislation in the first instance, and then challenged through the court at a later date after spending large amounts of money to process the claims (Informant 27). In practice this eroded the cherished discretionary authority of TLAs:

[The legislation] forced them to send us information, forced them to have a regular meeting with us so we can ask what is going on and they might actually tell us… Now my view is, they only do it because when they have to and if there is not a piece of legislation like the Waikato Rapatu Settlement Act for the river forcing them, they don’t do it which is real shame (Informant 34).

Other respondents also claim to have had their hands tied into a new co-management approach, but that they are looking forward to doing things differently. For instance one of the Waikato dairy farmers stated:

If you don’t have teeth in the legislation it won’t go anyway and that is what happened in the past that lip service has been paid but no legislative protection, and the Treaty doesn’t cover all those (Informant 27).

Participants agreed that iwi have become more active within the trust board, and that this involvement has translated into involving wider iwi in river management debates. An environmental consultant from Maniapoto suggests that:

In the case of resources, the resources we manage, we are becoming more active. We are no longer stand on the side-lines and hope that somebody will do the right [things] for us. We need to do the right [things] by ourselves…What I have seen in our Ngāti Maniapoto Trust Board the intention is to get involved as much as possible… It has to be better of what we have now, which is nothing, no control or a little if any management with the river (Informant 10).
The JMA is becoming interpreted by government agencies as an important tool in this process. For example, the recent reports of the Co-governance Committee between the WRC and Te Arawa River Iwi Trust celebrate the JMAs as a vehicle through which Te Arawa iwi can participate fully in decision-making around the Waikato River (WRC, 2014k). Thus, for River Iwi, the JMAs have confirmed their long-voiced position that if other parties engage with integrity and collaborate genuinely in the early stage of the consent process, this will reduce the adversarialism of policy making and its costs in terms of time and money. As one interviewee from Waikato-Tainui emphasised:

If you engage with Māori up front and work out how you can still do whatever you want to do in a way that iwi are happy with, and it could be around conditions. You can actually do that without the court process at all, you can do that quite quickly and so it doesn’t need to be as expensive and you don’t need to have Lawyers. You can start collaborating up front and iwi can say actually if you did this and that we wouldn’t oppose you and you can just go straight through and make it easier for everybody (Informant 34).

In any political process, however, this will involve making accommodations and may involve compromises and trade-offs.

6.5 ICM and multi-stakeholder participation, a new co-management agenda?
Operationalising concepts of ‘integrated catchment management’ (ICM) is another potential framework for co-management. Indeed not only is any co-management approach likely to have to work within an ICM framework, but ICM planning must now accommodate co-management. Well entrenched in the New Zealand context (see Bowden, Fenemor, & Deans, 2004; Fenemor, 1992), ICM discourses suggest coordination of different agencies and collaboration among stakeholders to be necessary elements for an effective ICM approach (Memon, Painter, & Weber, 2010). Co-management and ICM may thus, not only be forced bedfellows, but may become mutually supportive, even co-constitutive. Indeed, collaboration, co-management and conceptions of holistic resource management such as ICM are linked together as core approaches in the Proposed Regional Policy Statement (PRPS):

Integrated resource management requires a holistic view that looks beyond organisational, spatial or administrative boundaries. For integrated management to
be effective and efficient it requires a coherent and consistent approach and that agencies or organisations involved in resource management work together in a collaborative manner (WRC, 2012g 4-8).

The complexity of co-management in the Waikato and the enormous challenge of dealing with the social, economic and political issues as well as the underdeveloped understandings of the interplay of land and water resources indicates that “if you really want to achieve ICM, there are whole rafts of things that you need to do” (Informant 31). Prior to the recent imperatives towards co-management, the farming community did not have enough capacity to deal with the water quality projects (Informant 24). Recently, the attention that co-management directs to collaboration and holistic water management has challenged the well-entrenched ultra-individualism of landowners (Informant 24). Arguably, they have begun to recognise that co-management does not imply that farmers have to retire all their pasture and put up fences or riparian planting, but is a process of discovering a better way to rehabilitate the river (Informant 34). At a minimum, this requires encouraging more farm management plans and incentives (Informant 3).

Currently the WRC has an ICM Committee with the general role of implementing an holistic approach for land and water management (WRC, 2015d). However, the WRC has no catchment plan per se (Informant 31). The Committee focuses on informing and then delivering the regional plan, and its work feeds into regulations, compliance, incentives, and educational programmes (Informant 26). Its work remains focused mainly at the sub-catchment scale, although it aims to shift its emphasis to support catchment level management (Informant 26).

The study to apply ICM in the Waikato was initiated in 2004 as the Environment Waikato’s regional plan was challenged by the Ecologic Foundation and Fish and Game (EFFG). The concern was that Environment Waikato\(^{28}\) was allowing excess nutrient discharge for farming and agriculture land use (Informant 26). EFFG took the legal challenge to the Environmental Court and claimed that Environment Waikato was breaching section 70 of the RMA because of the excess of discharge into the water (Informant 26). The WRC launched an experimental ICM project in two sub-catchments of Little Waipa and Waipapa in the Upper Waikato experiencing nutrient loss into the river from predominantly dairy farming activity (Informant 26). The project aimed to help farmers change their practices in order to reduce nutrient loss

\(^{28}\) Prior to 2011, the ‘Waikato Regional Council’ was formally called ‘Environment Waikato’.
from their farms by demonstrating best ICM practice (WRC, 2012b). One of the ICM managers at the WRC describes the experiment, emphasising the complicated relationship between water quality and dairy farming productivity:

We went out to the community and said we are concerned and we want to work with you. The community basically said, that is nice, we are also concerned if you looking at nutrient, it’s going to mean constrains with our business. [They told us] you go away and think out what target you might need and then we will look at what we do. They also said we want a menu of what we [have] to do about it, don’t come up with a blank canvas, if you know things tell us. We went back to the office, made some early estimates on target which was about 30% reduction in nutrient loss particularly nitrogen for dairy. We focused mainly on dairy throughout the projects. That was getting down from average loss of about 40kg nitrogen down to about 26kg. So quite a large jump to lower that. They were pretty concerned about that and they said well that is very nice, where is your menu of best practice of how we could do this. So we went away and worked with AgResearch, put together an early menu of best practice and people wanted to pick and choose what they would do. They also said we don’t like to work on the catchment scale, we don’t understand it, we care about our farm and don’t care about the neighbour so come and see us. So we started doing individual farm planning in early 2008. They [the farmers] took the existing nutrient stock take and nutrient budget from the fertiliser rep and we revised those at the table with the fertiliser rep present at the farm. We took stock take of what is happening at farm and what the strengths and opportunities were and then we came back to the office and ran the scenarios of how to lower nutrient loss on farm (Informant 26).

From July 2010 to June 2011, the ICM plan continued to engage more farms in the two sub-catchments (Table 6.1). An evaluation of the project emphasised the finding that N and P leaching decreased as knowledge of nutrient management increased (WRC, 2012b).
Table 6.1: The numbers of farm plans in Little Waipa and Waipapa catchments covering 2009 to 2011. The table shows an increasing number of farm plans and farmers involved in the ICM projects (Source: WRC, 2012b, p. 3).

<table>
<thead>
<tr>
<th>Catchment</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Farm Plans</td>
<td>No. of Farmers</td>
<td>% of Land area</td>
</tr>
<tr>
<td>Little Waipa</td>
<td>25</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Waipapa</td>
<td>4</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>25</td>
<td>18</td>
</tr>
</tbody>
</table>

Historically, the WRC did not require farmers to account for their water management. The direct relationship between farm management and water quality was under-investigated (Informant 24). Farmers’ practices had to be changed, but that has always been a sensitive topic given their sense of absolute rights to their farm properties (Informant 24). Changing attitudes is a major exercise, requiring not just communication, but new research, new objects of concern, and management such as environmental footprints, and new ethics of environmental care and collaboration. Farmers seek measurable objects of environmental management, which might mean the environmental footprint if it were readily measurable in terms of costs and benefits (Informant 24). As one of the WRC group managers observes, as with iwi, meaningful participation is a key:

They need to be involved because if there is a problem that we are trying to deal with like diffuse discharges of water, if that has been created from farming, then farming must also have the solutions. The solutions have got to come within the farming community because they have got tools that we don’t have (Informant 23).

The challenge of representation is intricately bound up with questions of scale: the appropriate scale for organising co-management and co-governance, especially relative to other overlapping institutional arrangements, and the appropriate scale for managing the human-environment interactions in question (Lovell, Mandondo, & Moriarty, 2003; Norman et al., 2012), in this case revitalisation of the river. As one senior environmental advisor explained of the prevailing logic of New Zealand environmental management and the imperatives of water management:

You have to focus on ‘the catchment’. New Zealand has been very lucky in that water management legislation has always been focused on the whole base catchments. It must continue to be based on the whole catchment bases. You can
break it down to smaller sub catchments for more convenient management. However overall, there is no way Waikato River for example can be managed by multiple parties. It has to be managed as a single catchment (Informant 16).

Farmers, however, can be less willing to engage in discussions at a catchment level, and can take an individualistic approach to responsibility for nutrient loss from farms. They are commonly unwilling to accept collective responsibility (Informants 3 and 4). This can complicate not just co-management through representative bodies, but also complicates technical management questions such as acceptable nutrient runoff calculations and associated forms of permitting or pricing that need to be addressed at the catchment level. This issue is not related to the farmers only, with iwi also facing the challenge of balancing collective concerns with concerns about practices in their own rohe, the boundaries of which are not always respected by water (Informant 26). The challenge for iwi under the WRSA to create integrated river plans needs also to be extended to preparing these plans in collaboration with both, other iwi, and with agencies such as the regional council that have not just overlapping responsibilities within the rohe, but in neighbouring rohe within the wider catchment (Informant 26).

6.6 A political economy of negotiating co-governance

The negotiation of co-governance and co-management of the Waikato River are bound up, as we have seen, with the project of revitalising the river. This is not just temporal context in which co-governance is being negotiated, but is the shared goal of parties that underpins the possibilities and value of co-governance, and is the legitimatory glue in the way that these negotiations are being developed. The project, however, must be funded. The Waikato River Independent Scoping Study (WRISS) which provided several scenarios for the restoration and protection of the Waikato River and its catchment, suggested that the task would require billions of dollars (WRISS, 2010, p. 7). The WRA has access to only a small portion of the funding required (Informant 31), but is able to use ‘restoration funding’ to underwrite its efforts to discharge its responsibilities under the WRSA. Indeed, informants refer to the strategic use of this funding to drive co-governance negotiations as an alternative to the expensive and lengthy alternative ‘Big Stick’ approach of enacting legislation between the stakeholders (Informant 27). In fact, one informant suggests that the need to co-raise funding is being used to build and cement relationships (Informant 31).
However, access to funding has also reinforced existing lines of contest and introduced new divisions. The WRA is able to allocate $7 million of contestable clean-up fund projects across the catchment each year. Establishing criteria for the contestable funding, evaluating proposals and assigning priorities has been extremely challenging, and complicated not just by the politics of multiple interests and co-governance but also by scale, geopolitical boundaries, and the bio and geophysical materialities of river catchments. The setting of funding criteria and priorities has been highly political as well as dependent on complicated and deeply uncertain scientific and economic calculations (Informant 31). As one participant from the WRA stressed:

Because the degradation is associated with so many factors and so many variables are at play. Over such a long running timeframe we could spend $210 million in 30 years and the river still potentially be degrading because some of the system are very slow in terms of time and the movement of ground water and so on (Informant 31).

Indeed, the broader VS for the river, as well as initial clean-up programmes, remain contested. In response, the WRA has prioritised particular problems in three geographic areas (see Figure 1.2); the upper part, and the middle to the lower part of the Waikato River, and the Waipa River. In this it has been directed by government to fund revitalisation activities that do not have access to already existing funding and to focus on ‘action based’ rather than ‘research based’ activities (Informant 31). In practice, this has extended to allocating funding at the micro level to assist farmers to fence off their activities from streams. More broadly, it has led to a strategy of co-funding ‘clean-up’ activities partially funded by other agencies such as Councils, especially where added funding will lead to synergistic gains and economies of scale, such as extending the reach of a project along the river.

…that means partnering with key organisations like the Waikato Regional Council or Mighty River Power or DairyNZ or somebody. There are people out there that we need to along with iwi of course to co-fund them so we can all be partners. We put a little bit of money and they put some expertise and something like that so we can stretch this money for a longer period of time (Informant 30).

The WRA has, for example, become involved in the weed clearance and riverbank planting projects supported by the Tainui Development Authority (TDA) and the Kanaea Kakariki
Trust, combining funding from the TDA with funding from Waahi Whaanui Trust (WRA, 2014a). It also co-funds projects associated with the WRC’s 20 year plan for the Waipa Catchment (Mather, 2014) and the Upper Waikato Sustainable Milk Project29 initiated by DairyNZ and supported in part by the Primary Growth Partnership (DairyNZ, 2014). Management of the whitebait fishery at Port Waikato is another example celebrated as signalling progress in developing river rehabilitation through the clean-up fund. A multi-party agreement has been struck, involving Waikato District Council, Department of Conservation, Ministry for Primary Industries (MPI), and different Kaitiaki from lower Waikato marae working together to secure Waikato-Tainui’s access to customary activities and its kaitiakitanga with respect to the fishery (WRC, personal communication, 2014). This success has been reported publicly:

The work on the issues at Port Waikato builds on long-standing efforts to protect the health of the river and the whitebait fishery. Those efforts have been given a boost recently by the Waikato River Authority’s decision to set aside $1.5 million over five years for the restoration of habitat that supports whitebait (Scoop, 2014)30. These efforts, however, have been met by opposition that questions the transparency of some of the relationships, as well as the funding process more generally (Informants 11 and 34). In this context, the development of transparent and rigorous funding protocols has been important and challenging, but so has the challenge of maintaining the flexibility that enables and encourages co-governance. The politics are complex and unassailable. While the WRA has developed funding protocols that reduce administrative and other transactions costs for assessing, administering, reporting, and evaluating what it terms small projects (applications for $50,000 or less) (Informant 31), participants still questioned the process. Iwi participants questioned the identification and communication of priorities (Informant 34), while others questioned whether notification and application timelines made it possible for busy people across the spectrum of iwi, economic and environmental interests, to build effective and demonstrable stakeholder collaboration:

29 The project supports 700 farms with the aim to reduce nutrient and sediment released into the river and improve on-farm water use efficiency in the Waikato catchment. Out of this project $2.2m invested by DairyNZ levy funds and $685,000 co-funded by the WRA over three years (DairyNZ, 2014).

It comes to no surprise that collaboration is a lot of work and it is a hard work that requires a lot of time, requires a lot of energy and it requires people to trust each other. The WRA didn’t help us by only giving us two months’ notice, maybe 10 weeks’ notice of the closing of those applications and you cannot create a collaboration in 10 weeks (Informant 11).

The challenge is on-going, both in terms of developing an effective co-governance and co-management approach to allocating funding, as well as allocating funding to support co-management and co-governance in revitalizing the river more broadly.

6.7 Building a platform for multiple, emergent and messy initiatives: Uncertain but not unstable co-governance?

The co-governance and co-management arrangements discussed over the last two chapters have produced institutions for moderating and channelling a complex resource politics, and one that is subject to ongoing internal trajectories and external modification and shocks. In this section I consider how some of these processes of change have been brought to bear upon, and accommodated by, the institutions of co-governance and related management practices.

6.7.1 Local government change and associated initiatives

In 2012/13 the WRC established the Land and Water Portfolio (LWP) a 10 year project ($28M per annum) to promote the WRC’s sustainable land and water management objectives (WRC, 2013a, 2014d). The portfolio included a programme called Healthy Rivers/Wai Ora (HRWO), which established a Collaborative Stakeholder Group (CSG) to develop a new regional plan for the restoration of the Waikato and Waipa rivers. The HR/WO is described as being:

…about working with iwi, the Waikato River Authority and stakeholders to develop policy to help restore and protect the health of the Waikato and Waipa rivers. This project recognises that addressing water quality is a complex issue requiring strong collaboration with all those who have different tools available to develop and implement long term solutions (Vaughan Payne, CEO, WRC, 2013g).
The HRWO links two significant legislative drivers (the Vision and Strategy 2010 and the National Policy Statement for Freshwater Management 2014), research-centred water quality considerations, and recommendations by The Office of the Auditor-General that the existing Regional Plan and Regional Policy Statement better specify how the WRC will manage activities on land in order to improve the water quality (WRC, 2014c, 2014j). A Healthy Rivers Wai Ora Committee formed to provide a co-governance arrangement under which the WRC and the five River iwi (WRC, 2015f), will set objectives, goals and limits to reduce of bacteria, sediment, and nutrient discharge into the rivers and into the ground waters (WRC, 2015i). The WRC published a Stakeholder Engagement Strategy (SES) 2013, which outlines how the WRC and River iwi will work collaboratively and engage with wider regional stakeholders to review the Waikato Regional Plan and enhance water quality (WRC, 2013c). The SES (2013), highlights the need to define the issues and possibilities relating to water quality; develop a series of potential land management scenarios based on socio-economic, environmental and cultural values that set limits and targets for improving water quality; and to apply various techniques including rules, incentives and education to identify the impacts of the changes of the Waikato Regional Plan on economic, environmental sustainability and the wellbeing of the community (WRC, 2013b, p. 19).

The HRWO is a co-management project that supports the ways in which the River Iwi partners and the WRC can work collaboratively in order to co-manage the rivers. It emphasises principles of co-management, including shared respect (WRC, 2015f, p. 36). The NPS necessitates the identification of the ‘values’ and ‘uses’ as the first platform in developing policy. As Bill Wasley the chair of the CSG recounts: “Once stakeholders and communities have chosen values for freshwater management units, the new NPS directs councils to decide the water quality objective for each value chosen by the community” (WRC, 2014m). To achieve co-management, the HRWO Committee established Te Rōpū Hautū (project steering group), the Collaborative Stakeholder Group (CSG), and the Technical Leaders Group (TLG) to provide guidance and support co-management parties in developing change to Waikato Regional Plan (WRC, 2015f). Te Rōpū Hautū acts as a Joint Working Party (JWP) required by Waikato and Waipa rivers Settlement Acts to oversee the progress of HRWO projects, assist River Iwi in arranging hui to inform hapū and related iwi about matters in relation to projects and outcomes, and support the early engagement of hapū in the decision-making process (WRC, 2015f). The CSG was formed as a central plank of the HRWO project, representing a wide range of interests including representatives from: WRC,
WRA, River Iwi partners, farmers, industries and the general public. In developing the HRWO, the CSG sought to identify socio-economic, environmental and cultural values for different parts of the Waikato and the Waipa catchments (WRC, 2014f). This was to be a first step in an instrumental process of setting objectives, and in the initial process, the WRC started to engage with 1200 farmers and 900 rural experts with the collaboration of Massey University to develop nutrient management training (WRC, 2014f). The TLG provided technical information to the Te Rōpū Hautū, and on the state of the Waikato and Waipa catchment’s waterbodies, soils stabilities, riparian management, scenarios of land management possibilities, and mātauranga Māori knowledge (WRC, 2013d).

To date, HRWO have organised several hui for each River Iwi followed by a wānanga to discuss and identify factors that affect swimming and the taking of mahinga kai species from an iwi viewpoint (WRC, 2015a). Its results confirm a correspondence between mātauranga Māori and scientific measures. Several studies were undertaken by NIWA for DairyNZ and WRC on identifying the source of faecal bacteria, and the algae in the Waikato River to provide key messages for TLG (WRC, 2015g). The wānanga provided a site for discussing these sorts of findings.

