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Landcare Research

Shaping Southland's Regional Forum: drawing on lessons from elsewhere

Prepared for: Environment Southland

August 2018

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Contract Report: LC3293

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Executive Summary

To address water management issues in Southland and meet Council obligations under the National Policy Statement for Freshwater Management, Environment Southland is establishing a regional forum to consider and advise the Council on the options available to achieve community objectives for freshwater. This report aims to help Environment Southland consider how it might design its regional forum to involve its community in water management decision-making based on collaborative principles.

Everyone has a stake in freshwater quality and quantity. Across New Zealand regional councils are approaching their obligations under the National Policy Statement for Freshwater Management by moving beyond the traditional decide-consult-defend planning model for informing and consulting communities. Increasingly, regional councils are involving and collaborating with their communities to help make challenging and often contested decisions about how to care for, use and manage freshwater.

This report provides a summary of international and New Zealand literature on participatory processes relevant to the Southland regional forum and the region's 'involve with collaborative principles' approach. We present five snapshots of participatory processes in New Zealand – Northland, Tasman, Bay of Plenty, Hawke's Bay and Waikato – to highlight how these processes have been conducted and to comment on their strengths and challenges. We also provide observations and options drawn from information gathered for the snapshots, as well as in Greater Wellington, Canterbury, Gisborne and Horizons, and the Motueka Integrated Catchment Management research programme. Finally, we provide a summary of useful techniques and practical tips for sustaining a participatory process.

Participatory groups are representing the range of community values and interests in freshwater in various ways. The number of people involved varies between 10 and 30-plus people. How community members, stakeholder groups with broad interests, and stakeholder groups with specific interests involve themselves varies widely. However, common features are consensus-based decision-making and the participatory groups being involved with councils in an advisory role (which means the council retains the final decision-making power).

Key messages coming out of these participatory initiatives are that participatory processes are taking far longer and requiring more meetings than anticipated. Consensus decision-making takes time and requires a considerable amount of information to help people make informed decisions. Good facilitation, ensuring sufficient resources are available, and there is enough time for interaction are critical to success. It is also clear that working with a participatory group is not a substitute for a council undertaking broader community engagement (making contact) and interaction (what is done when contact is made). Bringing the community along with the regional forum will be critical for building legitimacy for the forum's recommendations and, ultimately, the council and council decisions.

1 Introduction

A range of initiatives have been introduced in New Zealand in recent years by government and industry to change the way freshwater is used and managed. Under the National Policy Statement for Freshwater Management, regional councils are required to maintain or improve the state of freshwater and set water quantity and quality limits to meet national and local objectives and community expectations.

Many councils are creating participatory processes because of the complexity of water management issues and the potential for conflict across the multiple values and interests in the community. For these types of issues, the traditional decide-consult-defend approach – whereby councils focus on setting the rules, informing and consulting the community, then defending them in hearings and, if necessary, the courts – is increasingly recognised as not producing the desired water resource outcomes. In many regions communities are now being involved in participatory processes to help councils make decisions on where to set limits and how to implement programmes of work to address water management issues. Broadly, the rationale for creating these processes is:

> *By bringing together those individuals or groups most affected by planning outcomes, collaborative planning and decision-making seek to achieve consensus outcomes that will deliver the greatest benefits to the widest number of stakeholders, while also achieving desirable outcomes for natural resource management.* (Cradock-Henry et al., 2017, n.p.)

To address water management issues in Southland and meet the Council's obligations under the NPS-FM, Environment Southland is establishing a regional forum to consider and advise the Council on available options to achieve community objectives for freshwater across its region. This report draws on knowledge, experience and lessons learned in other parts of New Zealand to help Environment Southland consider ways to design its regional forum to involve its community, based on collaborative principles.

2 Project Scope

At the request of Environment Southland, this report presents:

a. a summary of international and New Zealand literature on participatory processes relevant to the purpose of the Southland regional forum and the region's 'involve with collaborative principles' approach
b. five snapshots of participatory processes in New Zealand that highlight how processes were conducted, as well as strengths and challenges of relevance to Southland from the processes used in Northland, Tasman, Bay of Plenty, Hawke's Bay and Waikato
c. observations and options drawn from a range of processes, including those above, as well as in Greater Wellington, Canterbury, Gisborne and Horizons, and the Motueka Integrated Catchment Management research programme
d. a summary of useful techniques and practical tips for sustaining a participatory process.

3 Approach

This report does not make recommendations on what the structure of the Southland regional forum should be. Nor does it evaluate or critique other processes. This would require an extensive and systematic analysis given that all participatory processes are profoundly complex and political, with rafts of documentation. Any assessment of success or otherwise would require an evaluation across multiple dimensions and perspectives, and would be a lengthy and intensive study for just one region and far more so for the many examined here.

This report draws on peer-reviewed international and national literature on public participation and collaboration in environmental decision-making. It also draws on publicly available guidance and selected resources (e.g. terms of reference) available from regional council websites to identify aspects of interest to Environment Southland in designing its regional forum (e.g. who was involved, how they were involved). These resources are combined with the knowledge and experience of the authors (gained through ongoing research and involvement in participatory processes within New Zealand) to comment on the approaches taken by different councils and to identify options for Environment Southland to consider in the design of its regional forum. Therefore this report should be considered a review rather than a comprehensive study.

It is also important to acknowledge that many people will have additional information through being involved in the processes, working with those involved, or observing these processes. Furthermore, there is likely to be a difference between what has occurred (or appeared to occur) in practice compared to what is set out in the documents we have relied on. While efforts have been made to clarify information with the staff of relevant councils via telephone calls and emails, as a desktop study we have relied on publicly available documentation derived from websites or provided by council staff.