Across all these fields the HRWO has proven an important initiative because it keeps resource contests out of the time-consuming and adversarial Environment Court and appeal processes. Rather, it subjects them to an operational planning framework that draws together other governance initiatives, and a clearly articulated river revitalisation plan centred on collaboration, capability building, and co-management. The process involves multiple stakeholders (Figure 6.2) and looks more like the co-governance advocated in the literature, rather than other arrangements over-determined by Treaty processes and their politics. Nevertheless, the plan continues to struggle with the inherent politics of co-governance. So far, the CSG has held 16 workshops. While the core concept of CSG is to engage with community and consult with stakeholders (WRC, 2015g), iwi argue that they are members of the HRWO Committee, and that the CSG is comprised more of stakeholder groups such as the farmers and landowners (see Figure 6.2) (WRC, 2014k). They also continue to argue that identifying the acceptable threshold for nutrient management is far from a purely technical issue, and one to be negotiated between farmers and the Council. They claim a stake in the setting of such measures that warrants a voice in the discussion. These debates resist a full and final resolution, and continue.
Elsewhere in local government, in 2013 Hamilton City Council (HCC) confirmed a new leadership group (HCCLG) to create a strategic guideline for the 16-kilometre stretch of the Waikato River passing through Hamilton city (Figure 6.3). Consisting of 13 members, the LG excluded representatives from the WRA and WRC. Critics argued that this promised to undermine the work of the Group. As the WRA chief executive Bob Penter stressed with some incredulity:

"The Waikato River Authority is an organisation that was specifically set up, by legislation with considerable Crown funding, to provide leadership in restoring and protecting the Waikato River" (cited in Leaman, 2013).
Figure 6.3: Photo A & B show the existing vegetation cover along the Waikato River at Hamilton City (Photos: Author’s own).
The WRA was co-funder of key projects that had both up-stream and down-stream connections with the stretch of the river winding through Hamilton and its immediate surroundings. These included projects in partnership with Waikato and Waipa and Rivers Iwi and stakeholder groups such as the Waikato River and Waipa River Restoration Strategy, a collaborative initiative developed by partnership between WRA, WRC and DairyNZ, to improve the Waikato and Waipa rivers’ water quality by prioritising restoration actions that centred around stakeholder consultation (WRA, 2015b). Responding to criticism from the WRA about their exclusion from HCCLG, Hamilton Mayor Julie Hardaker commented that while a "hugely important partner … the river authority's brief is about the restoration of the river and of course that's a very important role but this is a different piece of work" (cited in Leaman, 2013). In Hardaker’s view the river plan involved the role of vegetation along the Waikato River or where necessary place or remove the trees (Leaman, 2014). Peter Buckley from the WRC congratulated Mayor Hardaker on the initiative, but stressed that it would have been more appropriate if Hamilton City Council confirmed a place for WRC in the leadership group. He observed that “people are surprised that the city would not want to work collaboratively with two of the organisations that can help it achieve a plan for the future development of the 16km stretch of the Waikato River” (cited in Leaman, 2013). In response, Hamilton city councillor Dave Macpherson suggested unconvincingly that “the City Council did not consider the Regional Council because they were unsure of the regional body's future status” (Leaman, 2013).

The response suggests that whatever their reason for excluding the WRA and WRC, they had not fully considered the impact of the decision in the newly emerging world of co-governance and related commitments to collaboration. The decision set them apart from wider initiatives.

Another leadership group has also been established to foster collaboration among the Waikato River stakeholder group and to envision an integrated restoration of the Waikato and Waipa rivers. The ‘Waikato River Restoration Forum’ (WRRF) includes representatives from the WRA and the five River Iwi, WRC, Department of Conservation (DoC), DairyNZ, Fonterra, Mighty River Power, Genesis Energy and several marae organisations around Huntly (WRA, 2014b). Its aim is effectively to a community-driven river revitalisation, as well as via established statutory and regulatory bodies. While bodies such as WRRF and HCCLG have generated added momentum and new sites from which to stimulate river revitalisation, they also risk confusing lines of responsibility and increase the challenge of coordinating or
harmonising initiatives. As one senior environmental manager observes, creating more bodies
does not guarantee enhanced collaboration:

… the number of high level meetings between people who announced that
everything is going to be collaborative and co-operative and how in the future their
organisation committed to doing this or that but not a lot of change because there is
nothing to drive them to work together (Informant 16).

6.7.2 Wrestling with the RMA
Informants hold quite different perspectives on the RMA and its ability to foster co-
governance for river revitalisation (Table 6.2). Their views tend to mirror the views they hold
about the legislation more broadly. While some use a simple empirical test to critique the
RMA (‘the river is still heavily polluted’), those participating in this study offered up the
range of views commonly expressed in assessments of the RMA (see Duncan, 2014; Lennox
et al., 2011).

Table 6.2: Understanding of the informants on the RMA and its ability to restore the river.

<table>
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<th>View</th>
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<tr>
<td>I would say to those detractors of the RMA, show me an environmental management system in the world that is better and more efficient than the RMA, and while you are doing that show me that there is not controversy associated with its environmental decision-making. No one can find that. When I talk to my colleagues around the world be they hydro company colleagues or be they environmental management colleagues from all dimensions across that spectrum, I haven’t got any indication that there is an environmental administration that is better than what we have here, anywhere in the world. I can think about a lot of worse ones (Informant 11).</td>
</tr>
<tr>
<td>If the RMA is a tool that monitors environmental outcomes why is the river still getting dirty. The RMA is something that lawyers love and it is something that applicants hate. It is a tool that regulators use to do their work, but you kind of measure law and outcomes based on how polluted is the river, such as if the streams are still dirty. Who is actually monitoring RMA? So the regulator is also the monitor (Informant 5).</td>
</tr>
<tr>
<td>I don’t think the RMA is beneficial; there are still too many impacts on the river. We say we are agreeing to something happening under these conditions (under these consent processes). But those consent processes are never really monitored (Informant 6).</td>
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These range from positive reflections on its sustainability emphasis to concerns with its implementation, its ability to deal with cross-cutting national policy considerations such as iwi concerns, the costs and delays of the consenting process (see, for example, Dormer & Payne, 2011), the exercise of undue political influence by commercial actors, monitoring of consents processes, and whether in practice it is strong enough to offset developmentalist interests (WRC, 2015e). Furthermore, one interviewee described an inherent problem in New Zealand of policy cycles that move at different rates to exhausting and lengthy implementation processes, and the institutional futility that this can engender:

For the Council to implement policy statements, it takes more than ten yeas [i.e.] implementing government policy down to the local level, because of the consultation process [and] the litigation in the Environment Court. So after ten years things have changed. You have to start again so the process of changing environmental policies and rules take too long. It is so process based rather than the result. So to understand what’s going on, we need to focus attention on how we take the whole policy through than what does the policy do (Informant 20).

Respondents also questioned a range of particular river, water, and Waikato issues. These included whether the administration of the RMA through the WRC dealt effectively with nutrient discharges (Informant 5). Some Māori participants raised concerns that the WRC focuses more on the mitigation of the adverse effects on the river rather than preventing activities that impacted on the river (Informants 5, 34 and 36). The effects based principle of the RMA contradicts an holistic conception of the river, and when applied in practice has tended to prioritise environmental and commercial concerns over cultural, and conceptions, for example, such as mauri. On the other hand, some iwi representatives approached in relation to this research acknowledge that RMA has played an important part in incorporating into planning processes iwi concerns about the environmental consequences of resource use, even if its provisions are often inadequate or compromised.

WRC officials and others question whether the RMA process is flawed by its failure to incentivise all parties to come to the table early in the process, and to resource the Regional Council to make a timely and collaborative binding decision. Some parties, for example, are argued to eschew full participation in the WRC hearing process so as to keep their “powder dry” for the appeal process in the Environment Court (Dormer & Payne, 2011, p. 4). This can be costly (financially and in terms of opportunity costs) and take inordinate amounts of time
(Dormer & Payne, 2011) (see Table 6.3). On the one hand it has meant that the WRC has had to divert further resources to the water management process, such as an estimated 1 to 1.5 million dollars per year that it will cost to prepare and review plan changes for the Waikato River (Informant 23). It took the WRC nearly seven years and $7.5 million to organize the Waikato Regional Plan Variation 5 and resolve appeals to the Environment Court (to protect the water quality of Lake Taupo), while Variation 6 (see Chapter Five) cost more than $3.7 million and six years to complete and see through the appeals process. On the other hand, it has allowed the current government to legitimate legislative changes to the Resource Management Amendment Act 2013 that promise more or less faithfully to address questions of costs and delays in consenting (MfE, 2014c), but arguably weaken the ability of councils to perform their environmental protection and social justice mandates.

**Table 6.3:** Lengthy planning decisions for preparing variations to the Proposed Waikato Regional Plan (Dormer & Payne, 2011; WRC, 2012f, 2014g).

<table>
<thead>
<tr>
<th>Variation</th>
<th>Notification</th>
<th>Hearings</th>
<th>Decisions</th>
<th>Environment Court Hearing</th>
<th>Negotiations following interim decision</th>
<th>Final decision</th>
<th>Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation 2</td>
<td>Aug-03</td>
<td>Feb-04</td>
<td>Jun-04</td>
<td>Aug-06</td>
<td>2006-2007</td>
<td>Sep-07</td>
<td>Nov-08</td>
</tr>
<tr>
<td>Variation 5</td>
<td>Jul-05</td>
<td>Jun-06</td>
<td>Mar-07</td>
<td>Jun-08</td>
<td>2009-2010</td>
<td>Jun-11</td>
<td>Jul-11</td>
</tr>
<tr>
<td>Variation 6</td>
<td>Sep-06</td>
<td>Dec-07</td>
<td>Nov-08</td>
<td>Aug-08</td>
<td>2009-2011</td>
<td>Feb-12</td>
<td>Apr-12</td>
</tr>
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Questions of cost and defrayment to the Environment Court are important concerns for iwi who share the view about the uneven effects of cost and the way it privileges the access of some groups over others (Informant 34). They also lament the failure to achieve a consensual outcome through collaboration earlier in the process, as was the case in the example of Variation 6 sought by the WRSA to deal with water allocation. As one informant from Waikato-Tainui stressed:

> We thought working together they would see we’re not scary …and actually we do have the same kind of overall visions but we get there differently, so rather than just imposing the variation or imposing a new rule it would be collectively decided. We thought it might pave the way for a nice warm partnership future, but then Variation 6 [came] and everyone in court again. I am thinking have we achieved anything? Because they were sitting opposite each other fighting again [and]
getting evidence. Back in the court I am thinking, one of the ultimate aims of the settlement I thought was to avoid the litigation and adversarial approach with each other and to have a more collective approach (Informant 34).

All these tensions are particularly apparent in relation to arguably the two most entrenched challenges of managing the Waikato River: dams and dairy farms. Both are crucial regional and national economic activities, well established in the region, and barriers to river revitalisation. Under the RMA, the Waikato hydro system was considered an existing use and MRP a permitted activity. While new hydro developments require consents, those in place are in effect fully consented without an expiry date (Informant 16). So MRP operation is currently completely consented and the issues of the effects of dams in the Waikato River are beyond the scope of environmental legislation (Informant 16). As one senior environmental manager stresses:

“At the time that was being done, there was an aspect of RMA that required the decision maker to take account of the existing baseline. The existing baseline essentially meant that the effect you have to take account of when assessing an application for consent where only those affects beyond what could legally and legitimately already be there. So because the dams were already legal, really all that could be take account of in the consent process of that time was the management of the hydro system not the existence of hydro system… So MRP although their operation is currently properly consented the issue of the effects of dam in the Waikato River were not addressed because legally they couldn’t be as the dam is already there and they are legal” (Informant 16).

Farmers must seek resource consents for new activities and must have their consents renewed. They generally resent the financial and transactions costs of obtaining consents, even though they now better understand the impact of dairying on water quality in the river and have developed practices designed to mitigate the worst excesses of their practices. Farmers also resent the imposition of new restrictions and standards from above, which they perceive as meddling by the WRC or unfairly changing the goalposts. They seek some certainty on expectations.

What is upsetting a lot of farmers when they want to do the right things is they go to the Regional Council seeking guidance and the Regional Council stock answer…
I know it is common amongst staff and it is really difficult because they can’t be a policeman and an advisor too. But nothing brasses you off more than to spend, sometimes tens of thousands of dollars, and then be told “no what you have done is not right you should've done this” and people wanted to find out at the beginning (Informant 27).

The RMA gives the WRC both a “stick and carrot”, and options for deciding when and in what circumstances to apply either technology. Farmer advocates call for more carrot and less stick, suggesting that it is “easier to get better support and far better outcomes by using the carrot” (Informant 27). While authorities have focused on seeking out incentives to change farmers’ behaviour rather than imposing penalties for not changing behaviour, there is room to envision a new approach to consenting and to develop a new template for monitoring farming compliance that stimulates a will to comply or even go further towards environmental practices that over-comply (Informant 26). Possibilities here include incentive through a clean-up fund, farming practices that focus on developing efficient land management plans, and developing a better system of stream fencing and riparian planting that is more cost effective (Informant 34).

These ingrained challenges of the RMA regulatory structure are complicated by co-management, or at least they become wrapped up in debates about co-management, just as the development and implementation of co-management is complicated by the RMA. The RMA works in large part through resource consents. Under the WRSA the principle of co-governance is enacted in resource consenting by establishing a hearing committee for consents directly impacting on the river that is composed of three commissioners, one from the WRC, one from WRA, and one iwi nominated. The practice applies to WRA regions, including the upper-lower Waikato and the Waipa catchment, but does not extend to land-based consents (Informant 36). This gives each of the parties a voice, but requires a level of resourcing with respect to the regulations, possibilities, and constraints of the RMA that is likely to be uneven.

Co-management will need to be ring-fenced against the developmentalist intent of the RMA reforms and any weakening of co-management bodies, as well as the relationship between NPS and the RMA. Thus although decision-making processes for initiatives such as the
HRWO, may be sped up\textsuperscript{31}, other developments may escape the careful scrutiny required. Decision-making timeframes are always complicated, and planners can fall behind even before developers are re-empowered by RMA reforms. The conversion of forests to farms in the Waikato is a prime example that will have significant effects on nutrient run-off, but may escape the kind of scrutiny promised by co-management. As one manager from the WRC explained:

> In this catchment we had forest conversion occurred when we were writing our regional plan in the first version, the version one of our regional plan. We asked forestry companies is there any ‘likely’ change occurring in the next 10 years and they said no it is likely to be status quo. We said what about conversion of land use and they said at the moment we don’t have the technology to do it and there is no driver because log prices were high and everything else on the [agriculture] sector was medium to low. [Then], dairy increased their pay-outs quite rapidly, log prices were falling away and suddenly we had around 70000 hectares planned of forest conversion after our plan came out. We didn’t have any rules for that (Informant 26).

### 6.8 Integrating Mātauranga Māori into decision-making

The WRSA mandates the integration of mātauranga Māori knowledge in decision-making. This raises the question of how indigenous and non-indigenous people value water. For Iwi, mātauranga Māori defines human-environment relations in particular ways and via particular metaphors. For example, Iwi deal with land and water in an integrated fashion:

> They [iwi] see the catchment as the body and the waterways as the veins. The metaphor for nutrient management would be the cholesterol, where you get normal and the above threshold, which will make problem for the body in its function (Informant 26).

Yet, for Morgan (2006), Panelli and Tipa (2007), Voyde and Morgan (2012) and a number of participants in my study, mātauranga Māori understandings of water are largely ignored in regulatory arenas. The recognition of mātauranga Māori is for these actors a fundamental

\textsuperscript{31} It is scheduled that HRWO takes around 4 years to get to the hearing phase (2017), and two years to sort the Environment Court appeals which may be completed by 2019 (WRC, 2013 h; 2015f).
prerequisite for “effective partnership” in co-management (Informant 33). It is viewed as an essential part of any equal partnership, both symbolically and practically; and as a fundamental dimension of authentic kaitiakitanga (guardianship). In this regard, the HRWO formed a technical leaders group (TLG) to integrate the mātauranga Māori with the complementary science known as western science:

A unique element in this technical information gathering exercise is the integration of mātauranga Māori with western science. The TLG have an expert in this field who will support the project and ensure the council is giving effect to the Vision and Strategy for the Waikato and Waipa Rivers (WRC, 2014e, p. 40).

Incorporating Mātauranga Māori into decision-making in ways that capture and seek to enhance indigenous aspirations has, however, proven challenging.

6.8.1 The Waikato River Independent Scoping Study (WRISS)

The WRISS is one initiative that seeks to incorporate a Mātauranga Māori perspective into river management questions. Undertaken by NIWA to document the current state of the Waikato River, the study identifies revitalization priorities. It endeavours to integrate mātauranga Māori with science. The WRISS was carried out in an intense process of two rounds of hui in a short period of time. Most participants agreed that it was a “good document”, but one interviewee from Waikato-Tainui had hoped for a “great document”:

I tell you, the scoping study that came out was the best draft. I was surprised with the standard of work but I think people [was] very tired at the time, they had worked hard, they had probably underestimated what was required, maybe didn’t understand it, maybe made some assumptions as to how easy would be to get information like mātauranga Māori or cultural health indicators and etc… (Informant 36).

The process around the document exposed some of the tensions to do with the status of mātauranga Māori in relation to science, and the challenge of having science accept that MM comes with both a sociality and a politics. One environmental manager in the process expressed his frustration that the NIWA was unable to restrict the study to a ‘scientific document’ and to focus on the current state of the Waikato River (Informant 16). From a
different perspective, Māori participants questioned whether the document managed to pull/bring the Māori perspectives together. The process itself was an issue. NIWA sought to restrict the number of hui to a manageable level which would allow them to deliver on their obligations to present a timely scientific report that incorporated mātauranga Māori, while others sought to incorporate a wider range of indigenous knowledge and insights through extended hui (Informants 1, 13 and 36). The potential breadth of mātauranga Māori contributions, such as generating cultural health indicators, was underestimated in setting up the project. Three more general challenges of aligning mātauranga Māori and science were revealed by the study.

Firstly, the study revealed the depth of the methodological challenges posed. From a technical scientific point of view, scientists working with established conceptions of testing, reliability, and replicability struggled to interpret the credibility of mātauranga Māori relative to science, let alone to integrate science and mātauranga Māori. They found methodological reports to lack ‘thoroughness’, opinion based, and lacking a solutions focus. As one senior environmental advisor remarks:

There was too much unnecessary side issue in it, they should have structured the technical issues and got on with it. It was far too bulky and not comprehensive enough (Informant 16).

At the same time, however, NIWA’s science was also questioned by those who criticised an overreliance on desktop science relative to field research on water quality. For Māori the ‘desktop data’ approach accentuated concerns that the study ignored longer-term understandings and measures of water quality, such as those that might be derived from mātauranga Māori. One Māori scientist expressed this concern:

I think that study was based on a lot of previous research that already existed, the trends that you should be looking at over a longer period of 10 years. The interest of Tainui and Waikato people in the Waikato River is to return it to the nearest state as possible to the way it was before the colonial influences that did the damage. So you cannot establish [data] by looking back at 10 years, you have to look back at the 150 years and then you get the idea of the necessary changes and behavior (Informant 1).
Secondly, the study pointed to the problem of the status of mātauranga Māori that had been lost (Informant 36). While there may be potential to recover much of this knowledge through funded research, how one might bring to bear lost knowledge beyond some formal recognition of its loss, suggests an intractable problem. Thirdly, these challenges are complicated by the reluctance of some Māori groups to share knowledge. As one Māori scientist, whose own work in the field of bringing indigenous knowledge to science, observes:

NIWA is a government owned organisation and so when they do the management approach they assume that decisions are going to be made in a co-management way, but scientists historically haven’t really valued indigenous knowledge. They have treated it as anecdotal and lacking the robustness that science has (Informant 1).

While argued to be built on deep “distrust” generated by generations of devaluation and appropriation of indigenous knowledge by government and private actors, this is perhaps a less intractable problem that might be resolved by a new politics of knowledge production and shifts in scientific practice. This presupposes a more open reception from scientists to mātauranga Māori, and a new basis for valuing it. The positions taken by participants in this research indicate that there is some distance yet to go in building a platform for mutual recognition. Given that science struggles to fully recognise the value and merits of much social science generated in western academies, this may involve a difficult struggle where the burden must fall heavily on science.