4 Literature Review

4.1 Participatory expectations

Internationally it has become common and expected practice for government authorities to involve the public in environmental decision-making (Ansell and Gash, 2008; Chilvers and Kearnes, 2015; Frame et al., 2004; Harding et al., 2009; IAPP, 2014; Innes and Booher, 2010; Margerum, 2011; Russell et al., 2011; Sabatier et al., 2005; Scholz and Stiftel, 2010; Webler et al. 2001). Decisions to address environmental issues are likely to have an impact on the interests of particular groups and the broader community. Public participation allows those concerned about issues or likely to be affected by decisions to contribute to discussions and, if given the opportunity, to influence the decisions that are made (Fenemor et al., 2011; Harding et al., 2009; IAPP, 2014; O'Brien, 2012). How to involve the community and who is 'the community' are two important questions discussed in this report (see also Cradock-Henry et al., 2013; Sinner and Harmsworth, 2015).

4.2 Types of participation

Designing a participatory process requires deciding how much decision-making power is given to the community. There are different types of public participation, with a range of implications for the legitimacy and success of implementing recommendations, as well as for time and resource commitment. The International Association for Public Participation has defined five types of public participation (see Figure 1). The schematic is useful for seeing how the different types of public participation require different interactions between authorities and the community, the varying levels of control and authority that can be given to the community, and the expectations of the council at each level.

Informing is about telling the community what has been decided. It is characterised by one-way communication, minimal interaction, and a communications strategy (e.g. fact sheets, information conveyed via a website). **Consulting** is more about listening, taking concerns into account, then deciding (e.g. through public comment, focus groups, public meetings). While consulting might involve two-way communication, interaction is often limited to questions and answers on matters already decided. While informing and consulting are essential, and regional councils are accustomed to these ways of interacting through traditional regional planning processes, consulting involves low levels of public participation.

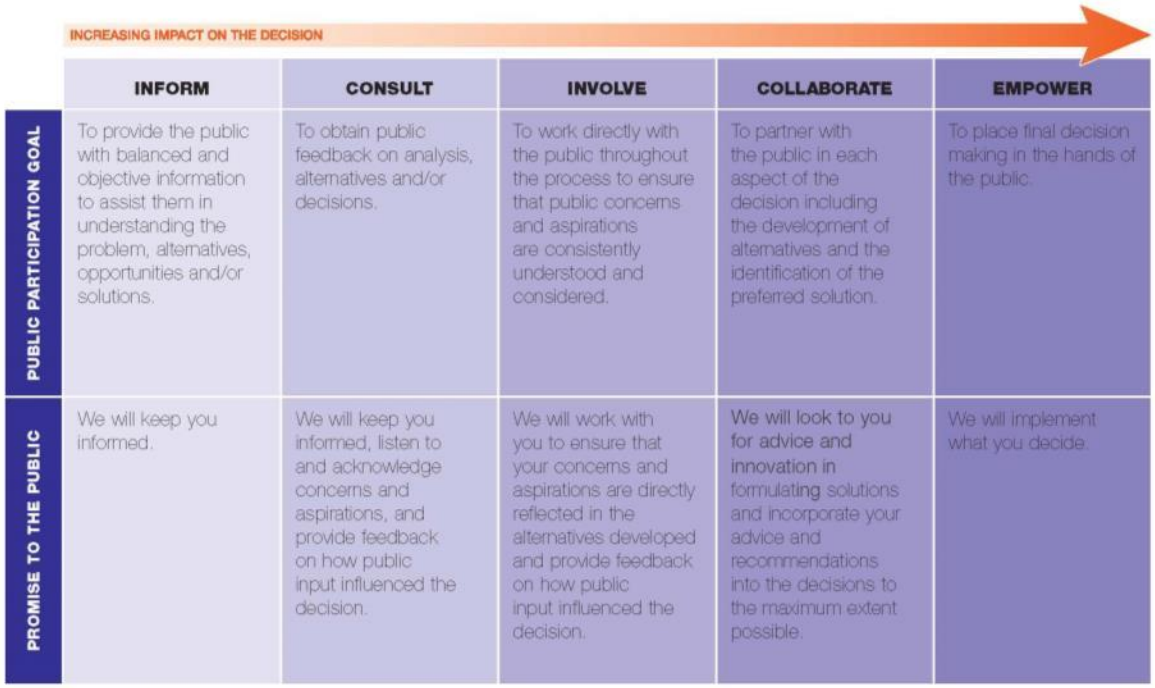

Figure 1: The public participation spectrum, showing levels of participation (International Association of Public Participation, 2014, no page).

4.3 Why choose participation beyond informing and consulting?

A more interactive way to conduct a participatory process can be thought of as EDD (engage-deliberate-decide) (Ministry for the Environment, 2017a), which is shown further to the right of Figure 1 as **involve** and **collaborate**. These participatory approaches can be enabling for a council, which has the power and (although often limited) resources to instigate and facilitate deliberation. Involving and collaborating also require two-way communication, but with opportunities for conversations and the exchange of ideas using, for example, advisory committees.

These participatory approaches are more of a 'working with' dynamic and represent a higher level of control and authority given to the community than 'inform and consult' models. This more interactive approach can help build trust within a group and between a group and a council. It can also demonstrate to the community that a council is seeking a broad range of perspectives on a particular issue. Trust is essential for open and meaningful conversations and establishing foundations for partnerships between governing authorities and the community to implement what might come out of a participatory process (Innes and Booher, 2010; Margerum, 2011).

At the right-hand side of Figure 1, **empower** puts decision-making power in the hands of the community. This means that what a community decides gets put into action. For example, a decision-maker could establish a citizen jury to decide whether or not a development should proceed. Under the empower scenario, the decision-maker would commit to abide by the decision of the citizen jury. While this might be seen by some to be the democratic ideal, elected decision-makers may see this model as usurping their own roles. Incidentally, a binding public referendum would fall into this category, but yes/no answers cannot adequately capture or deal with the complexity of freshwater issues (Harding et al., 2009).

4.4 Who to involve?

Whether resources are limited or not, it is not workable to include everyone in a participatory process that seeks to address complex issues (Boedeltje and Cornips, 2004). Decisions have to be made about who to include and who will represent the different values, interests and sectors of the community. Defining who 'the community' is can be difficult, however, given that any community is diverse. It is especially difficult in New Zealand, where recreation and tourism, for example, extend those who have a stake or an interest in an area well beyond the local community of the physical region. It is also the case that some stakeholder groups have representatives beyond the region.

Participation often refers to the involvement of stakeholders. A stakeholder is someone who holds a stake or interest. While everyone has a stake or interest in freshwater, in the context of participating in environmental decision-making stakeholders are usually organised groups that have a "special interest or concern" and have some level of political support and collective influence (Harding et al., 2009, p. 169).

These collective, organised and political attributes differentiate stakeholder groups from citizens. While stakeholder groups will represent the interests of some citizens, they are

unlikely to represent the interests of all 'the community'. (Of course, environmental and conservation groups would argue that they do represent the interests of all.) Treating environmental and economic interests as mutually exclusive can overlook the common ground that might be found to protect, for example, drinking water. Having said this, individuals and stakeholder groups will have or represent vested interests in retaining the *status quo* (e.g. maintaining access to a resource or dominance in a market) given historical decisions that might now be recognised as unsustainable (Harding et al., 2009). For these interests, the stakes are high to be involved in a decision-making process and to stay the course no matter how long it takes.

Stakeholder groups can also draw on varying levels of resources (e.g. funds to commission studies, time to undertake in-depth research, and communications expertise to package information). The resources that can be assembled can be considerable for some groups, especially if the stakes and rewards are perceived to be high and interests are under threat. The variation in resourcing can overwhelm the capabilities of groups who do not have access to similar resources. This inequality can also be intimidating to individual citizens or underprivileged groups, who do not have the same level of resourcing but have valid issues to be heard. Hence, providing pathways and venues (which could be formal or informal) for a range of contributions in a range of formats can ensure participation is enabled for many rather than a few (Harding et al., 2009; Innes and Booher, 2010).

There is a range of options for attempting to address the issue of who to involve. For example, a 'community model' would involve individuals contributing to a process to take account of the values and interests of the community as a whole, not necessarily representing the interests of a particular group. The 'stakeholder model' would see stakeholder groups representing particular values and interests sitting around the table. Another option is a combination of both, where, for example, groups can nominate a member of the community as a representative.

4.5 Involving tangata whenua

The above definition of a stakeholder does not capture the role of tangata whenua in resource management in New Zealand. As a purpose and principle of the Resource Management Act 1991, regional councils are required to take into account the principles of the Treaty of Waitangi. The preamble of the National Policy Statement for Freshwater Management recognises the Treaty of Waitangi as the "underlying foundation of the Crown-iwi/hapu relationship with regard to freshwater resources". Objective D1 of the National Policy Statement for Freshwater Management states:

> *To provide for the involvement of iwi and hapu, and to ensure that tangata whenua values and interests are identified and reflected in the management of fresh water including associated ecosystems, and decision-making regarding freshwater planning, including on how all other objectives of this national policy statement are given effect to. (*New Zealand Government, 2014 updated 2017, p. 24).

Hence, regional councils are required to "take reasonable steps" to involve and work with iwi/ hapū and to reflect their values and interests in the management and decision-making

of "fresh water and freshwater ecosystems in the region" (New Zealand Government, 2014 updated 2017, p. 24).

4.6 Feeding information into the process

When informing and consulting, councils rely on scientific expertise to inform, explain and defend rules and plans. When involving and collaborating, the way science and expertise are used can change substantially. This is because the dynamics of a more interactive participatory process are different from the traditional planning process. Under these circumstances, there is a greater diversity of people who will assess the relevance, legitimacy and credibility of knowledge and uncertainties differently compared to council or planning staff (Cash et al., 2006; Duncan, 2016; Jasanoff, 1987; Memon et al., 2012).

For example, scientists will have to explain their data, research, models, model inputs and outputs and conclusions to audiences that are likely to have quite different views about what counts as evidence (including forms of knowledge beyond quantifiable science), what is acceptable to extrapolate and model, and the implications for any decision-making that has to take account of uncertainties and unavoidable data gaps (Berkett et al., 2018; Duncan, 2014; Fenemor, 2014). It is often assumed this is merely a science communication problem (Irwin and Wynne, 1996). While good science communicators are essential, these issues are not just about communication or a lack of understanding of the science. They arise from fundamentally different ways of knowing (e.g. farmers want to see 'real' data whereas scientists may rely on models) (Duncan, 2016).

4.7 Arguments for extending public participation

It is important to recognise that participatory processes that are more interactive represent a significant shift in how policy and planning have traditionally been done. They will require investment in building different skills for staff, finding skills outside the council (e.g. a good facilitator), and the development of credible and usable information so that forum members can understand the issues and their implications. This could require people with a different set of skills to write a plan (e.g. a science communicator). There are also the costs of regularly bringing people together face to face, and demands on the council's communications team will ramp up as information flows become key to building legitimacy and ensuring transparency.

Issues also arise for staff who have learned how to operate and work in New Zealand under the decide-inform-defend approach to planning. The personal toll on staff can be significant and is often unrecognised (see Henley, 2014, and Fenemor, 2014, for experiences in Canterbury). Interactive participatory processes can be very challenging for all involved, especially when conflicts arise (and many will) and decisions need to be made. It requires considerable fortitude, leadership, commitment and patience from within the council and within a participatory group.

Nevertheless, arguments in favour of extending public participation to involve and collaborate are set out below.