Māori believe that science has an essential political role (and is expected by courts) in revitalising the river, and may yield measures and strategies that will assist in any project to improve water quality in the Waikato River. However, they also believe that more research is required on the social systems and the history around the river (Informant 9). Early Māori are argued to have observed and recorded the state of health and wellbeing of river ecosystems through narrative. While ecologists are beginning to accept the value of indigenous knowledge as a place-specific, culturally grounded knowledge of the natural environment, for Māori it is more. Mātauranga Māori is at the same time their spirituality, principles, ethics, and connection to place (Informant 9). As one Māori academic explains, water quality and emotion are bound up in attachments to, and uses of, the river:
Mātauranga Māori is not just about the five senses. Mātauranga Māori is also not just about the present, it is about the past and the future… It is not just about a narrow application to the river, it is about the whole catchment and it is not just about the physical environment, nor is about the political environment. It is also about the spiritual and emotional attachments (Informant 33).

One informant made comparisons among mātauranga Māori and scientific knowledge to denote that it is not about western science being superior or inferior to mātauranga Māori rather they both need to co-constitute each other:

There are differences [between western science and mātauranga Māori] but there are also many similarities…with regards to mātauranga Māori, in fact Māori where first scientists in this country. They studied the river with the environment and [its] interconnected link. I am a scientist by trade… In terms of interconnectedness between western science and mātauranga Māori, my view is they are the same… we are looking at the same thing. We are looking at the same body of water, I suppose potentially through different lenses…but the important thing to note about the Māori science versus western science is that, it is not one versus the other. I don’t like to see it that way. I prefer to see both sciences working collaboratively together and working on each other’s strength (Informant 12).

In regard to mātauranga Māori, Māori, like many other stakeholders (Karodia & Weston, 2001), are both lay people and experts. This can create tensions in interpretation of scientific measures. However, for Māori academics mātauranga Māori should be interpreted as enriching scientific measures. For example, precise measures of dissolved oxygen in the river can be enriched by a Mauri approach, which considers the potential and the ability of that water to sustain life and other cultural values that are central for iwi (such as the ability to be able to gather food or swim in the river) (Informant 2). These values are less measurable scientifically than dissolved oxygen and pH, but they need not be conflictual in a context where co-management is structured as a ‘knowledge partnership’.

Knowledge partnerships assemble different forms of knowledge from different organisations or institutions (Berkes, 2009). If a policy formation is the result of an assemblage of discourses based on knowledge claims (Richardson, 1996), then accommodating mātauranga Māori will forge a different policy formation, while it can also be argued that co-management
necessitates a genuine engagement with mātauranga Māori. Knowledge empowers actors, and power comes from knowledge (Foucault, 1980). If co-management is to reassemble power relations then a different knowledge formation must be forged, which in the case of the Waikato River must involve mātauranga Māori. Further, accommodating indigenous knowledge would not only turn new attention to the mauri of the river but have the additional advantage of revitalising hapū, something that Māori scholars argue is also essential to mātauranga Māori (Hikuroa et al., 2011; Morgan, 2006).

Integrating mātauranga Māori knowledge in decision-making into governance is a crucial goal in Waikato iwi’s support for co-governance. For one Māori academic informant, however, there must also be a post-colonial shift in how that knowledge is used and who can command it. As the informant reflects, for Waikato iwi “it is up to non-indigenous people to earn the right to share that knowledge and at the moment they have not” earned that right (Informant 1). Furthermore, the informant argues:

So rather that placing responsibility in a cultural context that suits the colonising power in New Zealand, I think it should be framed as you earn the right to access that knowledge. Only when you have the right to access that knowledge do you have the right to a seat at the decision table (Informant 1).

The implication is that accommodating indigenous knowledge is not so much the price of the political settlement necessary to revitalise the river, but that access to the decision-making involved requires, not just attention to, but an apprenticeship in, mātauranga Māori set on iwi terms. The co-production of knowledge that must underpin co-governance requires that iwi participate fully right from the beginning of the process. Local authorities, commercial industries, and iwi must communicate in a language that brings mātauranga Māori and scientific knowledge together through projects such as the HRWO Project. The challenge is to create a new language for understanding and accommodating different values and interests, and balance conflicting values, not just to provide a chance to air different views. As Māori participants claim, for co-management to be effective, the decision makers need to ‘rethink’ and ‘re-know’ the river in terms of different priorities. Given that most iwi priorities are about revitalising the river and restricting discharges of waste into it, iwi question why their values are seen as threatening. Rather, they argue that the most significant challenge to co-governance is accommodating the different positions of hapū and attending to appropriate scales of representation in co-governance arrangements in the context of different mana
whenua. The challenge is to connect iwi level representation at the co-governance table to what is happening along the Waikato River and to create decisions making frames that take into account the view of hapū in other parts of the river.

6.9 Scale, hapū and co-governance

While iwi authorities see co-management as a way to influence strategic decisions about the river, hapū might see it as an opportunity to voice more specific concerns and desires for river quality such as “we don’t want the waste into the water” (Informant 14). One way of bringing together these levels of concern is to address past inappropriate management approaches, which will need to address questions of transparency and knowledge deficits (Informant 1). A broader involvement of hapū will be necessary, and will inevitably involve more engagement with local people (Informant 1). In the course of interviewing, I asked one iwi representative from Tuwharetoa how they represented hapū interests. The informant’s response was:

That is a good question. That is an important question. That is something that each iwi addresses in their own right and there is no right and wrong answer and it is the tikanga, I guess. It is the protocol of each iwi how they choose to involve their hapū in that regard. So I am unsure what the other iwi are doing and wouldn’t attempt to think about it, but what I can say for Tūwharetoa is that the way that we have structured it is that the Tūwharetoa Māori trust board is the signatory in the river legislation. However the Tūwharetoa Māori trust board ‘technically’ does not represent specifically the interest of those hapū at this point and time. What we have attempted to do is built the bridge and a platform between the board, the legislation we hold, and our hapū so that we can eventually work through discussion with them so that in a few years’ time we can say well, this is how we best reflected the interests of hapū and their river aspirations (Informant 21).

This is the top-down structure that has in effect been forced upon iwi, whether or not they would have chosen to adopt it. The Tūwharetoa Māori Trust Board, for example, speaks for hapū and has a duty to support the aspirations of hapū, even though it does not formally represent their interests. The five iwi organisations sitting on the co-governance board must seek to exercise mana whakahaere, their customary authority, for ‘their river’ or ‘their catchment’ (Informant 36). Management decisions, however, must often be taken at site
specific scales where hapū have concerns that do not always translate upwards to iwi-wide concerns or general governance principles. For example, one interviewee from Waikato-Tainui explained the significance of decision making at the rohe scale:

I think there is a need to be clear around boundaries, tribal boundaries … their [iwi] say will only ever be dependent on the sort of tribal area. And a particular iwi has kaitiaki or guardianship responsibilities, then it is only appropriate that their say is a lot more paramount than iwi who are not from this area, for example. So in the Waikato River area you know, we have four different iwi… it is not for us [Waikato-Tainui] to determine what interest that other iwi have… but what we do know is that there are marae that have been ahikā, what I mean by ahikā, they have been keeping the fires burning at various places along the river particularly from Karapiro down to the Puaha to the port Waikato. And naturally they know their terrain. They know their area better than anyone else and it is only appropriate that they sort of promote what is good and what is not good for their respective areas (Informant 35).

This is one expression of a more general challenge around representation to anchor iwi participation in co-management. As with any socio-political organisation, iwi must resolve internal disputes about resource use and strategic action. One informant articulated this concern more fully:

Waikato Tainui should be doing some work to make sure that internally we are doing what we should be doing as a tribe. If you look at the Vision and Strategy that we came up is that we all have the responsibility, no one is immune. We iwi ourselves have to do some stuff too [and] Council has to do some stuff. So it was an opportunity for everybody to have stop and look at what they were doing, look at their behaviour and their attitude and see if we all going for single goal? Can we be ourselves and still get to that single goal? (Informant 34).

Within iwi these are commonly heightened by historical disputes and the ways in which these have been dealt with in Treaty settlement processes (Bargh, 2012; Ruru, 2013a; Te Aho, 2010). Trust Boards have been obliged to balance questions of long-term investment with short term demands to create employment and welfare considerations. Iwi authorities must
also balance expectations from hapū for support at the local level with both wider strategic interests and the challenge of resourcing such support. As the same informant elaborates:

I think that tribally, the central tribal organisation needs to do a lot more engaging with the people on the ground… some of the problems are around capacity, the numbers. They all doing lots of other things, you know? They are working on the water forum. They are looking at outstanding claims that have to be settled, [and] there are other environmental issues that come along. But I still think more of an effort needs to be made by iwi (Informant 34).

While this politics is sometimes kept within iwi, the informant expressed this concern frankly:

We have got a highly resourced tribal authority and a claims and a management team within that… but then when a company wants to set up a dam on stream by my marae we do all the work to fight that. When we ask them for their help, sometimes they can help and sometimes they cannot help. I am thinking, what was the point of the settlement if we still have to battle at the local level, pay the legal fees ourselves, get the resources, [and] go to all the meetings. What was the point of the settlement if there is going to be no assistance coming through to those people who need it on the ground (Informant 34).

The challenge that lies behind this comment is a deep one. As one Māori academic participant suggests, the Treaty of Waitangi was an agreement between Crown and hapū and not the iwi. He/she claims that “today that is not the case. Some hapū have been obliterated and there are some other hapū that are setting themselves as iwi” (Informant 33). The claim is of course contentious and distinctions between hapū and iwi are slippery (Muru-Lanning, 2011; Van Meijl, 2015). However, the point is that the distinction is made, and scale is important to conceptions of access and rights to resources, and to how concerns in that regard are represented more widely. This can undermine the legitimacy of co-governance arrangements based on iwi scale representation, especially where there are divergent hapū interests and iwi-hapū aspirations.

Ideally, for the good governance model in place, hapū will develop a common interest that allows iwi to discuss the issues with local authorities. Local authorities and industry interests prefer to deal with a single Māori ‘one stop-shop’ such as in the WRA (Informant 21). This produces administrative efficiencies and relocates the political complexity to the level of iwi
authorities. In the terms of one respondent, it is far easier than having ten discussions on the same issue with ten groups (Informant 21). Iwi, however, point to the efficiencies and the greater justice of having the different affected parties in the room, which also raises the level of the Māori voice with respect to more general issues of cultural sensitivity, tikanga, and historical justice. While still not hapū level representation, they point to the value of the co-governance committees involving the five River Iwi established to administer the JMAs.

The co-governance arrangements have led iwi organisations to establish advisory groups to bridge the gap between the board and the hapū. This provides a forum to discuss divergent aspirations among hapū and between hapū and iwi organisations (Informant 21). While it is the responsibility of iwi to engage and consult with the hapū, such processes will depend upon the strength and effectiveness of relations more generally between hapū and iwi organisations, and on the qualities of the individuals involved. In practice, sometimes hapū prefer to engage directly with the iwi authority while in other circumstances they would prefer to engage directly with the local authorities:

It really depends on the dynamic of the relationship between all of those three or four parties but sometimes an iwi authority would like to be the sole point of contact for both territorial authorities and hapū (Informant 21).

In other cases, local authorities offer additional, even independent, actors who might settle or even broker improved relationships among iwi:

To be completely honest iwi talk a lot about holistic and working together, but we can’t still be working together as neighbours sometimes, we might have a better relationship with the councils as we do with our next door neighbours…I am willing to say the iwi need to take a long hard look at some of the things we are doing and drawing on maps and not working collaboratively with each other (Informant 34).

The point here, however, is that what is being advocated is a thicker set of engagements. Dealing only with iwi authorities, and possibly some narrow subset of those, increases the risk and ability to understand what the community is thinking as well as to communicate effectively the other way. One informant stressed that authorities should go to the hapū and “tell them what is happening and ask them what are you thinking about it?” In the same way the “hapū should inform the iwi about their thinking not the iwi telling hapū this is happening.
what are you thinking about it?” (Informant 15). The two-way dialogue at a different scale is a potentially important component of co-governance that can be lost by paying too much attention to the formal institutions involved. This requires special time to be given to hapū so they can respond to policy change. One interviewee stressed that iwi authorities must play a role in ensuring that this occurs.

The biggest failure of the iwi today is that when the government talk to the leaders, those leaders don’t talk to their people. It should be the other way around (Informant 15).

Finally, respondents directed attention to two further issues of representation. The first involves duties of care and extension of voice to those Māori not living with their rohe or embedded in on-going relations with their marae and hapū. And second, by contrast, there is also the question of whether equal or full voice about questions of kaitiakitanga should be extended to those who have no connection to its practice. One interviewee, for example, made the point passionately that:

What happens is that, all Māori don’t grow up in a living idyllic Māori life where you are sustainably managing natural resources, going out to the river, fishing and just getting enough for yourself and your family… What tends to happen is you grow up in the city and there is a middle income life that is comfortable and you become disconnected from the natural environment and because you have the skills either academic, legal skills or business skills you are seen as a leader of your tribe and you put on to those governance boards. For me that is a huge barrier, unless those people have strong connection to kaitiakitanga or sustainable management then the way they are going to drive the management of the natural resources will be based up on efficiency, or market based efficiency (Informant 9).

This thorny issue can become closely connected to the question of the role of the Trust Boards as actors in mainstream economies. Iwi are significant economic actors, resource holders, users and investors. Their Trust Boards must consider the economic advantages of putting the Waikato to economic use, and they commonly draw on mainstream economic advisors. They must address potential conflicts among values internally as well as at tables with co-governance and co-management partners. For Trust Boards of major iwi with significant investments in resource economies, this can create a difficult politics internally, as
well as in relation to representing a position with a singular voice whilst recognising a diversity of interest in co-governance settings.

6.10 Conclusion
Te Ture Whaimana, the VS of the WRSA, sits at the centre of the Waikato River co-governance architecture. It enacts the WRSA and gives the WRA direction. TLAs are obliged to integrate it into regulatory frameworks such as District Plan, Regional Plan and RPS. The VS has forced the WRC to work towards a collaborative process and engage with River Iwi in the development of a regional plan. Co-governance has been developed alongside other regulatory change, notably new commitments to improving water quality encompassed in the National Policy Statement for Freshwater Management (NPS) and recommendations from the Land and Water Forum (LAWF) (Kanwar, Kaza, & Bowden, 2015). The VS creates a particular context within which the WRC must respond. It underpins the HRWO, which gives the WRC a platform for developing and implementing plans that meet national water quality expectations while delivering commitments to an “integrated, holistic and coordinated management approach”. The Waikato River is now being governed very differently. The WRC has forced to take a progressive stance in managing the water resources and has been decentred as a source of strategic and operational planning by a relational assemblage with other actors, including industry, central government, and, most prominently, iwi.

Actors are quite aware of the general objective of the VS in term of restoring the health and wellbeing of the Waikato River, even if what this means in practice is still unclear. Technical challenges remain, such as identifying metrics for making water allocation decisions, environmental footprints, and limits and targets for improving water quality. So too do ongoing political challenges such as the composition of the WRA and questions of river ownership. Iwi will keep pressing for greater control. At the same time key economic actors worry that the VS will provoke new regulations that will restrict land use activities. As in the case of its clean-up fund activities, the WRA must work with other organisations to co-fund restoration projects and encourage community awareness to promote restoration. Each of these technical and political challenges is intensified by the challenge of integrating mātauranga Māori with scientific knowledge.
Issues with iwi representation on the co-governance board associated with different mana whenua jurisdictions along the river are potentially destabilising, but are currently being dealt with constructively. Overcoming these issues with solutions that recognise Māori aspirations and desire to participate differently in river rehabilitation will test the robustness of the current co-governance architecture. It will also test the capacity of all actors to accommodate mātauranga Māori in a generative manner. Respondents in this research point to the need to generate greater trust and commit more resources and technical expertise to this challenge. In the meantime, they agree that co-governance has driven WRC into a more progressive stance than other regional councils in New Zealand with respect to developing a collaborative approach to managing water allocation, regulating discharges, and improving water quality.

It is too early to make judgements about effectiveness in terms of rehabilitation outcomes. However, co-governance has provided a pathway to promoting river rehabilitation, and mandated new ways of solving problems. The HRWO has provided opportunities for both River Iwi and other parties to prioritise their values for river rehabilitation. River Iwi now have active roles in decision-making processes. The involvement of WRA, WRC and DairyNZ in co-funding projects to improve Waikato River catchment water quality can only be positive. One indication of this possibility is the establishment by DairyNZ of 600 sustainable milk projects in the Waikato River catchment, which have resulted in 4700 individuals’ on-farm actions to reduce the amount of on-farm nutrient discharge into the waterways (DairyNZ, 2014; 2015).
7. CO-GOVERNANCE: ALIGNING POLITICAL PROJECTS IN THE WAIKATO

7.1 Introduction
As observed in previous chapters, the stated aims of the WRSA in introducing co-governance and co-management arrangements were to improve the health and wellbeing of the Waikato River and to revitalise the relationship of the Waikato communities with the river. Read more critically, however, this chapter suggests that they are bound into a political project that brings a particular governmental rationality to the management of contests around the Waikato River. The research for this thesis reveals that the co-governance project is less the rolling out of a prior ideology or a clearly defined plan for governing the river, and more a project of political settlement involving clear but also some unfamiliar alignments and unexpected partnerships. The settlement secured by the implementation of the WRSA through co-governance entangles historical grievances with contemporary claims from indigenous groups for resource sovereignty, environmental concerns with water quality, the use and economic demands from politically powerful actors, and new practices of co-production of knowledge. As a technology of settlement, co-governance balances economic efficiency, environmental qualities (notably river water quality), and power relationships. My research highlights the extent to which Māori is negotiating over historical redress and Kaitiakitanga. However, this is not the end of the matter, as the process has encouraged Māori to seek greater sovereignty over land and water and to begin to negotiate some form of tino rangatiratanga. The WRSA has not resolved these tensions in respect of the Waikato River, either historically or in contemporary terms. This chapter will develop two arguments latent in the discussion of the two previous chapters: that co-governance/co-management has provided a platform for subtle shifts in thinking about the practice of resource management in the Waikato region; and that co-governance has emerged as a significant political technology for ‘settling’ tensions between conflicting political projects. Taking a closer look at co-governance and co-management in this chapter suggests that they have been crafted into an after-neoliberal technology of control that for a realignment of conflicting political projects was brought to bear on the management of environmental resources in the New Zealand context after neo-liberalism.
7.2 Co-management: A decisive shift in thinking?

As explained in Chapter One the Social Science water management literature has advocated for a water governance regime centring on flexible, integrated and participatory approaches (Hukka et al., 2010; Molle et al., 2008; Pahl-Wostl et al., 2010). Nonetheless, in practice, water management remains dominated by a technofix approach informed by ‘hard’ forms of science, rather than social and post-normal sciences that embrace a socio-cultural approach to water management. For post-normal scientists and those espousing principles of socio-ecology (see Simon & Schiemer, 2015), there exist opportunities to build a new management regime centred on an accommodation between concepts of “ecosystem management” and “collaborative decision-making” (Cortner & Moote, 1994, p. 169). While Cortner and Moote (1994) have been proven premature in announcing a paradigm shift or "scientific revolution", which they suggest mirrors a larger “social revolution”, their call for an “extensive revision of traditional management practices and institutions” has been picked up by states looking to find new bases to displace bureaucracy with technocratic expertise influenced by new organisational theories from management, and a new wave of socio-ecological research alike (see Hill et al., 2015). Despite continued questioning from critical geographers and others (Robbins, 2011; Swyngedouw, 2009c) of the political status of alliances between these social knowledges and the agencies at work and the inappropriateness of the claims of paradigm shift, co-governance has framed and secured a new terrain of environmental management in the Waikato.

This research suggests rather, that co-governance and co-management represent and in many ways define a significant shift in governance, but one that is highly situated and deeply entangled in a set of political projects rubbing up against each other in more or less contradictory ways in a particular setting. The Waikato River co-governance and co-management demonstrate a new set of practices that helped realign political projects and release tensions among political and ideological actors, by forcing them into a regulatory framework that requires some aligned shifts in thinking and doing. This has provided key actors in the region with the opportunity to develop and align different forms of rationality for the river rehabilitation process, sometimes complementary, and sometimes conflicting. As a governmental technology that not only facilitates but necessitates the accommodations that enable such an alignment, I outline the case in the sections to follow that co-management is something new and distinctive.
7.2.1 An actualised co-management

In this section, I attempt to provide an answer to the question of ‘what co-management actually is’, in the case of the Waikato River; that is, to interrogate my research findings to ask what nature and form it has taken in its implementation in the region.