- It can allow complex issues to be responded to strategically and collectively (Margerum, 2011).
- If the process delivers transparent decision-making it can foster trust between group members and the wider community (Harding et al, 2009, citing Putnam, 1993; Margerum, 2011).
- If "creative, and durable agreements" are generated it could be that they will be more easily implemented, given the creation of new networks, community capacity-building, buy-in and conflict resolution that can occur within a collaborative process (Cradock-Henry et al., 2017; Frame et al., 2004; Innes and Booher, 2010; Ministry for the Environment, 2017b, p. 11).
- It brings people in early, rather than after issues have been identified or decisions have been made (Harding et al., 2009).
- It is expected to increase community engagement and awareness of issues, and to produce outputs that reflect community values (Ministry for the Environment, 2017b).
- It can help resolve conflict and decrease the likelihood of issues ending up in the courts because of the relationships built during a collaborative process, with benefits seen in reduced litigation costs and time delays once decisions have been made (Ministry for the Environment, 2017b).
- Bringing people together from different interest groups and walks of life who hold different values and perspectives can build understanding, empathy and trust (Floress et al., 2011).
- The processes can facilitate learning (Allen et al., 2011).
- Accessing indigenous, local, practice-based and historical knowledge can contribute to a deeper understanding of the issues, which helps formulate responses (Folke et al., 2005 Van Kerkhoff and Lebel, 2015; Wesselink et al., 2011).
- It helps informed decisions to be made in the face of high levels of uncertainty (Allen et al., 2011; Folke et al., 2010).
- It provides spaces for dialogue and deliberation that are needed for people to feel that their concerns have been heard (Allen et al., 2011; Frame et al., 2004; Harding et al., 2009).

4.8 Obstacles to the success of participatory processes

Drawing on research done on collaborative planning in resource use management in Canada, Frame et al. (2004, p. 59) list factors they have identified that can inhibit the effectiveness of participatory processes:

- fundamental ideological or value differences between stakeholders
- institutional culture resistant to change
- lack of flexibility in agency procedures
- a legitimate convenor cannot be found
- lack of trust among stakeholders
- significant power imbalances among stakeholders
- negotiation skill imbalances among participants

- affected interests choose not to participate or are not organised to participate
- stakeholders are poorly organized or cannot clearly define their interests
- significant time and financial resources are required, restricting access
- participant burnout
- transfer of personnel, reducing continuity
- key stakeholders not motivated to reach agreement because … [objectives can be achieved through other means, for example, court appeals]
- weak accountability of stakeholders to their constituents and to the public.

(quoted from Frame et al., 2004, p. 59)

4.9 Participatory processes in New Zealand

Many regional councils across New Zealand have been extending public participation beyond inform and consult to meet their obligations under the National Policy Statement for Freshwater Management to address freshwater management issues (see Berkett et al 2018; Cradock-Henry et al., 2017; Memon et al., 2012 O'Brien, 2012; Sinner et al., 2015). The Ministry for the Environment (2015) has developed a range of resources to help regional councils undertake participatory processes. It uses the term 'collaboration', and defines a collaborative process as follows:

> *Where a range of stakeholders are involved in developing planning solutions rather than being consulted on established proposals. Councils partner with their communities to share knowledge and work together to generate a better understanding of the issues and differing views; they then develop, evaluate and implement solutions to those challenges together.* (Ministry for the Environment, 2017b, p. 6)

Looking again at involve and collaborate in Figure 1, and comparing definitions, it can be seen that 'involving' and 'collaborating' are similar. Although Environment Southland is not anticipating using a statutory collaborative planning process, nor undertaking a fully collaborative process (as in Figure 1), it is embarking on a participatory process for freshwater decisions and basing discussions on collaborative principles. On this basis, the Ministry for the Environment's collaboration resources will be useful for Environment Southland as it proceeds with the design and development of its participatory process (see http://www.mfe.govt.nz/rma/resources/about-collaboration). Manaaki Whenua – Landcare Research has undertaken research on collaborative processes, which will also be of interest and can be accessed here: http://www.landcareresearch.co.nz/science/portfolios/enhancing-policy-effectiveness/vmo/ planning-and-decision-making

4.10 Collaborative principles

The Ministry for the Environment (2017a) has identified the following collaborative principles for guiding a participatory process: representativeness, accountability, inclusiveness, deliberation, impartiality, empowered, transparent and lawful (see Appendix

1 for more detail). As Environment Southland is seeking to involve the community based on collaborative principles the following natural resource management governance principles could also be useful to guide the forum's participatory process.

Principle 1. Legitimacy

Legitimacy refers to (i) the validity of an organization's authority to govern that may be (a) conferred by democratic statute; or (b) earned through the acceptance by stakeholders of an organization's authority to govern; and (ii) the integrity and commitment with which this authority is exercised.

Principle 2. Transparency

Transparency refers to (i) the visibility of decision-making processes; (ii) the clarity with which the reasoning behind decisions is communicated; and (iii) the ready availability of relevant information about the governance and performance of an organization.

Principle 3. Accountability

Accountability refers to (i) the allocation and acceptance of responsibility for decisions and actions; and (ii) the demonstration of how these responsibilities have been met.

Principle 4. Inclusiveness

Inclusiveness refers to the opportunities available for stakeholders to participate in and influence decision-making processes.

Principle 5. Fairness

Fairness refers to (i) the respect and attention given to stakeholders' views; (ii) consistency and absence of personal bias in decision-making; and (iii) the consideration given to distribution of costs and benefits of decisions.

Principle 6. Integration

Integration refers to (i) the connection between, and coordination across, different levels of government; (ii) the connection between, and coordination across, organizations at the same level of governance; and (iii) the alignment of visions and strategic directions across governance organizations.

Principle 7. Capability

Capability refers to the systems, resources, skills, leadership, knowledge and experience that enable organizations, and the individuals who direct, manage and work for them, to deliver on their responsibilities.

Principle 8. Adaptability

> Adaptability refers to (i) the incorporation of new knowledge and learning into decision-making and implementation; (ii) anticipation and management of threats, opportunities and associated risks; and (iii) systematic self-reflection on organizational performance
>
> (Quoted from Lockwood et al., 2010 pp. 992−996).

Principles such as these can work together and be mutually supportive. However, there can be tensions. For example, involving everyone would rank high for inclusiveness but could make the process unworkable for resolving the issues and so would rank low for legitimacy (Boedeltje and Cornips, 2004). Furthermore, transparency might be at odds with accountability if the public disclosure of information puts participants at risk of undue criticism within their community.

4.11 Turning collaborative outputs into successful outcomes

There is considerable debate in the international and New Zealand literature about the merits of participatory processes. While there is agreement that there are benefits (for example, in terms of building relationships and learning within a participatory group), the extent to which the more interactive modes of public participation can live up to the many optimistic claims is unclear (Cradock-Henry et al., 2017; Memon et al., 2012 Nissen, 2014; O'Brien, 2012; Sinner et al., 2015). It is for this reason the literature contains a lot of guidance and evaluation research to help practitioners improve how processes are conducted (Chilvers and Kearnes, 2016).

A key issue is whether collaborative participatory processes can deliver the promised environmental outcomes (Biddle and Koontz, 2014; Brower, 2016; Koebele, 2015; Koontz and Thomas, 2006; Koontz, 2013; Newig et al., 2018). Prutsch et al. (2018) argue that failure to translate collective decisions into outcomes arises from a lack political commitment and changes in the institutional settings needed to implement what comes out of a participatory process. With everyone's attention directed towards aligning divergent values and interests, decision-makers do not usually focus on changing the institutional frameworks that are often contributing to the problems they are trying to solve.

This lack of a holistic view (i.e. a perspective that includes the institutional dimensions of water use) can mean that the good will established for decisions and implementation within a process can be lost once a community strategy leaves the confines of the collaborative group (Prutsch et al., 2018). These concerns highlight the importance of an integrated approach to water management (Bowden et al., 2004; Fenemor et al 2011; Duncan, 2014) and tackling implementation processes and practices from the beginning of any participatory process. Indeed, Prutsch et al. (2018, p. 283) call for extending participation into new forms of "participatory implementation". On this basis, rules in regional plans are recognised as an essential but small part of a much bigger and long-term picture, where the longer-term picture strengthens community participation and involvement well beyond the life of any initial participatory process.

4.12 Summary

There are many arguments in favour of establishing a participatory process that adopts a more interactive mode of decision-making to address water management issues. However, it needs to be recognised that this way of involving the community is fundamentally different to what regional councils, their staff and decision-makers are accustomed to. Where and when participatory processes take place, what issues are at stake, how decisions of the past influence what can be done today and in the future, and who is involved and how create too many variables to find a 'right way' to do participation. There is a wealth of knowledge and experience sitting with people that have either facilitated or been involved in the design/development of processes or have been a member of a freshwater participatory process. The use of principles is likely to be a useful approach to assist in the design of any process, but also how to adapt processes as they progress.

Environment Southland has chosen to involve the community in a participatory process through a regional forum based on collaborative principles. The proposed forum would be an advisory committee to provide opportunities for interaction, dialogue and deliberation, and would sit within the bounds of 'involve and collaborate' in Figure 1. The decision on exactly where the process sits between 'involve and collaborate' will be determined as the process is formalised. Decisions will need to be made about how representation is to be structured, who will participate, the mandate of the group, what decisions the group will be allowed to make, what mode of decision-making is required (e.g. majority or unanimous), how technical information is fed into the process, and how the broader community beyond the participatory group is involved. The following snapshots from Northland Regional Council, Tasman District Council, Waikato Regional Council, Hawke's Bay Regional Council and Bay of Plenty Regional Council illustrate what these councils have done in establishing and conducting their participatory processes.

How participation is approached and the reason for doing it are important to consider at the outset. The planning process is often seen as an end in itself rather than a means to an end. Rules and regulations are like the bones of a skeleton: they are essential and provide structure to a body, but far more is required to bring it to life. A number of councils are addressing this issue by focusing on implementation at the outset and through their planning processes. This means a focus on non-regulatory actions alongside regulatory actions, and going out into the community (rather than relying on them coming in) to address water issues.

5 Snapshots of New Zealand Participatory Processes

The following examples from the Northland, Bay of Plenty, Hawke's Bay, Tasman, and Waikato regions illustrate a range of experiences with participatory processes. Aspects to note are the levels of involvement of the participatory group in planning decisions, how processes have been designed to represent the community, how participants have been recruited, the type of decision-making, and how meetings have proceeded.

We have drawn on the governance principles, the literature review and our knowledge and experience from ongoing research to identify the various aspects of these processes, and to comment on the strengths of and challenges for each process.

5.1 Northland Regional Council

What's been done?

Northland Regional Council began its regional plan review process in 2014. In response to obligations under the National Policy Statement for Freshwater Management, it established the Waiora Northland collaborative processes concurrently in five catchments: Mangere, Waitangi, Doubtless Bay, Whangārei and Poutō. Some catchment groups were already in place (e.g. Whangārei, Doubtless Bay and Mangere).

The Council identified its 'priority' catchments based on conservation values, identifiable issues and where there was an opportunity to make progress (e.g. an existing group). Catchment groups are a sub-committee of the Council's Environmental Management Committee under the Local Government Act 2002. See the Council's website for an overview and access to the various phases of the process: https://www.nrc.govt.nz/Your-Council/Council-Projects/Waiora-Northland-Water/.

Who was involved and how?