The Waikato River co-management initiative is a customised solution to a particular set of environmental management issues in a particular context. It differs from those elsewhere that seek to roll-out a new neo-liberal form of distanced governance according to a set of participatory principles (McGregor, 2014; Ross et al., 2009; Spaeder & Feit, 2005; Stevenson, 2006; Wilson et al., 2013). It is designed to facilitate participation by Waikato-Tainui and other Waikato River iwi in the management of the river under the terms of the Treaty of Waitangi and the legislative framework erected around and framed by contemporary regional and national politics. As such, it differs from other efforts to develop an institutional design to combine shifting norms, values and rules (Ostrom, 1990) with ‘enabling policy’ (Armitage et al., 2012; Ayers & Kittinger, 2014; Benson et al., 2013; Ingram, 2012; Memon & Weber, 2010; Ribot, 2002; Weber et al., 2011). It even differs from those designed to engage indigenous actors and knowledge in places like Australia (Maclean et al., 2014). While both these ‘projects’ are important drivers of co-management arrangements in the Waikato as elsewhere (Trimble & Berkes, 2013), it is designed for particular purposes in a specific political and institutional context. Perhaps most significantly, co-governance in this instance is an attempt to implement legislative obligations for ‘partnership’ and a rising political drive for Tino Rangatiratanga, albeit contested and of uncertain meaning. Thus co-management arrangements cannot stop at giving iwi advisory status, or subjecting management decisions to a governance structure that privileges a technical body, the decisions of which are preconfigured in econo-scientific expertise or control of the governance board which rests with the state. The structural constraints to power sharing in the case of co-management arrangements with indigenous peoples still locked in political struggles over title and rights that have been criticised elsewhere (Mulrennan & Scott, 2005), could not wash in the Waikato.

In effect the challenge of implementing co-management over the Waikato River is different – in some ways tougher, in that the bar for genuine power sharing is higher (at least in the short term), yet in some ways easier, as the legislative framework and political commitments (or at least projects) are in place. The challenge was to connect an ethical and theoretical advocacy
for collaborative resource management governance to new institutional designs, policy settings, and a shifting set of knowledges and political currents around socio-economic and environmental change. The formation of WRA and the collaborative stakeholder groups such as HRWO or the DairyNZ partnership are examples of efforts to foster social practice based on collaboration and the increased participation of local people in the decision-making process. However, the deeper challenge to meaningful co-management, as this thesis demonstrates, has been to design and implement democratized decision-making processes that are acceptable to multiple iwi, local and national states, and advocates for environmental and economic interests. These decision-making processes must be capable of developing plans and polices that embed the voices, values, interests, and demands of interested parties, and of allocating resources legitimately. This means, in turn, accommodating and containing contest.

As Tipa and Welch (2006, p. 378) elaborates, “comprehensive resource co-management is defined through complex negotiation”, in which parties with contrasting aspirations come to an agreement, ideally around visions and objectives held in common (Zurba et al., 2012).

This is not simply a matter of refining shared aspirations from different individual lists. It requires a shared language for framing shared visions, and a multitude of accommodations around knowledge of conditions as well as the meaning of different aspirations. My research points to the contest over interpretations of concepts such as ‘responsibility’, ‘ownership’, and ‘guardianship’, as well as the validity of all knowledge of management processes and the content of that which requires management, especially in the context of a contest over the status of indigenous knowledge. As Tipa and Welch (2006) and Te Aho (2010; 2014) have demonstrated of processes elsewhere in New Zealand, different interpretations of the values and worldviews between indigenous people and state agencies have frustrated efforts to establish co-management processes and have undermined power sharing initiatives. As they argue, these “formulations neither help indigenous communities read the intricacies of particular decision-making contexts nor, despite their good intentions, suggest ways indigenous voices might be better heard in such decision-making” (Tipa & Welch, 2006, p. 381). Maclean, Robinson, and Natcher (2014) suggest that failures to recognise indigenous epistemologies and worldviews routinely undermine efforts to co-govern.

The solution for Tipa & Welch (2006) is to move beyond state based co-management frameworks towards community based decision-making frameworks. This requires “strong commitment” from the state (Ross et al., 2009, p. 249) to localised governance and
management and to legitimating the alignment of local and indigenous values in decision-making. Advocates of participatory and collaborative governance and management elsewhere, theorise also that co-governance and co-management institutions must be able to accommodate the dynamics of political and environmental change and shifting economic and social demands on resources, as well as the internal dynamics of institutional politics (Collins & Ison, 2009; Titter & McCallum, 2006). So, how have initiatives in the Waikato dealt with these challenges at an applied level? It is too early to fully evaluate co-management in the Waikato. Many of the institutions are still being developed and there is too much interdependent change occurring to conduct a decisive evaluation. Nonetheless, Trimble and Berkes’ (2013) model of the seven faces of co-management (Table 7.1) provides an heuristic through which we might examine some of those questions that any evaluative rubric ought to consider: how are objectives developed and represented, and how are conflicting objectives accommodated; how are common interests and values identified and settled upon; how do public consultation and associated debates take place; how are conflicting interests identified and related contests resolved; who gets to make the decisions; who are benefiting. All this needs to be driven from high order commitments to power sharing, down to day-to-day problem solving. The common problem of implementing co-management in New Zealand is associated with the difference of worldviews amongst Māori and stakeholders which influence their judgment in relation to the water management process and outcomes.

Claims that participatory water management policies facilitate greater community engagement with and/or control over their water have been widely questioned by commentators and scholars (Biswas & Tortajada, 2010; Moss & Newig, 2010; Pahl-Wostl et al., 2010). Those that have explicitly sought to provide a voice for indigenous communities in the decision-making process have been argued to have fallen short or failed to share power or authority, or to align indigenous aspirations with those of the state, business or other non-indigenous actors (Coombes et al., 2012; Ens, Finlayson, Preuss, Jackson, & Holcombe, 2012; Maclean et al., 2015; Nadasdy, 2003, 2005; Natcher & Davis, 2007; Natcher et al., 2005; Stevenson, 2006).
Table 7.1: The different faces of co-management in the Waikato River governance framework using Trimble and Berkes’ model (2013).

<table>
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<th>Faces of co-management</th>
<th>Framing of co-management</th>
<th>Key Waikato River institutions</th>
<th>Co-management evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Co-management as power sharing</td>
<td>Power sharing between indigenous people and local government.</td>
<td>WRA, JMAs</td>
<td>River Iwi are actively involved in developing changes to the Waikato Regional Plan (e.g. new water quality variation).</td>
</tr>
<tr>
<td>2. Co-management as governance</td>
<td>Good governance principles. Sharing management rights and responsibilities.</td>
<td>WRA, JMAs</td>
<td>River Iwi have the rights and responsibilities to manage the river (overseeing consent process).</td>
</tr>
<tr>
<td>3. Co-management as institution building</td>
<td>Building and improving the capacity of various stakeholders, and collective decision-making.</td>
<td>WRSA, VS</td>
<td>Shift in the existing informative consultation process to a more robust collaborative engagement by bringing together iwi and other stakeholders (e.g. HRWO, JMAs).</td>
</tr>
<tr>
<td>4. Co-management as trust building</td>
<td>Building mutual respect amongst actors with different perspectives and worldviews.</td>
<td>VS, JMAs</td>
<td>Fostering trust in which River Iwi are keen to collaborate with the local government and different organisations to restore the river.</td>
</tr>
<tr>
<td>5. Co-management as process</td>
<td>Co-management as an on-going process, rather than end point.</td>
<td>Clean-up Trust, VS, JMAs</td>
<td>On-going communications and compromises with regards to projects of revitalising the river.</td>
</tr>
<tr>
<td>6. Co-management as learning and knowledge co-production</td>
<td>Integration of indigenous knowledge in decision-making. Co-construction of knowledge and knowledge exchange</td>
<td>VS</td>
<td>Integrating mātauranga Māori through the Technical Leaders Group (TLG) as part of the HRWO project.</td>
</tr>
<tr>
<td>7. Co-management as problem solving</td>
<td>Promote consensus building and collaborative learning</td>
<td>WRSA, VS, Clean-up Trust</td>
<td>Through collaborative stakeholder group (CSG), stakeholders are involved in restoration projects (e.g. identifying values for water use to set limits and targets for river restoration).</td>
</tr>
</tbody>
</table>
The WRSA was established to identify, recognise, and secure indigenous rights under law and to define the partnership obligations of government institutions and parameters for how these must be exercised. Building institutions to enact its provisions have proven to be challenging, given continued contests over the meanings of co-governance and co-management and their enactive language of collaboration, partnership, power-sharing, representation, and so on. As Te Aho (2010) and Coates (2009) emphasise, co-governance and co-management are far from empty terms for Māori, or the basis for an institutional architecture for a new phase of economic development, and therefore not to be gamed patronisingly for individual interest. They encompass issues of ‘equity’ and social and environmental justice, commitments from government ministries to the Treaty of Waitangi, recognition of the value of indigenous knowledge, and a framework for debating negotiating sovereignty.

Indeed, for most of my participants, the WRSA is not a new set of rules for avoiding, trivialising or monetising collaboration, but a legislative framework for an, as yet only loosely defined, project of partnership in which the complementary and contradictory dimensions of different political projects are settled, if not resolved. And, of course, it exists itself on a set of shifting regulatory plates and underlying contests embedded in the molten spaces of treaty settlements (Crocker, 2014). These two points are crucial to any evaluation of the Waikato River co-governance arrangements – we should neither expect nor welcome arrangements that seek to fix the world in 2013. The deeper value of these arrangements ought to be seen in terms of how they allow long-term political debates and associated negotiations to proceed, whilst at the same time offering to these debates new understandings and testing/refining of potential institutional models that creatively accommodate more dynamic and open political contest, and introduce productive rather than restrictive or adversarial parameters for such accommodations.

7.3 Political projects revealed
In Chapter One, I introduced the idea of political projects to describe and account conceptually for the alignments of interests that cohere into distinctive political narratives around the governance of the Waikato River. These projects were understood to cohere around narratives of wellbeing, environmentalism, economic growth, and tino rangatiratanga. This section argues that the findings presented in the previous two chapters confirm the value of this conceptualisation, and that these projects, while not always identifiable on the ground
as coherent assemblages of actors, discourses and strategies, have a discernible trace in political narratives, distinctive contests and the accommodations that constitute the nature and force of co-governance in this case. In what follows I outline the particular form taken by these projects in the negotiation of co-governance and the way that these projects have come to frame co-governance and be framed by it into a form that secures a settled on-going negotiation if not a readily discernible consensus.

Water management is “implicated in contested relationships of power and authority” (Bakker, 2012, p. 616) which in turn work to define who wins and who loses. My research confirms that water governance and management are connected into wider contests linking them into the wider politics of social transformation, representation and place. In the case of the Waikato River, these contests relate to control over the river, steward its diverse values and the lives are lived within the river itself and in relation to it, regulate the relationship of humans and non-humans to it, manage the conduct of activities on it and within it, and to draw water from it and discharge materials into it. Power resides within the exercise of these responsibilities or capacities to act, to restrict action, or not act. It is enhanced by a context in which great and diverse values are placed on the river and on the relations that people have with it. Many people derive their living and cultural and physical wellbeing from the river, while many activities and non-human values are dependent upon it. The river is important to its various iwi, and their relationship with it constitutes by law a special significance to be considered in questions of governance.

7.3.1 Wellbeing: A discursive technology of political settlement

Discourses of wellbeing are understood in the critical literature to articulate a form of neoliberal thinking that gives emphasis to individual responsibilities and their engagements (Fleuret & Atkinson, 2007, p. 114). Geographers tend to research wellbeing with respect to three categories: social wellbeing centered on social justice; environmental wellbeing associated with values underpinning human-environment interactions; and economic wellbeing that focuses on standards of living (Fleuret & Atkinson, 2007). However, the definition and conceptualization of wellbeing in relation to different forms of governance is still vague and unclear (Atkinson & Joyce, 2011).

My research adds weight to Fleuret & Atkinson, (2007, p. 114) view that the value of the concept of wellbeing lies in its dynamic qualities and its weakness of definition. Wellbeing
allows for traditional hierarchical modes of governance, with their discourses of precision, to be overturned by new and democratic forms of collaborative governance in which individuals and groups are enrolled in decision-making and encouraged to join and develop initiatives from the bottom up. The collaborative environmental management model in other parts of the world is labelled ‘co-governance and co-management’ in the Waikato region (Informant 11). Like the UK Local Government Act (2000) (see Atkinson & Joyce, 2011, p. 4), the WRSA aims to set a vision, policy and plans to promote local social, economic and environmental ‘wellbeing’. In the case of the Waikato River, this openness has proven generative. It has meant that there is no singular reduced and reductive definition of ‘good’ in circulation, be it political or technical. This has allowed different actors to begin to establish an accepted or even shared conception of ‘good’ when it comes to river values. In practice, this conception of ‘good’ or ‘meeting the partnership responsibilities’ (Informants 21 and 34) assembles elements of economic, environmental and social wellbeing (see Figure 7.1). This point (the arrival at a shared conception of good that incorporates this range of elements) is often missed by the standard resource management literature, which, perversely, has pursued approaches that seek to identify competing values with conceptual precision. Such commitments to precision can only possibly generate contest.
7.3.2 Environmental advocacy: grounded and aligned for settlement

Water scarcity and water quality are part of climate change debates and often listed among humankind’s great challenges of the 21st century (Gleick & Ajami, 2014). While the institutional literature on water management emphasises that water is an ‘economic good’ (da Cunha, 2009; Rogers, De Silva, & Bhatia, 2002), for environmentalists water is an agential ‘part of the environment’ and has intrinsic values (Bakker, 2005). Scholars have advocated for an environmental justice approach to management, in which every environmental strategy is a socio-political development and every political strategy involves an environmental project (Swyngedouw, 2009a). Within such an approach, regulations are framed to improve water quality. However discourses of sustainability have in neoliberal states come to serve “post-political” management regimes in which both conceptual and applied contests have been reduced to “techno-managerial planning” and “expert management” (Swyngedouw, 2014, pp. 24-29). As Swyngedouw (2011, p. 70) suggests, “elevation of the environment to a public concern is both a marker of and constituent force in the production of de-politicization”
(Swyngedouw, 2011). That is, the effects transcend just questions of environmental management, and in resource economies like the Waikato, they promise to translate into fields of economic development in particular and to reduce contests to technical concerns. For Swyngedouw this would mean displacing “political institutions of government” with “post-democratic institutions of governance” (Swyngedouw, 2014, pp. 24-29).

Whilst my research demonstrates a drive towards such reductionism, the Waikato River clean-up fund for example, applies water quality metrics to identify priorities and cases for funding, yet politics continue to swirl around this project, often trumping the metrics (Informants 1, 16 and 20). The presence of both ‘wellbeing’, which remains a political concept in the Waikato, and the politics of tino rangatiratanga means that the political cannot be enfolded into the technical. By contrast with Swyngedouw’s (2014) conception of the post-political, questions of the environment remain wrapped into wider conceptions of environmental justice in which ‘trialectical’ alignments of the “utopian political discourse, existing political-economic formations, and ecological materiality” continue to demand politics (Marston, 2013, p. 3).

In the last two decades there have been many environmental initiatives and advocates for river rehabilitation in the Waikato region. Monitoring of water quality and reacting to shifts in indicators has provided a scientific platform for politics and for grounded interventions. These initiatives, as emphasized in Chapter Five, involve individuals or groups ranging from governmental organisations to volunteer based initiatives of private land owners. They suggest that environmental interests are alive in the Waikato and are given impetus by the shared desires of iwi and environmentalists to revitalize the river, and their willingness to build a coalition of skills and interests to achieve it. Indeed, they can form the stuff of political contestation. For example, contests over nitrogen leaching into the river between the Waikato River Care, DoC, NIWA scientists and farmers remain live, despite the efforts of the DairyNZ farm management plan (Sustainable Milk Plans) and the Dairying and Clean Streams Accord.

The definition of ‘good water quality’ remains contested, with technical measures of environmental quality and economic development discourses alike subjected to socio-political scrutiny. With much of this scrutiny coming from iwi, much is directed in the name of the river itself and of socio-environmental relations predicated on an indigenous environmentalism. This must not of course be idealised as either pre-political or superior to an
environmentalist science, but provides the kind of counter balance that Swyngedouw (2010) argues is necessary to keep politics alive and science just and honest. On the other hand, however, there are pressures to impose politically reductive technical best practice solutions such as farm management plan, by putting in place guidelines and rules around practices to set measures that make it easier to govern the river (e.g. the allowable amount of nitrogen discharge into the waterways).

Of course, on top of this, not all environmental politics is progressive. Environmental science and indigenous understandings clearly recognise that what happens on the land will affect the water, but the politics of resource use based on property ownership and cadastra mean that property owners continue to view land and water separately. This is nowhere clearer than when actors confront each other during the RMA process, with farmers on one side of the submission and environmentalists on the other. With the RMA lying across co-governance processes, the adversarialism produces a different form of political contest that encourages technical solutions, or at least a politics of technical support that is often determined by resources. Nonetheless, even here the process of co-governance has added a layer of political complexity and new momentum to educational programmes through the HRWO collaborative stakeholder groups to inform land users how their activities can affect the river’s water quality. As one of the representatives from Federated Farmers quipped to a scientist presenting at an animal production conference: “It is hard to be green when you are in the red” (Informant 7).

Environmentalists and iwi have found shared interests in politicizing the degradation of the river, the decision-making process in respect of the use and allocation of water resources, and the notion of restoration. Restoration discourses remain prominent, despite a realpolitik of co-governance that has forced the concession that it is not possible to restore the river to where it once was. They allow for a politics of revitalization to achieve better Waikato River water quality, which draws on tropes of arcadianism and connections to place (Gamez, 2014). However, it also provides a platform for bringing more technical science and monitoring to discourses of health and wellbeing in relation to the river. Hence, we can see advocates win concessions by talking about restoration. For example, the Waikato River Restoration Strategy project shows that the dairy sector is now committed to improving the health of the river. As John Luxton, the co-chair of the WRA and chairman of DairyNZ emphasises:
“Farmers have been stepping up to do their bit and DairyNZ is supporting them” (DairyNZ, 2015).

The WRSA has provided elements for iwi and environmentalists to acknowledge their interests and to be involved in the river rehabilitation processes. In reality, the clean-up process is considered to be ‘rehabilitation’ and environmentalists are aware that it will never be a complete ‘restoration’. As emphasized by informants, there are numerous issues reflecting ‘absolute tragedy’ for environmentalist in the Waikato which will never go away. Such issues include: the willow infestation, koi carp, phosphorus runoff and nitrogen leaching that cannot be currently undone/restored (Informants 5, 28 and 32). Nevertheless applications to the clean-up fund have encouraged environmentalists to advocate for co-governance/co-management. Applications to this fund represent another site of democratic action and political engagement that resists reduction to best practice or other technical resolution. Thus, using the concept of ‘restoration’ as a discourse in order to create particular political resonance therefore allows actors to voice their interests and align them with political projects. In this regard the concept of ‘restoration and wellbeing’ of the river can carry more “optimistic” implications for negotiating contest among different actors’ accountability (Atkinson & Joyce, 2011).

7.3.3 Economic growth in partnership

Environmental governance relates politics to ecology and political economy. A river is a paradigmatic case where the object of concern is clearly an ‘economic’, ‘social’ and ‘political’ good as well as an environmental good (da Cunha, 2009; Van der Zaag & Savenije, 2006). Institutional arrangements and policies must deal directly with the economic dimensions of this good and their politics, and work with actors whose interests in these different ‘goods’ are not only different and commonly conflicting, but are commonly internally conflicted. In the case of the Waikato River, while farmers, foresters, urban dwellers, and electricity generators all make claims on the river for economic uses (taking water, damming rivers, or discharging into rivers), farmers see themselves as custodians of their land as well as resource developers, and urban populations have various cultural and environmentally-bound relations with the river. Iwi are increasingly both small and large-scale economic actors and resource developers, who must negotiate internally interests in economic development, traditionalist ties to land, river and place, spiritual and cultural ties to
the river, and questions of political and social inequalities. Environmental governance through co-governance is complex.