Taking the Mangere catchment terms of reference as an example, the group included representatives of tangata whenua, dairy, forestry, community residents, the Whangarei District Council, as well as a regional councillor. Documents show the group subsequently sought more representation from the horticultural sector and the community. By January 2015 the group was meeting and workshopping with 19 people who had varying degrees of presence and absence. See: https://www.nrc.govt.nz/media/10579/waioranorthlandwatermangerecgroundupandyearaheadjanuary2015.pdf

How did they go about it?

While Council staff worked with catchment groups to develop catchment-specific recommendations, region-wide water management provisions were developed as part of the new regional plan. The regional plan allows for specific provisions to be included in catchment-specific sections of the plan, with regulatory and non-regulatory actions. Catchment-specific provisions will apply in addition to or instead of those in the new regional plan (https://www.nrc.govt.nz).

There was a combination of monthly meetings and workshop meetings held in the evenings in each catchment, with dinner provided. Generally, the workshops were not held in public, and in meetings members of the public were not allowed to contribute.

Strengths

- Stakeholder groups have constituents that a representative can communicate with and draw support from.
- Having iwi, hapū and rūnanga involved in some way can foster broad support and access to multiple sources of local knowledge and information about issues.
- Having a representative from the district council ensures there is coordination and communication between the two levels of local government.
- Consensus decision-making among a diverse group representing a range of interests and values facilitates deliberation to achieve a blend of perspectives in outcomes.
- The Mangere catchment group, for example, recognised there was insufficient representation and were able to seek further representation on the group.
- There were detailed terms of reference (Appendix 2): https://www.nrc.govt.nz/media/10585/termsofreferencemangerecatchment29october2013.pdf.
- Inclusion in the process of non-regulatory implementation means on-the-ground actions can be worked on while the plan goes through the statutory process.
- The Council's website and technical documents are well organised. See: https://www.nrc.govt.nz/your-council/council-projects/new-regional-plan/technical-reports/

Challenges

- Simultaneously running so many processes in different catchments with unique characteristics and issues creates an extremely high workload for staff in terms of organising meetings, preparing the information required by each group, and building multiple but distinct bodies of knowledge and planning work.
- When stakeholder groups are asked to represent the interests of their constituents, it can be difficult for them to take a broader view beyond their interests, even if the terms of reference ask them to do so.
- The extent to which stakeholder group representatives communicate with their constituents is difficult to know.

5.2 Bay of Plenty Regional Council

What's been done?

The Bay of Plenty Regional Council has adopted a two-tiered approach to its obligations under the National Policy Statement for Freshwater Management. The Council has created the Regional Water Advisory Panel to address issues relevant to all catchments (e.g. principles for reconciling economic development and environmental protection, and dealing with 'clawbacks').

Community Reference Groups focus on catchment issues and catchment-based actions across nine water management areas. To date, the Council has established three community reference groups in the Rangitāiki, Kaituna/Maketū and Pongakawa/Waitahanui catchments.

Who is involved and how?

The Regional Water Advisory Panel meets quarterly, or as needed, and consists of 16 key stakeholders representing tangata whenua, environmental, economic development, energy, forestry, agricultural and tourism interests. Some members are not based in the Bay of Plenty because they are involved with nationally based sector organisations. See: https://www.boprc.govt.nz/our-region-and-environment/water/freshwater-futures/freshwater-community-co-governance-and-technical-advisory-groups/regional-water-advisory-panel/

Community Reference Groups consist of representatives of community interests (e.g. tangata whenua, urban, rural, recreational, forestry) and local stakeholder interests (e.g. land trusts, local government, Department of Conservation, and Fish and Game). These members have been chosen through an advertised expression of interest process and chosen by a co-governance group and staff within the Council. A regional councillor is a member of each group. The groups appear to be large, with 20–25 members. Details can be found here: https://www.boprc.govt.nz/our-region-and-environment/water/freshwater-futures/freshwater-community-co-governance-and-technical-advisory-groups/regional-water-advisory-panel/

Consensus decisions are required of community reference groups, and the Council will take their recommendations into account in decision-making. It is not clear what guides decision-making in the Regional Water Advisory Panel or its reporting lines.

How did they go about it?

To allow free and frank discussion, community reference group meetings are not held in public. The following website is well organised and contains pre-community group workshop records, reports and presentations, and information on iwi engagement for the three groups.

https://www.boprc.govt.nz/our-region-and-environment/water/freshwater-futures/freshwater-community-co-governance-and-technical-advisory-groups/community-groups-and-iwi-engagement/community-group-workshop-records-reports-and-presentations-iwi-engagement/

The following workshops have been held in each water management area. Further workshops are still to be held.

Workshop 1: Introduction
Workshop 2: Current State of the Water Management Area
Workshop 3: Values Framework and Freshwater Management Units
Workshop 4: Community Views on Water in Rivers, Streams and Lakes
Workshop 5: In-river State and Use Values/ Modelling
Workshop 5b: In-river State and Use Values/ Modelling
Workshop 6: Catchment Modelling Scenarios and Use Values
Workshop 7: Mitigation Bundles and Information on Surface and Ground Water Quantity.

These materials show that group members are provided with usefully detailed briefing notes to prepare for workshops. The briefing notes explain issues, the meaning of terms, what needs to be addressed, and questions to consider before the meeting. The website also contains detailed minutes (including pictures) of the discussions that took place at the workshops, as well as the presentations given at the workshops.

To give a sense of time commitment involved, the first workshop of the Kaituna/Maketū community group was held in December 2015, with workshop 7 on April 2018. There has also been a considerable period of time between meetings. For example, Kaituna/Maketū and the Pongakawa/Waitahanui group had workshop 3 in April 2016, workshop 4 in November 2016, workshop 5 in May 2017, workshop 6 in September 2017, and workshop 7 in April 2018.

Unpaid members can receive an honorarium and all are eligible for reimbursement of travel costs. The facilitator is to act as a neutral support person for the group and is not a member of the Community Reference Group.