The developmentalist discourse and economic goals of government (doubling land-based exports by 2025) increasingly frame ‘water as an economic good’, and imagine a governance framework in which (a) economic imperatives take precedence over any other, and (b) water is governed, as any other asset, by market institutions. In current regulatory practice, the economic imperative works out via continuous pressures to seek market forms of governance and efforts to subject governance arrangements to decision-making by economic interest in the final instance. Economic interests feed into all aspects of water management and governance, which for many economic actors reduce to questions of allocating access and user rights, with participation and compliance understood as the price of acquiring environmental resources (even if they are not purchased through markets).

The key commercial actors of the Waikato such as the dairy industry and energy generation companies have roles in the co-governance structures. In these roles they clearly exercise a lobby and attempt to influence decision-making processes regarding access or discharge into the water. Actors such as DairyNZ, Fonterra or MRP have staff who are always interacting with members of parliament and the ministers. Their efforts will be circumscribed by national and local political processes beyond narrow concerns about the regional economy, or the place of the river in national and regional socio-political and socio-ecological economies. Regional and national politics will be brought to bear. However, so too will the inter-personal and otherwise situated politics of co-governance. It is precisely the politics of political economy and ecology under co-governance that Swyngedouw (2010) suggests are disappearing in the realms of the ‘post-political’. It is here that at times the economic will not narrowly over-determine outcomes, but always be subject to politics. Fonterra for example, must be attentive to discharges into the river; as it has established a Clean Stream Accord, and therefore, continues to participate in co-governance arrangements.

Post-colonial governance systems are routinely argued to be shaped by global economic interests, the western nature of conservation, and resource management (Coombes et al., 2012; Memon & Kirk, 2012). The case of the WRSA provides similar evidence to other critical analysis of water management issues in New Zealand which highlights New Zealand’s economic growth agenda which puts the interests of growth ahead of the environmental and social dimensions of water management (see Chapter Four). In the Waikato, this is nowhere
more clear than in dairying, where the government is driving an explicitly productivist agenda (Le Heron et al., 2001), which puts enormous pressure on the Waikato River in terms of both intake of water and discharges. Burton and Wilson argue that the productivist approach “is generated from an alliance of the wishes of ‘grassroots’ members and the corporate objectives of the organisation, i.e. from within the cooperative itself” (Burton & Wilson, 2012). This brings the interests of individual farmers and major corporate actors in New Zealand into a close alignment, and one that also involves the scientific establishment.

Participants in my research confirm that the dairy lobby exercises a powerful voice behind the scenes in the co-governance apparatus, and one that is matched by the constant presence of the economic imperative in the co-governance framework. However, no significant environmental initiative has yet to be vetoed by the lobby and all participants appear to recognise the multiple responsibilities of co-governance actors to water quality and social and environmental wellbeing as well as economic growth. There is still room for an environmental politics despite the alignment of WRC and WRSA with the growth agenda of the current government and interests of productivist dairying (see Chapter Four). Indeed, Fonterra conducts a great deal of monitoring and other forms of environmental science, and while participants are wary about some of the evidence generated and sceptical as to whether poor practice would be fully reported, the evidence does lead Fonterra to act upon its farmers to support environmental goals in defence of Fonterra’s environmental credentials in global markets. The problem is that this pressure is brought to bear at a distance rather than through domestic politics. If Fonterra relied on domestic markets, then the New Zealand public would be better positioned to influence how Fonterra deals with water management and nitrogen discharges.

Further, as Jay (2007; 2009) points out, the productivist agenda is not the only economic agenda on the table. New Zealand agriculture is increasingly a mix of productivist and post-productivist agriculture (see Campbell et al., 2009). While less significant in the Waikato, the environmental ethics of post-productivist agriculturalists become part of the co-governance process. Positive economic use of the river for example, includes promotion of eel fisheries, whitebait fisheries in the lower region of the river, the visual amenity of the river that passes through Hamilton City, and tourism. At the same time, urban supporters of nature conservation such as the Waikato River beautification programme (see Chapter Six) have also
put pressure on the governance of the river in support of the Waikato River rehabilitation program.

Participants point to the limits on environmental politics imposed by the absence of prescriptive state regulation, which see farmer practices regulated largely by Fonterra’s market-facing, self-regulatory regime. Ultimately, pressure is not exerted by local concern for the river, but by the environmental concerns of consumers elsewhere in the world. So rather than develop a post-productivism from a social democratic environmentalism, the Waikato River’s co-governance arrangements work alongside self-regulation and a neo-productivism in which an underlying productivism is subjected to market mediated ideas of sustainability (Wilson & Burton, 2015). Nevertheless, as Campbell and Rosin (2011) reflect, this does not foreclose on possibilities for improved environmental practices or political opportunities to promote them through the pursuit of long-term stewardship (Jay, 2007). In fact co-governance arrangements that bring Fonterra to the table enhance the possibility that values might be re-aligned, and that framers might be persuaded to embrace the economic benefits of a more stable regulatory environment, enhanced ecological productivity, and narratives of an enhanced environmental provenance.

The challenge is to use co-governance to realign environmental sustainability and business efficiency through emphasising the provenance values of strong environmental performance, and of injecting money into the revitalising of the local economy through programmes of river revitalisation. Ultimately enhanced water quality will improve product quality and productivity in dairy farming (Rosin, Dwiartama, Grant, & Hopkins, 2013). All this requires a change in mind-set to a more positive reading of economy-environment relations, from post-productivist possibilities to fostering sustainability-led provenance values. Whilst not yet apparent in the co-governance arrangements, they do offer an opportune structure for developing such alignments and alternative ways to promote sustainability. This depends on simultaneously finding practices and strategies that will also balance iwi socio-cultural aspirations with regional values which emphasise the maximising of the economic growth agenda.
7.3.4 Treaty projects: the ongoing negotiation of Tino Rangatiratanga

Māori and successive governments have been locked into a prolonged and difficult debate over the ownership of water and the determination of water management rights (Bargh, 2007). Māori claim ownership of water under the Treaty of Waitangi, whereas the Crown remains wedded to the common property law under which water is not owned by any group. The contest involves fundamental constitutional issues and pervades many of the more localised and instrumental debates about specific management issues to do with the Waikato River. Stakeholder views are often situated within this wider debate, with many business and community interests and some environmentalist positions positioning their views against Māori claims of ownership. Key non-Māori economic stakeholders resist legislation that might give any governance group greater control and, in their view, restrict their commercial freedoms and activities (Informants 1, 9 and 20). Others see in Māori ownership opportunities for less government regulation and the wider marketization of freshwater. Most environmentalist voices see in Māori ownership potential for deeper environmental stewardship centred on cultural values that emphasise a starting point for resource management in the mauri of the water, the centrality of the River itself in cultural identity, and claims of an essentialist indigenous environmentalism. These voices see in such claims and cultural relations a more promising foundation for a contemporary environmentalism than the neoliberal legislation and parlous long-term environmental record of a developmentalist New Zealand state. They discount the implication that Māori businesses in developmentalism and productivist agriculture will bring more commercial pressures to bear on governance.

The debate tends to focus on sovereignty, models of environmentalism, competing environmental, socio-cultural and economic values and the capacity to identify and prioritise them, values regulatory capability, levels of marketization, and trust in iwi authorities to deal with conflicts between economic and environmental agendas. The Māori and representative iwi voices expressed in this thesis make questions of sovereignty more or less prominent in their views. While they charge economic and Council agencies alike with responsibility for causing harm and diminishing the mauri (life force) of the River (Informant 1), they commonly attach their politics to some form of sovereignty claim grounded in Treaty as well as claims of historical injustice, historical failures of management, suspicion of the state, and flawed participation/collaboration initiatives. Negotiating what this means in terms of governance rights and responsibilities under co-governance/co-management has proven challenging, especially for government agencies that have responsibilities to wider
communities. As Bess (2011, p. 93) has emphasised, the government’s task is to find the competing interests of different actors, and since the 1985 amendment to the treaty “all branches of government have ‘walked the tightrope’ regarding the position for Māori within the fabric of the general social, legal and political framework” (Bess, 2011).

Co-governance/co-management gives Māori new legal opportunities to negotiate the Raupatu settlement in an on-going politics (Van Meijl, 2013). Participants in my research claim that for them the ‘new era’ of co-governance/co-management started with the signing of the Treaty of Waitangi but these had been derailed by power relationships that ‘disempowered’ Māori (Informant 33). The WRSA is the first settlement in New Zealand that clearly declares the river to be financially co-managed (Informants 15 and 34), giving Waikato River Iwi the first opportunity to actively negotiate co-governance in practice. It forced local authorities to the table routinely with Māori and to recognise a role for them in the on-going decision-making process. While the details of how to do this are still being worked out and contested by all parties, the question of who owns water and under what terms is far from resolved (see Young, 2012) and dealing with different views and interests of hapū and Māori Trust boards remains problematic, as each of the five iwi organisations has established a joint management agreement (JMA). Despite the government’s insistence that WRSA has nothing to do with the ownership of the river (WRSB, 2008), it does give iwi co-management roles, the capacity to use and allocate water resources differently, and a forum to debate ownership more generally. Such debates, however, can be testy (Informant 5), and as Ruru (2013a, p. 338) suggests, co-management represents an ‘incomplete reconciliation’ and restoration of governance. The WRSA is still subject to the RMA, which in the views of Māori has commonly failed to safeguard Māori interests in water and river management (Ruru, 2013a). Māori have embraced co-governance as a platform for aligning the economic, cultural, and environmental wellbeing of the Waikato River and its region, but continue to advocate for ‘better co-management’ (Harmsworth & Awatere, 2013) in which treaty partnership can foster even stronger sustainability and wellbeing for the river. This argument takes several different forms.

Firstly, while the Declaration of Independence approved by Pōtatau, and the subsequent Treaty of Waitangi 1840 signed by his son, established a first step in negotiating the principles of co-habitation between Māori and the settler state (Informant 33), the war in the Waikato led to Māori being exiled from ‘their river’ and ‘their lands’. The co-governance/co-management settlement is a crucial step forward in redress, even though Waikato iwi and
tangata whenua, more broadly, have made progress over a long time in negotiating new recognition of past grievances, and the capacity to practice kaitiakitanga. Secondly, the WRSA must be seen in historical context, as part of an ongoing political contest over the interpretation of the Treaty of Waitangi and victories in case-law (especially since the 1985 Treaty of Waitangi Amendment Act,) which have led to redressing grievances and achieving gains in Māori governance (Forster, 2014; Ruru, 2013a). The Treaty is crucial for Māori in gaining political voice (Wevers, 2013); and defining both the grounds for contest and the right to speak out about past injustice (Bargh & Otter, 2009). Co-governance and co-management are examples of how the Treaty of Waitangi has established the requirements for and the principles of contemporary relevance, under which constructive platforms for Māori tribal organisations are formed to exercise customary rights and improve environmental outcomes (Forster, 2014, p. 70).

Thirdly, while the initial approach of Waikato-Tainui was set out to address the Raupatu claim to the ownership of the river, Waikato-Tainui have found in the health and wellbeing of the river a more facilitative platform for negotiating co-governance politically, and one that had the advantages of putting Māori inside the turn to participatory management of natural resources and providing grounds for constructive advocacy for their environmental management credentials. The discourse of river wellbeing could then be legitimately narrated as “the result of accumulated pressure from Māori and a greater recognition of indigenous rights worldwide” (Forster, 2014, p. 73). Politically this was strategic, and also elevated management practice rather than historical grievance to the heart of daily debates. The process created a different environment for iwi to exercise their mana whakahaere and their customary rights. While Māori have initially achieved ‘participation’ in decision-making rather than the delegation of power in controlling the management of the Waikato River, that possibility is not closed down for future debate.

Finally, then, the discourses of co-management secure inclusionary rights and can promote collaboration while allowing Māori to be proactive and having the ‘rights of inclusion’ (Te Aho, 2010). This is not to argue that in all cases the new platforms for contest established result in more empowered indigenous communities (Castro & Nielsen, 2001). Rather, it is to suggest that my interviews indicate that Waikato River Iwi have been able to reposition themselves as environmental guardians, more engaged agencies, and better resourced political actors, through the co-governance arrangements. The WRSA does not exonerate actors from past injustice, nor current governments from responsibilities to environment or Māori claims.
Co-governance/co-management is in this way structuring a political settlement around environmental management, at least between Māori and the state. It provides a set of arrangements within which Māori can advance both kaitiakitanga and tino rangatiratanga, and to exercise both tikanga and mana in relation to water quality and the future of the river. However, it is far from an end to struggles over these key concepts, which are tightly interwoven in a more general rejection of colonial and contemporary property rights regimes (Ruru, 2013a). The WRSA directs attention to the health and wellbeing of the river and fosters the river rehabilitation programme, but whilst these are important to Waikato-Tainui, their historical claim was mainly based on the te mana o te awa or “the spiritual authority, protective power and prestige of the Waikato River” (WRSA, 2010, p. 6). In these terms, the mana lost through land confiscation cannot be returned through the WRSA alone. As Muru-Lanning (2012a, p. 129) explains:

The reality is, however, that there is little opportunity to regain mana through claims to land, and certainly not the significant opportunities that the river creates for this purpose.

Co-governance/co-management is thus caught between its potential as a political technology or/and for settlement as the baseline tension of ownership or sovereignty. What is at stake are more or less articulated claims for open-ended, non-specified Māori authority and control over resources, or tino rangatiratanga. For Māori this is the deeper struggle. As Muru-Lanning (2010, p. 74), explains:

Whatever the different conceptions of ownership are, be it possessive individualism, collective ownership, shared rights in property or variable ownership, another way of interpreting this debate is that it is more to do with claims to status and power. Claims to ownership are important not least because they also provide a vehicle for legitimising status within and between competing groups.

Before leaving this section, it is important to recognise two further complicating tensions in this struggle. The first is the developmentalist neoliberalism of current national government policy settings. That is, the government’s refusal to negotiate with Māori on the matter of ownership of water on the basis of an argument for public ownership and state regulation, is at the same time privatising assets and putting in place a pro-private developmentalist environmental management regime. What does public ownership and custodianship mean in
such a context? Māori are right to highlight the disingenuous nature of the arguments made by
government agencies in this regard. Similarly, the anti-privatisation and anti-neoliberalism
lobbies are supporting customary rights and the return of the Waikato River to Māori at the
expense of public ownership (Williams, 2013). Māori are using customary property rights to
argue against the public ownership of water. It is unclear just how public customary rights
really are, or whether it is not itself a form of commodification or a platform that would allow
for commodification under an iwi landlord, which may or may not elect to favour particular
stakeholders in granting access, levying fees, and so on. As Williams (2013, p. 327) suggests:

I suspect too that many anti-privatization activists will refrain from attacking
“commodification” when based on the communal customary rights of indigenous
peoples—talked up as ownership rights to water. If this species of commodification
has the potential to hinder or even frustrate the hegemony of state power, then those
opposing a government bent on implementing neoliberal dogma may well be
quietly delighted.

On the other hand, that is precisely the point of sovereignty, and why it is such a deep and
troubling debate – iwi get to make those decisions under their terms, and justify them if and
when they can in terms of an accepted set of principles.

The second issue, though, is not just what is meant by sovereignty, but the question of how it
is institutionalised and parcelled out. The settlement process has been made fraught by
questions of who has mana whenua in particular spaces, and how overlapping spaces or
territorial features such as rivers might be dealt with; even before the questions of direct
material contests among iwi and hapū are considered (Van Meijl, 2012). Some of this contest
is undoubtedly generated by colonial strategies of divide and rule. Chapter Six, for example,
outlines some of the tensions generated in the Waikato River co-governance processes by
presuming that iwi spoke for hapū and that different iwi shared interests or were prepared to
cede mana whenua to representative processes. The desire to have fewer voices at the co-
governance table contradicted the traditional position that holds hapū to be kaitiaki of natural
resources (Forster, 2014; Jollands & Harmsworth, 2007). While arguably about control, such
a strategy also recognised questions of efficiency in the face of potential contest at multiple
sites, the problems of scale in governance, and the established settlement process negotiations
in which iwi organisations played key roles (Informants 1, 35 and 36). If our ultimate concern
in such debates is to act as human guardians for the environment, there are good reasons for
confronting those who would damage it (in this case, farmers, energy generators, and towns/cities) at scales that are transparent and not easily picked-off politically or otherwise by more powerful actors. Yet at the same time, there are good reasons for ceding decisions to the local level where groups are best placed to monitor activities and effects, take account of difference in the local context, live with the consequences of decisions, and so on. Further in the defence of co-governance and co-management that I have developed above, they offer capability-building resources for hapū self-determination and enhanced kaitiakitanga. Involving hapū more directly would enhance participation and local development (Informants 15 and 34).

In my research, a diversity of hapū-level voices within the iwi representatives was argued to have enhanced decision-making by providing coverage across a greater range of issues as well as offering a more creative range of responses and enhancing the legitimacy of the process (Informants 1, 15 and 36). Hapū and their marae are often established close to the river edge and around catchment boundaries. They are a sensible unit for seeking voice and a key point at which to make environmental decisions. Less a group to be represented, the hapū offer important localised understandings of biophysical relations that are crucial to getting decisions right, a group with a pivotal stake in any decision, and a key unit for instituting a democratic and traditional Māori conception of legitimacy in environmental management. Good processes might strengthen relationships across hapū and begin to generate shared interests and values. The effective scale of collaborative decision-making for river rehabilitation and governance more generally is, in these different ways, the hapū (Harmsworth & Awatere, 2013). Making this happen in a way that avoids the pitfalls addressed above, and in the context of the established efficiencies of iwi level co-governance, would require significantly higher levels of resourcing (financial and human capability) (Forster, 2011a).

7.4 A question of knowledge?
Māori argue for the qualities of mātauranga Māori as a basis for an effective katiakitanga and governance regime. Mātauranga Māori knowledge is seen less as a replacement for science or an alternative science with particular qualities, but more as a different way of knowing and of assembling more diverse information into river management. If knowing is always political then mātauranga Māori is as much a challenge to how we might do resource management, as
to what information it ought to be based upon. It is also closely connected to kaitiakitanga and tino rangatiratanga as the knowledge base used to legitimate or even require a different governance and management.

7.4.1 From ‘power/knowledge’ to ‘knowledge partnership’?
In Foucault’s notion of power/knowledge, power and knowledge are inextricably entwined. The special case for Māori environmental management is not simply one of historical injustice or sovereignty stolen, but of a particular cultural knowledge of the environmental and long associations with a particular place, both of which underpin mātauranga Māori and work to bring the world into being through a particular way of knowing. Power is knowledge and vice-versa. Presuming that power and knowledge always co-exist, power will always be a contest between differing concepts of knowledge and lived perspectives on the world. Knowing the environment in a particular way makes it available for a particular form of management technology and governmental rationality embedded in that way of knowing (Townley, 1993).

The first thing that co-management demands is an engagement in co-learning (Informants 10 and 33), what Berkes (2009) calls a “knowledge partnership” among different forms of knowing and associated knowledge. In the case of co-governance and the co-management of environments, this typically involves the integration of community and state forms of knowing (Stevenson, 2006). In most cases, the terms and conditions by which local people must contribute and integrate their values and knowledge, are set by state rationalities (Stevenson, 2006). However, in the Waikato River case, the attempt is to establish a knowledge partnership among multiple partners, including scientists whose science is tied to an environmentalist project of clean rivers and high quality water, state technocrats who pursue a reason fixed in new public management, economic actors who pursue profitability conditioned by market signals from consumers, bankers and regulators, state based proponents of good governance and Ostrom’s ideas of collaboration and partnership (see for example Ostrom, 1990; 2010); and Māori, who operate in each of these knowledge domains but also bring to bear notions of indigenous knowledge or mātauranga Māori, which take Ostrom’s ideas in a particular direction. The terms of co-governance are not set simply by new public management or any after-neoliberal good governance adjustment such as collaboration. Mātauranga Māori is becoming an important political concept in how co-
governance is being worked out, because it alters the terms of debate and who can speak with
authority at any point. For Māori it is a crucial platform for engaging Māori in decision-
making that reflects their aspirations (Informants 1, 34 and 35).

Importantly, the significance of mātauranga Māori is elevated beyond debates about
intellectual property (see for example Harmsworth & Roskruge, 2014) that reduce its value to
the language of economic innovation, to the politics of who gets to talk of it and with it, and
what it permits or silences. As a Māori academic with interests in environmental management
confirms, it is the language of hapū and cultural relations with the environment (Informant 1).
Giving status to mātauranga Māori means that hapū must be in the room, which in turn
supports their wider claims to governmental relevance and authority and to sustaining the
mauri of the river. However, bringing mātauranga Māori and hapū into the room involves
addressing the “distrust” within hapū of colonial economic and governmental actors. Often
expressed as a reluctance to share knowledge with non-indigenous actors who have a long
colonial record of appropriating it (Informants 1, 10 and 36), what is really at stake in the
realm of governance is power/knowledge and a political project that rejects efforts to harness
Māori political and economic aspirations into co-governance or other processes that are
rooted in imposed models of governance (and even sovereignty). Knowledge is a pivotal
terrain of contest (Taniwha, 2014). Thus at one level, the on-going challenge for researchers
is to access mātauranga Māori, which is often expressed as restricted to those who
demonstrate that they have the appropriate respect to attain and use that knowledge in a
proper way. At another level, the struggle is much deeper, and involves the marginalisation
of Māori knowledge as a colonial souvenir of injustice (Mika & O’Sullivan, 2014). Insisting
upon and appealing to mātauranga Māori in environmental management involves lobbying for
a model that embraces kaupapa Māori, kaitiakitanga, and tino rangatiratanga as models of
knowing and doing human-environment relations, models that confront head on, cultural and
socio-economic imbalance (Mika & O’Sullivan, 2014).

7.4.2 Embracing indigenous knowing for resource management

The knowledge that emerges from being indigenous in the New Zealand context indicates
both the close relationship with the environment embedded in whakapapa and kaitiakitanga,
and the colonial and post-colonial experience of indigeneity (Forster, 2014). Both are argued
(Mika & O’Sullivan, 2014) to generate a different way of knowing and of addressing the
‘who, what, how, where and why’ of knowing (see Lewis & Rosin, 2013). As explained in Chapters Four and Five, kaitiakitanga along the river prior to early settlement of Europeans in Aotearoa was based on a local environmental knowledge and a series of knowledge exchanges and negotiations with adjacent tribes that gave it scale and reach. This knowledge is culturally embedded in values such as kaitiakitanga, a duty and a concept for looking after the environment (Forster, 2013), and guardian subjectivities such as taniwha, which occupy the bends of the Waikato River and safeguard spiritual and historical values (Tipa & Nelson, 2008). This knowing defines the relationship between hapū and river politically and ontologically as much as instrumentally - and links the political status and authority of hapū to discourses of identity, place, and being, as well as resource use.

Arguments that pit ‘science’ against ‘indigenous knowledge’, not only neglect to highlight that science itself must be subjected to a critique of its own knowing and will to power (the who, what, how, where and why of science), but also that all knowing is thus situated. While Māori participants in this study grasped this point clearly, scientists and economic actors did not, tending instead to focus their critique on incomplete, siloed or biased science. The instrumental values of indigenous knowledge are debated elsewhere (Hikuroa et al., 2011; Morgan, 2006), but it is important to recognise that not only do we need to recognise mātauranga Māori in this instance as a power/knowledge platform for making the world otherwise, but that any environmental management decision is always at least as much political as it is technical. The right thing to do scientifically, is always contested, carries its own politics, and is rarely ever the way that decisions are made. Discourses of ‘indigenous knowing’ are a way of coming to know the world that emphasises Māori knowing and Māori sovereignty. They are an important platform for creating partnerships, even before we recognise their virtue in environmental management of being precautionary, respecting histories in place of human-environmental relations, and being “not just about the five senses, but about being sensible and sensitive” (Informant 33). However, they are as deeply political as any other knowledge form, and define their own world of sense and ‘sensibility’.

The establishment of the WRSA along lines of knowledge co-production and co-decision-making thus presupposes the recognition of Mātauranga Māori and pathways for its incorporation into decision-making. Thus it presupposes the ‘willingness’ and ‘commitment’ of local authorities to put mātauranga Māori on the table and to engage in co-producing knowledge, something not achieved under the RMA which privileged science and western reason as dominant knowledge forms. In a world of co-governance, where Māori are
understood somehow corporately as one side of the partnership, such a privileging of a particular knowledge formation is disempowering. This is not to say that Māori representatives are not at least as equally proficient scientifically or adept at applying scientific knowledge politically, but that if the commitment to co-governance with Māori is genuine, then the knowledge basis of being Māori in relation to the environment must be accepted. By the same token, it also means that (a) all knowledge needs to be seen as political, and (b) the binary between scientific and indigenous knowledge that is politically useful for various parties no longer holds in the face of what must then be recognised as the co-presence of multiple knowledges with different epistemological, political, empirical and even ontological bases. What is at stake is a politics of knowledge production that is intricately entangled in a cultural politics of environment and an environmental politics of resource economy. This all sounds abstract and grand, but may reduce simply to ensuring that in prioritising and funding river rehabilitation projects, the contributions of indigenous knowledge and its holders/experts need to be fully incorporated into research projects, grounded responses, and future regulatory restraints on the practices that produced the problem. Indeed, rather than seeking to build kaitiakitanga into state regulation, why not start from kaitiakitanga and then buttress it with state regulation and science.

Co-governance is argued to require collaboration, co-learning and mutual respect for epistemological diversity and ontological multiplicity (Harmsworth, Young, Walker, Clapcott, & James, 2011). The interactions among participants investigated in this thesis suggest that co-experimentation in governance and management practice (Carolan, 2013; Carolan & Bell, 2003), can provide a platform for the dialogue and trust necessary to build the shared vision and co-produce new knowledge for river rehabilitation. This requires mutual recognition of the political bases of different knowledges, projects and settings in which to debate them in relation to particular questions. Participants openly recognised capability gaps in relation to scientific, technical, legal, and indigenous knowledges. These need to be addressed as a first principle of co-governance, which will require patience, communication, deliberation, and resourcing and measures of success that do not reduce to a rapid achievement of consensus (Fung, 2015; Lai, 2014). Establishing technical groups which bring together scientific, legal, economic, and indigenous knowledge holders to act as peer review for the WRC or the WRA, could be a first step. Indeed, a new form of research is necessary to co-produce different forms of knowledge so as to facilitate effective, politically legitimate and culturally appropriate co-management arrangements.
7.5 Co-governance: an after-neoliberal governmental rationality?

For Walters, the concept of governmentality allows us to see how ‘governance’ creates “a game of collective self-management and modulated social adjustment”, where actors with different interests can reach collective decisions without damaging dispute (Walters, 2004, p. 35). Co-governance makes this game explicit, and puts around it a different organisational framework to that of the market. As Lemke (2007, p. 55) stresses, neoliberal statecraft extends beyond simple marketization, to “foster coordination, cooperation and harmonization” that “translates fundamental antagonisms and political oppositions into modes of articulation of different interests” (Lemke, 2007). The shift from government to governance actualised by Waikato River co-governance reorganises what Swyngedouw might term the “parameters of political democracy” (Swyngedouw, 2005b, p. 1993). It addresses some of the intrinsic failings and democratic shortfalls of the market, in the context of a resource still too important politically to marketise. Co-governance with market actors takes the problem of governing away from the government and gives it to a mix of social, governmental and economic actors whilst remixing the socio-cultural and institutional factors essential to endorse/promote ‘democratic accountability’ (Jessop, 2013). This is on the one hand, governance at distance, but is also a new democratic form with a potentially progressive capability.

Governmentality analysts in New Zealand have always drawn attention to the contingencies in how neoliberal governance has been imagined, deployed and played out as actualised neoliberalisms in different parts of the world (Larner, 2003; Lewis, 2009, 2015). Just as the purity displayed in the adoption and implementation of neoliberal governmentality in the 1980s proved something of a paradigmatic example for the world (Kelsey, 1995), the turn by the Clark government to refilling the ‘hollowed out’ and marketised spaces of government with something more collective and more collaborative in the 2000s was also a transparent exemplar of what Peck and Tickell (2002) term roll-out neoliberalism or Larner et al. (2007) have labelled ‘after-neoliberalism’. Co-governance is part of this project, and clearly a contingency borne of New Zealand’s post-colonial trajectory as much as the design of a ‘roll-out’ neoliberal governmentality. The current neo-conservative government has redeployed this governmentality in the name of a cooperative pragmatism that works with neoliberal and after-neoliberal rationalities and statutes to operationalise its export-led, free-trade developmentalist agenda at a distance through localized modes of governance (Burton & Wilson, 2012). In this model, control is taken from local government and its interpretation of
the RMA, which had become a fetter on resource based economic development, and handed over to agencies working closely with development interests.

While it does decentralise responsibility and fracture state power, it is difficult to label the co-governance of the Waikato River neoliberal. The local contingencies include historical grievances, contest over the ownership of the river, and environmental degradation and intensifying local and global scrutiny over its water quality. They required a governance experiment be mounted; co-governance was that experiment, and one that could not simply be lifted off a shelf labelled neoliberal governance. It needed to be signed in a local context. Nonetheless, its deployment presumes the possibility of an alignment between economic development interests and iwi. When first elected, the current government relied on political support from Māori organisations amidst growing political pressures from Māori for greater participation in the governance of land and water based resources. With this politics increasingly managed within iwi organisations that are increasingly represented publicly by their economic development trusts, the governmental rationality of co-governance imagines a possible commodification of resources under Māori control, or at least their removal from the grip of an environmental science informed local democratic constituency and local government bureaucracy. In this way, McCarthy and Prudham (2004) point to the general form of these ‘co-approaches’ as neoliberal, but as the Waikato case suggests, they are less resolved by markets and more by an altered politics of resources (Lemke, 2001, p. 202). Certainly, whilst participants reveal a development ethic among Māori and a strong determination to be the beneficiaries of any form of commodification, any alliance between development interests and iwi in the Waikato River co-governance arrangements is far from simple, nor being won.

As I have argued in this chapter, the Waikato River co-governance/co-management arrangements have been structured around a set of distinctive ‘political projects’, which they have articulated into a particular alignment or settlement. These political projects are themselves, as Lewis et al. (2008, pp. 43-44) suggest, less than wholly coherent narratives that assemble loosely aligned interests and discourses. In the case of the Waikato River, co-governance/co-management provides a framework for assembling these projects into a more or less stable political settlement. It offers a framework within which the contradictions and antagonisms among these projects can be worked out. Whether or not this will ultimately prove to be a marketising solution or over-determined by the interests of resource capital is
uncertain, but it is not neoliberal in its structure of peak body, expert body, and social group representation. We will get a better sense of this as the WRA tackles questions of resource allocation, but the basic technology rests on contests among group interests, rather than a mechanism for resolving competing self-interests.

7.6 Conclusion
The WRSA has created new forms of alignment among iwi, Māori trust boards, energy corporations and Fonterra, farmers and urban and regional government agencies. Actors view the new arrangements as a new approach to dealing with the tensions of competing interests; with a developmentalist rationality. As such it is governmentality, but not neoliberal. What then should we make of co-governance? Co-governance of the Waikato River is for all involved, but especially hapū and iwi, for whom it is important symbolically and practically. It presents a high profile instantiation of an after-neoliberal governmental rationality that addresses governmental challenges in today’s post-colonial New Zealand. It is a framework that in practice has allowed for a situated alignment of political projects that jostle up against each other as their contradictions are worked out by the actors involved. The arrangements have dealt with contradictions among the rise of the neoliberal and technocratic state, the after-neoliberal turn to co-governance, the neo-conservative developmentalism of the current New Zealand government, the rise of market-environmentalism and the challenges posed to New Zealand’s productivist agriculture, and the significant issues of declining water quality, as well as the challenges of kaitiakitanga and tino rangatiratanga. The TLAs are charged with meeting the interests of the wider public and the environment, including fostering economic growth in the region, while iwi organisations are trying to safeguard cultural values and aspirations, manage processes of grievance settlement and seek out the best deals possible with the ‘Crown’, and manage the long-term economic interests of their tribal beneficiaries through their Trust Boards. Farmers and electricity generators seek to protect access to river resources, while environmental activists seek to work through science to protect water quality. All actors have a shared interest in water quality, but take different positions on how to organise and allocate access. Māori organisations sometimes find themselves aligned with farmers and electricity generators in organising better access to resources for economic growth, while on other occasions they find themselves aligned with community organisations and environmentalists concerned with water quality. Sometimes they are aligned with Council over what needs to be achieved, and at others opposed to them on similar questions and
questions of authority. Respondents suggest hapū interests do not always align with those of tribal Trust Boards or iwi organisations more generally. Cultural values and attitudes to the validity and utility of indigenous knowledge differ, slip and slide, as do attitudes to the market as a resource allocation mechanism.

While each pointing to problems and unrealized expectations, my participants suggest that co-governance has delivered a productive settlement for the political and economic moment. The ‘good’ river or the wellbeing of the river has established ground where various political projects can be articulated in a non-adversarial manner. While the full responsibilities and accountabilities of Māori as a partner in Waikato River co-governance/co-management arrangements are still contested, they do give Māori an active role in river rehabilitation projects and direct participation in decision-making over water allocation and usage. It also provides a forum for negotiating historical redress and developing projects that address historical environmental degradation. They provide for a governance framework that addresses normative concepts and value judgments as well as new technical solutions in the kind of arrangement advocated by Kooiman and Jentoft (2009).

Nonetheless, the underlying political terrain is unstable, and current shared commitments to co-governance cannot be assumed. To exist beyond the short-term and the situated relations of expedience or convenience at any moment, they must be worked at, new alliances identified, and shared commitments re-forged. With the current National government still talking about rapid increases of on-farm production and asset sales, the future ownership of energy producers with interests in the river uncertain (Williams, 2013, p. 323), iwi economic development trusts working out their own investment priorities, long term environmental effects on water still working their way out, Hamilton growing, and aspirations for tino rangatiratanga still unfolding, the arrangements will continue to be challenged.

Beyond the Waikato, the case speaks to the need to continue to investigate and theorise what is at stake in river governance (Birkenholtz, 2009; Sending & Neumann, 2006). However, it also offers some lessons to do with the statecraft necessary to eschew any premature search for consensus or a final solution to what will be on-going and shifting political struggles over water, territory, values and authority (Castro, 2007) in a context of shifting and interconnected socio-ecological relations at various scales (Ioris, 2014; Swyngedouw, 1996). At play will be political projects, ideology, established and experimental governmental rationalities, an emerging group of “environmental rationalities” such as kaitiakitanga or river
well-being, and, in many parts of the world, a pressing and historically charged post-colonial politics that assembles ideology and socio-ecological governmentalities in different and challenging ways (Ioris, 2014, p. 642).
8. MAKING NEW SPACES OF NEGOTIATIONS

“Politics: It is managing people’s assessments of the situation” (Informant 24).

8.1 Introduction

This thesis investigated the configuration of arrangements enacted to institute co-governance of the Waikato River. Co-governance has been touted as a pathway to more democratic processes and better outcomes in water management. It is represented in the literature and in the discourses associated with its institutionalisation in the case of the Waikato River as building an institutional platform upon which plans and policies can be developed that embed the voices, values, interests and demands of interested parties in water resource management and ensure effective stakeholder participation in achieving a more healthy river. In application, this ideal has been confused not only by the inherent tensions between efficiency and ideology, governance and management and multiple political struggles at multiple levels that have affected ‘good governance’ initiatives everywhere, but by the specific complexity of river management in the Waikato. A situated co-governance has been built, one that is developed around the case-specific, Treaty-based claims of Waikato-Tainui and other River Iwi, for voice, authority and some form of sovereignty over the river and its catchment; a situated co-governance that has many positive features, but is particularly vulnerable to the challenges of securing complementary co-management principles, protocols, and practices.

This final chapter offers a number of insights into the field of water management and policy by providing a critical analysis of the design and initial working out of one co-governance initiative. It begins by summarising the empirical findings of this research to highlight the emergence of co-governance as an initiative to bring a particular after-neoliberal governmental rationality to the management of contests around the Waikato River. It develops the argument that the co-governance platform has been developed into a governmental apparatus that allows for an on-going negotiation of the contests at the heart of water management and wider political struggles in Aotearoa. Rather than representing a lasting resolution to often intractable contests, co-governance institutionalises an emergent settlement, the contours of which are being worked out in many different places and at different scales. It is appropriately uncertain, contestable and contested by the many voices that it accommodates. Unlike good governance ideology, which is widely criticised
(Swyngedouw, 2008, 2009a, 2009b) for being anti-political, this platform allows for politics, but without (at least to date) generating damaging disputes. Arguably these measures have fostered a recognition of difference, blunted the destructive edges of the contests, and facilitated the cultivation of collective interests in both river restoration and multiple uses of the river. The co-governance platform developed in respect of the Waikato River allows for an on-going nudging of things forward in relation to managing problems and finding ways to make and negotiate political claims, rather than establishing any final settlement. This provides in brief an answer to the research question posed in this thesis as to how the logics and tools of co-governance have provided a platform for negotiating the situated politics of water in this place. In what follows I elaborate on this response in four ways, each of which offers a contribution to the co-governance literature.

8.2 Complex entanglement: A platform for co-governance of water in the Waikato

The Waikato River co-governance platform is composed of a set of specific Acts of Parliament (the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, the Ngati Tuwharetoa, Raukawa, Te Arawa River Iwi Waikato River Act 2010, and the Nga Wai o Maniapoto (Waipa River) Act 2012), co-governance antecedents in the RMA (e.g. s36B), co-governance provisions in the Waikato Regional Plan and the National Policy Statement for Freshwater Management 2014, and multiple other legal and managerial instruments created under these Acts or established to enact co-governance (the Waikato River Authority, the Waikato River Clean-up Trust, joint management agreements, and the co-management agreement for Waikato River Related Lands struck between the Waikato Raupatu River Trust and the Waikato Regional Council). This is an extraordinarily entangled set of arrangements, which has brought multiple parties into discussion and continuous negotiation over both the details and the structural conditions of good governance. Despite entrenched interests and multiple misgivings and concerns, this complex situation appears to have been worked at constructively by all the parties who are obliged to subject their stake-holding to a commitment to improving the health and wellbeing of the Waikato and Waipa rivers.

In practice the WRSA has bound The Waikato Regional Council (WRC) to work with the River Iwi to develop management priorities for the Waikato Regional Plan. The joint management agreements (JMAs) of each of the five River Iwi have created co-management frameworks that authorise iwi involvement in routine decision-making with respect to the
management of the river. The regulatory primacy of the Vision and Strategy (VS) has imposed an overarching goal and strategic principles on the co-governance framework that encourages practical ways for the participatory and holistic management of the river. The WRC and district councils have undertaken policy and planning reviews to ensure they achieve the objectives and the principles of the VS. These moves have been driven down into applied projects and management decision-making. The implementation of Variation 6, for example, requires that any water allocation rules must give effect to the VS, while the development of the Healthy Rivers/Wai Ora (HRWO) programme was an early attempt to embed the VS within the Waikato Regional Policy Statement as a basis for water quality management. The HRWO programme was in turn initiated as a series of Collaborative Stakeholder Group (CSG) meetings to discuss water quality issues across the Waikato River catchment and involved River Iwi in the heart of the HRWO project. The programme connected co-governance to integrated catchment management, and thus to iwi participation in river management, to land use management and concern for physical values, to concern for non-physical values in river rehabilitation. The resulting holistic approach has provided a platform for integrating mātauranga Māori into the management of the river.

The WRA’s decision-making, with respect to rehabilitation projects and any related activities on the Waikato and Waipa rivers, provides another example of a co-governance initiative that is working itself out through negotiation. Its decisions are reached through consensus. While the WRA has the VS as a statutory lever to enforce rules, it has to date been able to use its softer leverage, the Clean-Up fund, to encourage river rehabilitation and negotiate its way around competing priorities. Over five funding rounds from 2011, the WRA has allocated $27 million to 170 clean-up projects with the purpose of improving the water quality of the Waikato and Waipa rivers (WRA, 2015a). An official at the WRA reports that decisions are being made in a ‘trusting’ environment (WRA, personal communication, 2015). While many of those interviews retain at least a healthy level of scepticism about the collaborative ethos and the nature and outcome of consensual processes at the WRA, relationships have been forged that allow for accommodation. Indeed, the WRA has fostered external collaborations to co-fund rehabilitation that it cannot afford to fund itself, collaborations that the WRA suggests build on a platform of trust that it has created (Informant 31).
8.3 Settling the politics of water: Post collaborative partnership or partial reconciliation of competing political projects?