Strengths

- The regional group provides the Council with a broad range of perspectives and considerable depth of expertise to work through region-wide issues.
- Working regionally as well as across catchments avoids a one-size-fits-all approach.
- Pre-workshop briefing notes help members come to community reference group workshops prepared, which ensures meeting time is maximised for learning and deliberation.
- There are high levels of transparency, with provision of information from meetings.
- Differentiating community interests (e.g. rural, urban, recreation, environmental groups) acknowledges the diversity within a community.
- Detailed selection criteria for group members, along with expectations for conduct and participation, accompanying the selection criteria provide transparency (see Appendix 3) https://www.boprc.govt.nz/media/433956/final-community-group-selection-criteria-for-membership-word.docx

Challenges

- Getting the envisaged representation for community reference groups from such a diversity of community interests can be challenging.
- The Regional Water Advisory Panel is a large group of busy people that could be difficult to organise in one place at one time.
- It is not clear what guides Regional Water Advisory Panel decision-making and how its work feeds into Council decision-making.
- It can be difficult to facilitate discussion with large groups.
- Although the regional group is charged with addressing regional issues, it can be difficult to distinguish responsibilities between regional and catchment groups.
- Long delays between meetings can lose momentum for building a group purpose, learning, and building group relations.

5.3 Tasman District Council

What's been done?

Freshwater and Land Advisory Groups (FLAGs) were set up by the Tasman District Council in 2014. In an advisory capacity they are assisting the Council in developing regional plan changes for managing water allocation and water quality on the Waimea Plains and in Tākaka River catchments. Further information can be accessed here:

http://www.tasman.govt.nz/environment/water/water-resource-management/water-catchment-management/water-management-partnerships-flags/takaka-fresh-water-and-land-advisory-group/about-the-flag/what-is-the-flag/

Who was involved and how?

The Freshwater and Land Advisory Groups are community-based. Council held an advertised expression of interest process. According to the Terms of Reference, the ideal maximum number for a group was set at ten members with selection based on experience, interests and knowledge. In composing the group, a balance of interests was required as well as geographic spread, knowledge of water values and uses and people with the ability to work collaboratively and seek consensus.

The Terms of Reference state that members are not to represent a particular interest or group or promote the views or positions of interest or stakeholder groups. A councillor was appointed to each group, as well as an iwi representative.

As advisory groups to council, the Freshwater and Land Advisory Groups were asked to consider the issues and develop options for managing water quality and water allocation issues, and to prepare and recommend draft planning provisions (including policy and rules) for the Tasman Resource Management Plan.

How did they go about it?

From the minutes of the first Tākaka meeting, it was decided that meetings would not be open to the public to allow for focused discussion. Public forums would be provided as required. The minutes also state that input from stakeholder groups would be invited.

Consensus decision-making was required. In Tākaka, four meetings were held in 2014 (starting in July), 15 meetings in 2015, 14 in 2016, and six in 2017. Meeting agendas, minutes and information can be found here:

http://www.tasman.govt.nz/environment/water/water-resource-management/water-catchment-management/water-management-partnerships-flags/takaka-fresh-water-and-land-advisory-group/flag-outputs-and-supporting-information/takaka-flag-meeting-agendas-notes-and-presentations/?path=/EDMS/Public/Meetings/FreshwaterLandAdvisoryGroups/TakakaFLAG

The Tākaka group's terms of reference state that the groups were required to "provide oversight and leadership for communities in developing water body specific objectives and limits and allocation regimes to sustain these". The terms of reference also set out principles, one of which requires that members "[g]ive consideration and balance to all the interests in water in the region in debate and decision-making".

Strengths

- Consensus decision-making can instigate considerable deliberation and negotiation, especially when members are asked to make decisions that balance all interests. Given the high number of meetings over a long period of time, there was clearly considerable deliberation within the group.
- A small group is likely to more easily build rapport and trust over a long period of time.
- Detailed meeting notes are available from the Council website (although they contain statements about how they are to be interpreted because of concerns that some members may be targeted publicly for their views recorded verbatim in minutes).

Challenges

- Holding meetings that are not open to the public leaves the group and council open to criticism for a lack of transparency, which can diminish the legitimacy of the group and the advice it provides to the Council.
- Too much transparency (e.g. council minutes of stakeholder group meetings) can risk targeting and criticism of those involved, who are learning as they go along.
- The high number of meetings over a long period of time is a considerable time and resource commitment for community members. This level of commitment means a large proportion of the community would not be able to participate as a group member. It also risks having to re-address issues dealt with much earlier in the process.
- Community members do not have constituents to communicate back to or draw support from, which can isolate such members and put them at risk of criticism in everyday life.
- Given the amount of time this group worked together, it might have been difficult for them to communicate their learning and the trust they had developed within the group back to the community.

5.4 Waikato Regional Council

What's been done?

In March 2013 the Waikato Regional Council Healthy Rivers: Plan for Change / Wai Ora He Rautaki Whakapaipai Project published a Stakeholder Engagement Strategy, which set out the Council's plan to establish a community stakeholder group and a technical alliance to conduct a participatory process to review parts of the Waikato Regional Plan to address water quality issues in the Waipā and Waikato Rivers. The Stakeholder Engagement Strategy can be found here:

https://www.waikatoregion.govt.nz/assets/PageFiles/26815/2154945%20Stakeholder%20Engagement%20Strategy%20March%2028%202013.pdf

Community Stakeholder Group workshops began in March 2014. Plan change recommendations had been passed by the Healthy Rivers / Wai Ora Co-governance Committee (consisting of councillors and iwi of the Waikato and Waipā Rivers)[1] and full Council by September 2016. The community stakeholder group plan change passed Council by eight votes to seven.