Co-governance has arguably settled some of the antagonisms inherent in the competing political projects at work around the governance and management of the Waikato River. Co-governance for Māori is very much an instrument in a politics of both redress and sovereignty; whereas for the National government it is deployed as an instrument of ‘after’-neoliberal governmentality; for environmentalists, it is a platform for pursuing rehabilitation if not ‘restoration’; for local and regional governments, it is a governmental technology to which they can attach democratic ideology and rework place-based projects around place-based interests; while for economic actors, such as farmers and power companies, it is a new field of politics upon which they must re-marshal their political strengths and forge new alliances. The openness and elasticity of the discourses of collaboration and partnership provide the potential to realign unfamiliar and sometimes contradictory interests, while at the same time allowing for political projects to remain live and vibrant. However, it changes both the form and the context of political contest to do with river and catchment management, necessitating enhanced communication, regular and deeper interactions, new meetings with different sets of actors, and dialogical engagement. It is a very much more socialised technology than that of the permissive baselines, over-determination by market based efficiency, and adversarial practice that have been argued to have marked resource management under the RMA, albeit no more or less political.

In these first years of implementation of Waikato River co-governance, it is not yet clear how contradictions in the assignments of rights, relative empowerment, and responsibilities in the co-governance complex will play themselves out, but in the short term at least, stakeholders have been forced to engage and to moderate their performance of interest. The disruptive potential of claims making and the harder, directly adversarial edges of politics have been blunted, but politics has not, of course, gone away. It is unclear exactly where the lines of new alliances will be forged, or whether they will harden into, for example, a powerful rehabilitation alliance between Māori, environmentalists and sympathetic local/national politicians and council officials, or a developmentalist axis centred on farmers, electricity generators and iwi investment trusts. Nor is it clear yet into what forms of anti-political expertise or managerial technologies any such alliances will become wrapped, or whether or not this will happen. What can be said is that, at this point at least, a more inclusive politics is not only allowed for in the normal operation of resource management but mandated, and one
that promises a different practice of stakeholding than naked, competitive self-interest. What is also clear is that this is a situated co-governance that responds as much to the consequences for environmental management of both local and national renegotiations of the meaning of the Treaty over the last 30 years, as it does to an ethos of participatory democracy more widely construed. It is also clear, then, that Māori have become empowered through this process, albeit not as significantly as most would advocate. Co-governance provides a framework for recognising and discussing shared interests, and building alignments discursively. This can shift the politics of negotiating alignments around and between projects from negative and adversarial ground to generative and positive ground. It opens new possibilities for dealing with conflict:

...if we had said this settlement is about us participating, they would have said “hmmmm”, but if we say this is about us participating in a regime that will clean up the river and ensure that is healthy and well for future generations then we know that we get complete community buy-in. Because everyone wants that. There are some industries who want a healthy river, so they can make money out of it, so they wanted it for different reasons, but we all want that healthy and surging river (Informant 34).

Co-governance provides sets of rooms and moments for a different politics to be negotiated in a different way (see Le Heron, 2009). It mobilises ‘collaboration’ as a discursive technology and an instrument for dealing with the struggle over different political agendas and power relationships. This represents a significant achievement, as one of my Māori research participants observes:

Collaboration used to be a dirty word, which had other ideas centred around it. Collaboration, “working together” is based on partnerships. Even partnership, “real partnership” is something that both parties are working towards because there are advantages for each. We are trying to play in the field to make it even, but it is not even yet… In negotiations for Western politics there are always winners and losers, it is not necessarily about what is right and what is wrong or what is good for all of us. Māori have seen this politics all the time. Achieving good co-governance require consultation skills that are openness, fairness between the stakeholders, and the ability to step back and see the interests of other parties as well as take into account their own interest (Informant 10).
For Māori, this clearly shifts things, as it does for all those others who bring to various debates voices and interests that are not backed by economic development rationales and related resources. However, it does not determine how negotiation must take place or how the values of collaboration will be renewed after the initial flush of success derived from reshuffling the cards of political influence (perhaps even of power). In part this openness is the strength of a co-governance, collaborative process, but it is also a weakness. This is not just because the risks of political or provider ‘capture’ or the implausibilities of trust in the context of competitive self-interest, that so alarmed neoliberals in the 1980s, will always be matters of concern; or that the collaborative principles, practices, and protocols developed to deal with such concerns in the Waikato River case have yet to be tested. Rather, it is that, beyond a general promise and the principles of VS, it is not yet clear how collaboration is to build those ‘on-going shared interests’ that will make it withstand the claims of particular interests. This is both a high order concern and one that asks how VS will be directed into the nitty-gritty of water allocation and discharge permits. As a governmental technology to be judged in terms of river rehabilitation, the starting point of my interests for example, it is still unclear who speaks for the river and just how that voice will be translated into a healthier river.

In my research, I encountered multiple understandings of human-river relations as well as ‘good’ governance. Many of these were framed by a different socio-cultural and political positioning with regard to environmental management ideology and practice, the Resource Management Act (RMA), and the Treaty of Waitangi. The participants in this research are political actors in the sense that each actor is connected to a politics of knowledge as well as to particular interests. They know the world through different connections to place, time, backgrounds and material interests. They are also actors in particular contexts of power and decision-making and contests. These are, on the one hand contests about institutional efficacy and normative conceptions such as democratic principles; and on the other about whose knowledge is 'right', appropriate or, can “produce the most powerful claim to 'truth'” (Pedynowski, 2003, p. 738). For example, in questioning participants on the effectiveness of co-management in New Zealand, the respondents commonly positioned themselves wittingly or unwittingly in the context of the Treaty of Waitangi (in more or less binary frames), or more bluntly in relation to some presumed struggle between Māori and Pākehā or environmentalism and developmentalism. The point is not that all action and knowledge is predetermined by ideology, race, or material interest, but that these are
assembled into particular political discourses. Specific actors are positioned, and actively position themselves in relation to them (Preston, 2005).

It is difficult to make judgements about the effectiveness or otherwise of co-governance in terms of simple outcomes, either with respect to efficiency or democracy. In addition, it is not possible to generalise the co-governance of the Waikato River for other cases around the world because the co-governance in the New Zealand context is a specific form of collaboration that involves Treaty obligations for many of the actors and agencies involved in resource management and formal processes of partnership. This makes co-governance a challenging concept, and one caught up with complex Crown-Māori relationships. However, it also makes co-governance exciting and central to economy and to nation building more generally. Co-governance arrangements such as the Waikato River configuration have been viewed as test cases for what might be possible in building a new generation of Māori-Crown partnerships. At the same time, the Treaty context has created the opportunity for a deeper form of co-governance than in other settings in other parts of the world. It emphasises and creates room for collaboration away from antagonism.

Co-governance in this context cannot be judged to be a final solution. Instead, it can be understood as an experiment that has produced certain changes in the culture and practice of governance. It has successfully produced a political culture that is less antagonistic, even if it has not completely resolved conflicts between interested groups. Thus, while actors point to issues that have not worked or have yet to work, co-governance is a helpful device in the current moment of post-Treaty politics and environmental management in New Zealand. Co-governance and co-management allows for politics to be negotiated by creating a mechanism that makes it possible for various interests to express their voices and seek some sort of alignment among contradictory interests. Most interestingly, my findings suggest that co-governance is embedding a situated post-colonial settlement that aligns environmentalism with political-economic formations and socio-ecological materialities, subjects the economic growth agenda to iwi partnership and community scrutiny, and presents opportunities in which Māori have developed powerful agency. Eventually how successfully co-governance can stabilize these political projects and trajectories is difficult to anticipate because technologies and rationalities of government always reallocate and disperse responsibilities. I will return below to the challenges of connecting co-governance to co-management, but here I want to use the Waikato River case to point to three more concerns about finding lines of
expansion beyond collaboration as a process towards a genuinely different resource management.

First, co-governance will always be situated and embodied. This reflection goes beyond recognising that collaboration and participation is context dependent and tied to substantive interest, territory and related constituency, to ask what current and on-going knowledge informs co-governance, who is involved, and what political trajectories inform and shape it. In the case of Waikato River, two issues recur throughout this dissertation in this respect. Māori report that co-governance is impeded by knowledge asymmetries. Firstly, Māori communities do not have ready access to the technical knowledge and skills required to engage in the decision-making process, while non-Māori organisations lack the expertise to facilitate the integration of Māori values and knowledge in the decision-making process. This points to a barrier to co-governance, yet on the other hand the possibility of reworking debates about knowledge gaps into a platform for co-producing knowledge might underpin the construction of shared interests. Yet, there is some significant way to go here. The debate about knowledge asymmetries, like all other on-going political trajectories, knowledge and practice in scope in this dissertation, is dominated by the question of Māori sovereignty and the way it is being negotiated in Aotearoa New Zealand. While all those research participants who identified as Māori pointed to the qualities of the river as the pivotal issue at hand, all also located their comments in relation to the Treaty. Co-governance was seen as a binary process, ‘us’ (Māori) and ‘them’ (other stakeholders). As co-governance develops, its practice will be shaped by this tension and may struggle to contain it. At this stage, however, the important points are that co-governance did not create this tension, and it is neither subverting nor suppressing it. Rather it is allowing it to be negotiated.

Secondly, participants suggest that while co-governance has set a positive framework for river rehabilitation, the complexity of this framework, which I have suggested to be positive in other ways, has restricted the development of instruments and has frustrated stakeholders. It is unclear as yet how WRA is expected to achieve the objectives of VS, both in relation to detailed planning processes amidst overlapping regulations, and in the context of multiple authorities and jurisdictions that cross river catchment boundaries.

Thirdly, as the point about knowledge asymmetries clearly exemplifies, for the current ‘nudging forward’ gains of the Waikato River co-governance framework to emerge into something more positively generative, it must go beyond managing stakeholder/actor interests
to constructing collective interests. Further still, there may be the potentiality for co-governance in resource management to actively create a new knowledge framework for governance, and even social life more generally in post-colonial Aotearoa. But, this potentiality will need to be grasped. Such a knowledge framework, perhaps characterised by the co-production of different forms of knowledge, might facilitate effective, politically legitimate, and culturally appropriate collaborative arrangement. Altering the politics and culture of knowledge making might be seen as a test, or even a positive step in this regard. That is, rather than talking about taking account of indigenous knowledge and/or translating science to practice and community understanding, a turn to a genuine co-production of knowledge may recast self-interests, dissolve knowledge asymmetries, and foster shared and collective interests. Understood as always ‘in the making’ (Gibson-Graham, 2006), such knowledge may help to convert the accommodation and compromise often mistaken as consensus into a more real consensus. Co-governance, as it is currently being practiced with respect to the management of the Waikato River, is a working example of regulated and dialogically driven accommodation and compromise that has the virtue of making visible, and confronting interest politics and power relations; but a co-production of knowledge may help to fashion collective interests and achieve greater consensus.

8.4 Co-governance: Productive situated governmentality or empty ‘good governance’

The points about the ever-presence of sovereignty issues, and the potential of fostering collective interests through co-producing knowledge, are not idle. The former is a major challenge facing New Zealanders, while the latter is arguably a necessary way forward in this context, as well as a practical response to linking co-governance and co-management and answering the question of how to do river rehabilitation, water allocation, or water quality management in practice. Co-producing knowledge promises to facilitate an effective co-management of water (Berkes, 2009; Trimble & Berkes, 2013). In this sense, co-governance is latent with possibility that does not reduce to consensus building. At the same time, it holds the promise to open-up and sustain a constructive politics around sovereignty, and possibly even model a resolution. Irrespective of debates about the particulars of current models of apportioning governance and management responsibilities, accountabilities, and privileges, the more national resources that become wrapped up in similar co-governance configurations, the more co-governance becomes normalised as a government rationality, and associated practices of rule, owing their authority directly to the Treaty of Waitangi. Altered practices of
management and resource use, as well as constitutional reforms, might be expected to follow. The Waikato River co-governance is an experiment, not just in how to co-govern the river, but in how New Zealanders govern themselves more widely in coming years, and how they approach constitutional change. It also sets up a wider experiment in co-governance as a governmental technology.

Chapter Two traced the rise of ideas of good governance in water management, especially as a strategy for engaging resource users (da Cunha, 2009; Hukka et al., 2010; Lockwood & Davidson, 2010; Rogers & Hall, 2003). Building on the work of Ostrom, (1990), the literature has called for partnership and collaboration in governance and management to generate transparency, accountability, democracy, and participation (Ansell & Gash, 2008; Armitage et al., 2012; Benson et al., 2013; Davies & White, 2012; Margerum & Robinson, 2015). However, it recognises that, in practice, efforts to accommodate the multiple values and interests of different groups have been undermined by entrenched configurations of power (Hill et al., 2012; McGregor, 2014). Whether or not this is because good governance approaches have neoliberal tendencies (Demmers, Jilberto, & Hogenboom, 2004), the Waikato River co-governance has confronted the tensions between contradictory governmentalities and has generated something different.

The Waikato River case suggests that co-governance brings a socialised technology (social institution) to neoliberal technologies of responsibilisation and marketisation. In practice, it is neither socio-political nor an anti-politics apparatus. Rather it allows to format politics, and aligns, at least temporarily, neoliberal ideologies, technologies, and political projects with the political projects of the Treaty, iwi politics, and Ostrom-centred discourses of collaboration, co-learning and co-production of knowledge, to manage environmental resources. It reallocates and disperses responsibilities among actors to subdue but not evade the problem of government (Miller & Rose, 2008; Rose & Miller, 2010) – the problem of sovereignty and how to manage it remain present in all of their micro and macro detail, as does that of making decisions about allocation and discharge (and thus land use). Self-interest in the form of land use and development, iwi/hapū politics, the competing science of water quality, and the politics of environmentalism, are accommodated but not eliminated.

The current Crown-Iwi partnership, which underpins co-governance, in this case, provides for negotiated accommodation over what co-governance as technology cannot ultimately resolve (sovereignty), even if as a practice it may allow for other governmental technologies to
emerge. It also offers at the local level, an accommodation of the political struggle over the resources and knowledge that will always be there in place. The Waikato River co-governance allows for different projects to bump into each other, but not destroy each other; and to manage tensions, but not resolve them. Indeed, the case provides an exemplar of how environmental governance and management can/should/must avoid seeking to produce a one-off resolution. Indeed, the looseness and openness of the co-governance arrangements absorb the micro-details of daily contest into the bigger question of nudging forward the debate over sovereignty, and keeping open lines of renegotiation.

Co-governance has given Māori in particular a voice to pursue their interests, even where they claim greater rights to decision-making powers. The sense of generative emergence and productive politics fostered by co-governance, has meant that attention has been able to be directed to some shorter term solutions and management decisions with respect to river revitalisation that would have been more difficult if the politics at play was more divisive and less productively focused. Participants suggest, for example, that allocation of funding to river rehabilitation and to Māori engagement with river revitalisation projects has increased and has resulted in marginal but measurable improvements in water quality. That is, the River may also be an immediate beneficiary of co-governance. This stands at odds with the views of authors such as Swyngedouw, that blunting the gritty hard edged nature of politics reproduces the status quo and reinforces uneven power relations (Swyngedouw, 2010). However, as I repeat, this is a particular, situated case; one that builds on wider institutions of partnering that effectively securitises trust.

The Waikato River co-governance arrangements, therefore, suggest that co-governance configurations can be ‘good’, but that there is unlikely to be a perfect model of co-governance. Rather the messiness of co-governance in practice reveals a conceptual messiness, which we should perhaps be content to accept. Thus good governance might be seen to be good, not because it evacuates politics, but because it allows for it and channels it to more productive ends. Despite not building consensus, co-governance may still produce an accommodation in the presence of politics, even if many (if not most) actors still want more. In this sense it settles (down) tensions and steers them not so much in a strategically planned direction, but coherently in terms of the conditions of its own reproduction or sustainability. There is no ultimate solution and no consensus, only a set of ongoing negotiations and
accommodations and compromises. Perhaps, the ‘good’ in good governance needs to be rethought in these terms, and the anti-political aspirations replaced with more generative ones.

In the case of such an insistent, all-encompassing, and uncompromising political project, co-governance ought to be even more complicated than in other settings. A raft of political claims are more or less attached to claims about the health of the river; te mana o te awa (the spiritual authority, protective power, and prestige of the river) (WRSA, 2010, p. 6) and tino rangatiratanga (resource sovereignty) are bound by claims of sovereignty over the river and its catchment. However, sovereignty cannot be realised all at once and immediately. There is much to be worked out and through, and many competing claims and governmental rationalities to be reconciled, including the neoliberal governmentalities of private property and markets, and the environmentalities of sustainability, resilience, and waiora.

This interpretation of co-governance dovetails with a Foucaudian conception of power as productive. Co-governance opens up a set of contests in which Māori are empowered in a way that they were not before. It extends their reach (Allen, 2011), yet does not offer a fixed shaping of resource management powers that can be seized and positioned in a hierarchical mode. Rather, the ‘power infrastructure’ is partial and ‘unfixed’ (Huxham, 2003). Co-governance outcomes are not absolutely predictable (Kääkönen & Hirsch, 2009); there is space for contingency and agency, and the arrangements may produce more or less government intervention, more or fewer developmentalist concessions, and more or less Māori influence. There is a dynamic contingency to participation and democratic decision-making (Agrawal, 2005; Lamb, 2012). Power is in this case very much a ‘relational effect of social interaction’ (Allen, 2004), even if this is either not understood or accepted by participants, especially those playing a discursive politics of naming power differentials (“The Crown has the power, we do not have the power”) (Informant 1).

Co-governance has subjected struggles over water resources to a stabilising and reconciling impetus that has dulled their harder and sharper edges; co-governance is open, shifting and incomplete. It has allowed for the expression of multiple voices in river management practices, and thus a more immediate but less visceral politics. In so-doing, co-governance has not decisively reconfigured power or dissipated it; rather it has fractured, diffused, and un- and refolded it into a more productive force. The penetration of co-governance into a multiplicity of management practices has allowed for the WRSA to be implemented, the
WRA to continue to further develop and embed the VS, and the WRC to bring both to bear on managing the river.

Any processes of reassembling or re-fracturing of powers will need to be monitored and new unevenness reformatted to ensure that arrangements are not undermined. Indeed, the architecture of co-governance, and its deep rationalities of nudging things forward and temporary, partial, open, and even uncertain settlement, may need to be protected against its own architects. Technocrats seeking technical and financial efficiency and/or good governance in demonstrable democratic gains, may choose to find failure in the evidence to date, of its workings or the claims of impatient, short-sighted or discontented rent-seeking stakeholders. This would be unfortunate, but is a possible outcome from any evaluation with narrow terms of reference that may not recognise co-governance to be an emergent process that allows for politics to co-evolve productively with political processes in other settings. Co-governance is not always what it purports to be. However, it performs its mandated function more than adequately, whilst performing others that are arguably more important, even if not fully imagined by its architects.

For co-governance, then, success might be the continuous (re)negotiation of principles, protocols, agreed actions and shared visions that foster a productive politics, one built on meaningful and practice-oriented recognition (see Fraser, 2009). The knowledge bases required to secure this governmental rationality are less clear. Indeed, perhaps the next stage of co-governance might involve a series of open debates not only about water quality but also how its co-management might be conceptualised and implemented. The time may be right to challenge shibboleths of all kinds, from the primacy of science, to private property rights, and perhaps even the democratic credentials of tino rangatiratanga.

8.5 Thesis contribution: Anchoring co-governance in co-management?
The co-governance literature struggles to define the conceptual and practical boundaries between co-governance and co-management, with perhaps the most compelling position being that the distinction is a heuristic device and the categories are ideal types (Feit, 2005; Jentoft & Chuenpagdee, 2015). As the Waikato River arrangements confirm, the two are thoroughly inter-penetrated, and the situatedness of any case makes the search for the distinction as unhelpful analytically as it is theoretically. That is that co-governance in this
case is between two politically distinctive, but constitutionally uncertain parties: Māori and the Crown. And it is built top-down through legislative obligations prefigured (or at least authorised politically) by the Treaty of Waitangi. While co-governance and co-management are woven together, this is not a bottom-up building of co-governance to put a collaborative strategy or shared vision around grounded struggles and co-management practices developed to bring together multiple stakeholders.

Co-governance is primarily viewed and practised as an attempt to incorporate Māori actors, values and representative bodies into resource management, from vision setting to strategic decision-making and the minutiae of daily decision-making. For Māori, its penetration down to the level of specific decision-making is very much both meaning and aspiration. Its practice in current forms involves complex and multi-layered relations of co-governance and co-management among local, regional, and national governments, state agencies, together with hapū and iwi bodies. Various other scientific agencies and lobby groups are in attendance but are not formally part of the arrangements. Participation and partnership with all those interested is thus circumscribed, even if collaboration is heightened as process and objective. The neat division imagined and modelled by organisational theorists of governance as policy formation, and management as delivery, with executive functions positioned as intermediary, is not the model here.

The technical challenge of co-governance in this setting has been to convert constitutional, statutory, and political drivers towards co-governance into co-management; in other words to co-create with Māori and other stakeholders, organisational protocols, practices, and structures that redistribute day to day management authority and responsibility to Māori and institutions that allow for the on-going (re)negotiation of these arrangements. This particular situatedness of understandings and actualisation of co-governance offers some guidance as to how the co-constitutiveness of co-governance and co-management might be addressed in other post-colonial settings. Here the provision for on-going renegotiation and nudging things forward might be seen as generative in other places. It also provides an example, albeit in extremis, of how co-governance and co-management might be more widely understood as co-constitutive and implemented as such, thereby avoiding the sterilities of new-managerialist efforts to keep them artificially separate. In respect of water management, where water knows no artificial boundaries, catchment and river cross all manner of constituencies, and social values are multiple and fluid, this is a crucial insight. Management and governance are always
interpenetrated. The deeper challenge is to provide a foundational bridge to doing co-management in any situation through the co-production of knowledge. Producing knowledge collaboratively can enhance the construction of collective interest. For Māori this is understood not just as taking account of cultural values, but also taking seriously indigenous knowledge and attributing epistemological equivalence through Vision Mātauranga. Constructing the object of governance collectively not only creates shared understanding for effective and efficient day to day management, but also the possibility of shared interests and values and trust.

This thesis challenges assumed stabilities and privileges of scientific knowledge relative to indigenous knowledge. Efforts to disturb the privilege and assumed universality of scientific knowledge have created ongoing struggles in the practice of co-governance. Contemporary academic literature emphasises the co-production of both knowledge and indigenous participation in the decision making process. However, having a seat at the table does not necessarily guarantee equal participation in decision-making or power sharing. The experience of Māori co-governance in the Waikato confirms that the RMA assigns priority to science. No matter how many seats Māori have at the co-governance table, their voice is undermined by the language of science. They find themselves having to argue for exceptions and exemptions rather than negotiating on the basis of an indigenous knowledge predicated on Māori experience and interests. New forms of research and frameworks of knowledge construction are required to co-construct a knowledge for co-governance. This thesis has argued for a framework that fosters trust, alters the politics, culture and purpose of making science, and establishes an equivalence with other ways of knowing. A knowledge framework for co-governance would foster a situated politics of knowledge making focused on practice and community understanding. It might ask what kind of new knowledge is necessary to achieve cleaner rivers, and what part might science and/or traditional regulatory models play. It might also ask what kind of implementation and regulatory models might be designed if we start with the centrality of cultural values rather than individual values. Science would thus be a tool deployed to create management that enhanced co-governance and related sovereignty to economy and environmental justice.
8.6 Final thoughts

The narrative of the Waikato River co-governance arrangements presented in this dissertation is positive, less because a resolution has been found, and more because they allow for ongoing accommodations to be negotiated. There is still room for greater “inclusiveness” of voices, while Māori continue to press for greater involvement, authority, and responsibility. In Nancy Fraser’s (2009) terms, there has been a redistribution of responsibility and authority, material recognition, and increased participation. The three distinctive political projects at work – economic development, tino rangatiratanga, and river revitalisation have been allowed to articulate openly and to find accommodations that work productively to mitigate their contradictions. Significantly, this mitigation is occurring at the points where Māori and non-Māori interests come into tension, but is also made transparent and generative at those points where the tensions are internalised within iwi interests; at those sites and moments such as iwi investment in agriculture and power generation where traditional stewardship responsibilities for river qualities surface in debate and the setting of protocols.

One of the reasons that co-governance discourse has been productive in these ways is that it does bring these political projects into temporary alignments. The critical point here is that such functionally, temporally, and geographically partial ‘settlements’ provide space (rooms and moments) in which the deeper contradictions of both tino rangatiratanga and sustainable development can be negotiated. In an important sense, co-governance arrangements such as those configured around the management of the Waikato River point not only to how the wider settlements are being negotiated in relation to what is being called the post-Treaty Settlement era might be nudged forward, but to how this era might be defined. Historical epochs defined as ‘post-’ eras are about just this uncertainty, openness, and on-going renegotiation; perhaps the Waikato River case is illustrative less of a decisive new governance moment or model and more of this recognition-driven, redistributive renegotiation, and ought to be judged as such. Here, sustaining, debating and expanding the discourse of ‘co-’ is crucial. The formalisation of such discourses and the debates around them in actualised and meaningful governance and management configurations is pivotal. Water management and the Waikato River are richly material and deeply meaningful economic and cultural settings. Perhaps this is the current moment of New Zealand’s constitutional history.
PARTICIPANT INFORMATION SHEET (River Iwi Informant)

Project title: Negotiating the politics of water resource management: co-management as an approach to water governance in the Waikato River catchment

Tēnā koe. My name is Bizhan Rahnama. I am a PhD candidate in the School of Environment at the University of Auckland. As part of my PhD I am conducting a research project which will explore how co-management arrangements as part of a collaborative governance strategy enhance stakeholder participation in the Waikato River catchment.

Co-management (collaborative management) refers to joint administration between centralized, state-level and community and local-level where different stakeholders plan and decide upon collective actions in order to manage natural resources. In recent years increasing attention has been paid to the efficiency of co-management as an approach to develop management plans that promote democracy and equity in which people with diverse interests can collaborate and decide how their natural resources are to be managed.

In my research, I am using the co-management arrangements in the Waikato River catchment as a case study to determine whether more democratized decision-making processes in water management can be generated for stakeholder groups in the Waikato catchment by developing plans and polices that embed the voices, values, interests and demands of interested parties; and whether co-management arrangements can be devised to facilitate meaningful stakeholder participation in water resource management. The results will be used in the production of my thesis as well as in presentations and journal articles. Further, this research aims to generate possibilities, mechanisms, and opportunities that can contribute to the empowerment of local people to manage water resources.

Waikato River deed of the settlement Act (2010) reflects a shared commitment by the Crown and Iwi to develop co-governance and co-management in respect of the management of the Waikato catchment. Therefore, it is crucial to explore Iwi perspectives, views and opinions in regards to the co-management arrangements. By analysing what is happening and has happened in terms of the engagement and consensus decision-making
between Crown and Iwi, this research will provide a means to represent the voices of the Iwi communities who have interests in the health and wellbeing of the Waikato catchment. With this in mind, I wish to invite you to be involved in this research.

With your agreement you will take part as an interview participant. Interviews will be semi-structured with open ended questions. To ensure accurate collection of information, with your permission, I would like to make audio recordings during interviews; however, if you agree to be audiotaped, you can request for the recorder to be turned off at any time. The interview will take approximately 1 hour and I will make arrangements to conduct the interview at a time and location that is time convenient for you. A list of questions and topics I wish to cover will be made available to you at the beginning of the interview.

The audio recording from your interview will be transcribed by me and the data will be used in the production of my thesis. Given the nature of the study, it is possible that some of the participants may be recognized by others in the community; however, I will make every effort to ensure the anonymity of participants involved in my research. Your name will not appear in my thesis or other outputs arising from this research unless you give me your permission to do so, as indicated on the consent form. Where necessary and with your permission, pseudonyms will be used. Where direct quotes are used, I will ensure I select those which cannot be easily associated with an individual.

Participation in this research is completely voluntary. You are not obliged to take part if you do not wish to. You may withdraw authorization for the use of the whole of your transcript within 3 weeks after the interview has been conducted, but you will not have an opportunity to review and edit it, or withdraw authorization for use of any particular parts of it.

The data (digital audio files, electronic data and transcript) obtained through your participation will be securely stored in a locked cabinet accessible only to me and my supervisor, or will be password-protected. All information which is collected about you during the research will be kept confidential. The data will be kept for six years after which time it will be destroyed. Digital recordings, electronic data and emails will be deleted, and hard copy transcripts will be shredded. As a participant you may request a copy of the summary and results from this study, which will be available to participants at the completion of my thesis. These results will be sent either by mail or email. Please provide your details on the Consent Form if you wish to receive a copy of the summary.

Thank you very much for your time and your assistance in making this study possible. If you have any queries or wish to know more please contact me (the researcher) or my supervisor by any means shown below:

Yours sincerely
Bizhan Rahnama

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APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON ………… for (3) years, Reference Number **2011/414**
PARTICIPANT INFORMATION SHEET (Environment Waikato)

Project title: Negotiating the politics of water resource management: co-management as an approach to water governance in the Waikato River catchment

My name is Bizhan Rahnama. I am a PhD candidate in the School of Environment at the University of Auckland. As part of my PhD I am conducting a research project which will explore how co-management arrangements as part of a collaborative governance strategy enhance stakeholder participation in the Waikato River catchment.

Co-management (collaborative management) refers to joint administration between centralized, state-level and community and local-level where different stakeholders plan and decide upon collective actions in order to manage natural resources. In recent years increasing attention has been paid to the efficiency of co-management as an approach to develop management plans that promote democracy and equity in which people with diverse interests can collaborate and decide how their natural resources are to be managed.

In my research, I am using the co-management arrangements in the Waikato River catchment as a case study to determine whether more democratized decision-making processes in water management can be generated for stakeholder groups in the Waikato catchment by developing plans and polices that embed the voices, values, interests and demands of interested parties; and whether co-management arrangements can be devised to facilitate meaningful stakeholder participation in water resource management. The results will be used in the production of my thesis as well as in presentations and journal articles. Further, this research aims to generate possibilities, mechanisms, and opportunities that can contribute to the empowerment of local people to manage water resources.

Through the establishment of Waikato River Settlement Act 2010, Environment Waikato is committed to working closely with Iwi authorities toward the shared goal of a clean and healthy Waikato River. For this reason, it is important to consider how Environment Waikato collaborates with Waikato River Iwi authorities in making decisions and
developing plans that help to protect the health and wellbeing of the Waikato River. With this in mind, I wish to invite you to be involved in this research.

With your agreement you will take part as an interview participant. Interviews will be semi-structured with open ended questions. To ensure accurate collection of information, with your permission, I would like to make audio recordings during interviews; however, if you agree to be audiotaped, you can request for the recorder to be turned off at any time. The interview will take approximately 1 hour and I will make arrangements to conduct the interview at a time and location that is time convenient for you. A list of questions and topics I wish to cover will be made available to you at the beginning of the interview.

The audio recording from your interview will be transcribed by me and the data will be used in the production of my thesis. Given the nature of the study, it is possible that some of the participants may be recognized by others in the community; however, I will make every effort to ensure the anonymity of participants involved in my research. Your name will not appear in my thesis or other outputs arising from this research unless you give me your permission to do so, as indicated on the consent form. Where necessary and with your permission, pseudonyms will be used. Where direct quotes are used, I will ensure I select those which cannot be easily associated with an individual.

Participation in this research is completely voluntary. You are not obliged to take part if you do not wish to. You may withdraw authorization for the use of the whole of your transcript within 3 weeks after the interview has been conducted, but you will not have an opportunity to review and edit it, or withdraw authorization for use of any particular parts of it.

The data (digital audio files, electronic data and transcript) obtained through your participation will be securely stored in a locked cabinet accessible only to me and my supervisor, or will be password-protected. All information which is collected about you during the research will be kept confidential. The data will be kept for six years after which time it will be destroyed. Digital recordings, electronic data and emails will be deleted, and hard copy transcripts will be shredded. As a participant you may request a copy of the summary and results from this study, which will be available to participants at the completion of my thesis. These results will be sent either by mail or email. Please provide your details on the Consent Form if you wish to receive a copy of the summary.

Thank you very much for your time and your assistance in making this study possible. If you have any queries or wish to know more please contact me (the researcher) or my supervisor by any means shown below:

Yours sincerely

Bizhan Rahnama

Contact information

Researcher:
Bizhan Rahnama
Email: b.rahnama@auckland.ac.nz
Contact number: 027 3355 986
Postal address: School of Environmental, The University of Auckland, Private Bag 92019, Human Science Building 10 Symonds Street, Auckland, New Zealand.

Supervisor:
Dr Karen Fisher
Email: k.fisher@auckland.ac.nz
Contact number: +64 9 373 7599 ext. 88410
Postal address: School of Environmental, The University of Auckland, Private Bag 92019, Human Science Building 10 Symonds Street, Auckland, New Zealand.

Head of Department:
Professor Glenn McGregor
Email: g.mcgregor@auckland.ac.nz
Contact number: +64 9 373 7599 ext. 85284
Postal address: School of Environmental, The University of Auckland, Private Bag 92019, Human Science Building 10 Symonds Street, Auckland, New Zealand.

Chair contact details:
For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON ………… for (3) years, Reference Number 2011/414
CONSENT FORM (potential participant)

THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

Project Title: Negotiating the politics of water resource management: co-management as an approach to water governance in the Waikato River catchment

Researcher: Bizhan Rahnama

- I agree to take part in this research.
- I have read the Participant Information Sheet and understood the purpose of this research project and why I have been selected to take part.
- I have had the opportunity to ask questions and have them answered.
- I am aware that my participation in this research is voluntary.
- I understand that I may withdraw my authorization for the use of the whole transcript within 3 weeks after the interview has been conducted, but I will not have an opportunity to review and edit it, or withdraw authorization for use of any particular parts of it.
- I understand that if I do decide to withdraw from this study, I will not have to provide a reason, and if I choose to do so, any information pertaining to myself will be destroyed.
- I am aware that given the nature of the study, it is possible that participants may be recognized by others in the community.
- I understand that all data will be presented or published in such a way so that participants are not identified or identifiable. This may include the use of the pseudonym.
- I consent/do not consent to my name being used in the research.
- I understand that, if, for any reason, at any time, I wish to stop the interview, I may do so without having to give an explanation.
• I agree / do not agree to be audiotaped.
• I understand that audio recordings may be made during interviews, and that at any time individual participants can request that the recording devices be turned off.
• I understand that the interview will be approximately 1 hour long.
• I understand that information collected in the present project will be held by the researcher and will be used in the production of his PhD as well as in presentations and journal articles.
• I would/would not like a summary of the thesis findings.
• I understand that transcribed copies of the completed interview will be stored in a locked cabinet on The University of Auckland premises, separate from the consent forms, until the completion of the research project, at which time they will be destroyed by shredding.
• I understand that data will be kept for 6 years, after which they will be destroyed.

Name ________________________________

Signature ___________________________ Date __________________

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON …….FOR (3) YEARS REFERENCE NUMBER 2011/414
Appendix B

List of interview participants

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<tr>
<th>Informant</th>
<th>Organisation</th>
<th>Position/Background</th>
<th>Date</th>
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<tr>
<td>1</td>
<td>Auckland University</td>
<td>Māori scholar</td>
<td>January 2012</td>
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<tr>
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<td>Māori scholar</td>
<td>March 2012</td>
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<tr>
<td>3</td>
<td>DairyNZ</td>
<td>Senior consulting officer</td>
<td>January 2012</td>
</tr>
<tr>
<td>4</td>
<td>DairyNZ</td>
<td>Sustainability Developer</td>
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<td>5</td>
<td>Department of Conservation</td>
<td>Senior conservation officer</td>
<td>November 2011</td>
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<tr>
<td>7</td>
<td>Federated Farmers</td>
<td>Senior environmental advisor</td>
<td>February 2012</td>
</tr>
<tr>
<td>8</td>
<td>Forestry</td>
<td>Senior environmental manager</td>
<td>November 2012</td>
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<td>9</td>
<td>Landcare Research</td>
<td>Māori scholar</td>
<td>December 2011</td>
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<td>10</td>
<td>Maniapoto</td>
<td>Senior environmental consultant</td>
<td>December 2011</td>
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<td>Mighty River Power</td>
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<td>January 2012</td>
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<td>Independent environmental advisor</td>
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<td>13</td>
<td>National Institute of Water and Atmospheric</td>
<td>Iwi development manager</td>
<td>December 2011</td>
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<tr>
<td>14</td>
<td>National Institute of Water and Atmospheric</td>
<td>Iwi development manager</td>
<td>January 2012</td>
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<tr>
<td>15</td>
<td>Politician</td>
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<td>January 2012</td>
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<td>November 2011</td>
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<tr>
<td>28</td>
<td>Waikato River catchment dairy farmer</td>
<td>Farm Environment Award Winner</td>
<td>November 2011</td>
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<td>Waikato River Authority</td>
<td>Representative</td>
<td>November 2012</td>
</tr>
<tr>
<td>30</td>
<td>Waikato River Authority</td>
<td>Representative</td>
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<td>31</td>
<td>Waikato River Authority</td>
<td>Representative</td>
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<td>32</td>
<td>Waikato River Care</td>
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<td>November 2011</td>
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<td>34</td>
<td>Waikato University</td>
<td>Māori scholar</td>
<td>March 2012</td>
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<td>35</td>
<td>Waikato-Tainui</td>
<td>Environmental advisor</td>
<td>November 2011</td>
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<td>36</td>
<td>Waikato-Tainui</td>
<td>Senior environmental consultant</td>
<td>December 2011</td>
</tr>
<tr>
<td>37</td>
<td>Waikato-Tainui</td>
<td>Senior environmental consultant</td>
<td>March 2012</td>
</tr>
</tbody>
</table>
Appendix C

List of potential questions asked at the interviews

1. What are the main issues at stake in the management of water resources?
2. How do you understand collaborative governance?
3. How are responsibilities distributed between the state and local levels?
4. How do the existing rules and regional policy statements support sustainability?
5. Do you think the current institutional framework provide appropriate direction and policies for the co-governance of the Waikato River?
6. How can indigenous Māori knowledge best be used to manage the environment?
7. How do you incorporate matauranga Māori to the management of the Waikato River?
8. How does co-management influence the efforts at integrated catchment management?
9. How can Iwi be empowered to manage natural resources?
10. How do you build capacity among Iwi so they can become more active in decision making?
11. In what ways does the co-management arrangement help to connect/engage different stakeholders of the community to manage the Waikato River?
12. In what ways do you think the co-management agreement provides opportunities to improve water quality of the Waikato River?
13. How does the co-governance arrangement affect dairy farmers?
14. What are the main constrains to practicing co-management?
15. With respect to farming related activities, how do you encourage/support stakeholders to change their practices without the enforcement of rules or consent?
16. Do you think the co-management provides a means to resolve conflicts between different stakeholders within a catchment, or make them worse?
17. What changes to institutional arrangements are required to implement collaborative management?
18. In what ways co-management assist Waikato River Authority to identify priority needs and future directions to improve the health and wellbeing of the river?
19. What opportunities do you think co-management can provide for recognizing Iwi cultural and spiritual values?
20. How do Iwi perceive the co-governance arrangement?
21. How do Iwi perceive the co-management arrangements?
22. What opportunities do you think co-management can provide for recognizing Iwi cultural and spiritual values?
23. Do you believe water management is political? Why?
24. Do you think the co-governance arrangement will affect your farming activities?
25. Do you think co-management will provide farmers with greater opportunity to communicate with iwi authorities?
26. What technical or financial assistance do you think is required for improving the Waikato River?
27. In the scoping study what is meant by ‘protect the health and wellbeing of the Waikato River’?
28. How will allocation of the clean-up fund be determined?
29. What do you see as the challenges to co-management of the Waikato River given the complex human-environment interactions in the catchment?
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