A technical alliance was also established. It included specialists in environmental science, mātauranga Māori, farm systems, economics and social science. Drawing on the Stakeholder Engagement Strategy, the purpose of the technical alliance was to provide "expert advice and information to decision-makers". A summary and overview of the technical work can be found here: https://www.waikatoregion.govt.nz/assets/PageFiles/29739/Summary%20of%20technical%20projects%20Aug%202015.pdf

Technical reports were organised and presented for easy access, and can be seen here: https://www.waikatoregion.govt.nz/council/policy-and-plans/plans-under-development/healthy-rivers-plan-for-change/technical-alliance/technical-alliance-documents/

The unique features of this process are:

- stakeholder groups represented their own interests
- the community stakeholder group wrote the plan change, not Council staff (although assisted by them)
- the Council did not have a seat at the community stakeholder group table
- community stakeholder group decisions were essentially voted in or out
- the community stakeholder group output – a plan change – was voted on by a co-governance group of councillors and iwi.

Who was involved and how?

The community stakeholder group consisted of 24 people representing stakeholder groups, community representatives and iwi. Community stakeholder group meetings had an independent chairperson. The Council was not a member of the group. The names of those involved can be see here: https://www.waikatoregion.govt.nz/council/policy-and-plans/plans-under-development/ healthy-rivers-plan-for-change/collaborative-stakeholder-group/

[1] The Healthy Rivers: Plan for Change / Wai Ora: He Rautaki Whakapaipai Project contributes to giving effect to the Waikato Regional Policy Statement, which must give effect to the Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River contained in the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Ngati Tuwharetao, Raukawa and Te Arawa River Iwi Waikato River Act 2010, and Nga Wai o Maniapoto (Waipa River) Act 2012.

The Stakeholder Engagement Strategy recognised the considerable diversity of the communities in the two catchments, with the terms of reference identifying the following stakeholder groups:

- tangata whenua (trusts, farming groups, community committees)
- primary industry (industry organisations, farmers, foresters, horticulturalists)
- other rural industry and primary industry support (fertiliser industry, banks, insurance industry, quarries, rural supply companies)
- local government (e.g. territorial authorities, economic development groups, community boards)
- non-government organisations (environmental groups)
- water body users (energy, municipal, commercial, recreational)
- other industry and business organisations (tourism industry)
- community (ratepayers' and residents' associations, general public).

The selection criteria were developed from draft terms of reference prepared by the Council for the community stakeholder group, a stakeholder meeting, and then a project partners (i.e. Council and iwi) meeting in 2013. Project partners "maintained that candidates who 'ticked all the boxes' of the criteria should be prioritised. For example, a candidate who understands farming, forestry and environmental stewardship, and also brings complementary skills or perspectives to the group, should be considered more favourably than a candidate without the same breadth of knowledge". Details can be found here: https://www.waikatoregion.govt.nz/council/policy-and-plans/plans-under-development/healthy-rivers-plan-for-change/collaborative-stakeholder-group/

Selection criteria were:

- a balance across social, cultural, economic and environmental wellbeing
- a demographic and geographical balance
- candidates with the right skills (communicative, consider multiple views, solutions oriented, synthesise technical information)
- candidates with networks, influence and mandate.

How did they go about it?

The community stakeholder group completed its work in July 2016. Thirty official six-weekly workshops were held over two full days at Lake Karāpiro. Given the venue, the meetings were not open to the public. The information available for each workshop is set out here:

https://www.waikatoregion.govt.nz/council/policy-and-plans/plans-under-development/healthy-rivers-plan-for-change/collaborative-stakeholder-group/collaborative-stakeholder-group-workshops/

Members were provided with lunch, dinner and accommodation and could be reimbursed for expenses and compensated for their services if these costs were not being paid by another organisation. The honorarium policy can be found here:

https://www.waikatoregion.govt.nz/assets/PageFiles/28126/EWDOCS_n2828830_v9_Honorarium_Policy_for_the_CSG.pdf

The community stakeholder group terms of reference are comprehensive. In addition to provisions seen in other processes, they set out reporting links, evaluation and feedback loops, and guidance on how unanimous agreement will work (with a flow chart). For example, expected responses to proposals put to the group could be: I agree; I stand aside (which means I don't agree but understand and can live with the proposal); or I disagree with the proposal. The terms of reference can be found here: https://www.waikatoregion.govt.nz/assets/PageFiles/28126/CSG%20Terms%20of%20Reference.pdf

A review of the Waikato process, prepared for the Ministry for the Environment, provides useful insights on interactions between staff and the community stakeholder group and the many interfaces that open up when a council embarks on an interactive participatory process. See:

http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/collaboration-in-the-waikato-catchment.pdf

The Council also commissioned a review of the process (from Kinnect Group). Drawing on ongoing surveys and interviews conducted between 2014 and 2016, it assesses the quality of the process from the perspective of community stakeholder group members, Council staff and management, the technical alliance, iwi staff and managers, and the co-governors of the Healthy Rivers / Wai Ora Project.

Strengths

- There were comprehensive terms of reference, including reporting/links information and the unanimous decision-making protocol.
- The community stakeholder group developed policy selection criteria to help decision-making (see Appendix 4).
- Remuneration was available for non-salaried participants.
- Community outreach obtained a lot of information through surveys and other interactions, which was fed back to the community stakeholder group.
- Considerable resources were dedicated to outreach work and ongoing evaluation of the process.

Challenges

- Discord between elected councillors showed in the final close vote.
- Having the community stakeholder group rather than the Council develop planning provisions raises issues for planners and compliance staff. For example, the Waikato Regional Council has written a 100-page submission on the plan change raising concerns about its enforceability.
- While not characterised as voting, the unanimous decision-making protocol would create a voting atmosphere, which could make the process highly political, with

members spending time seeking support to accept or stand aside for particular proposals.

- Unanimous agreement was not reached on all aspects of the plan change.
- The Kinnect Group review reports that staff and management were working far beyond normal working hours and expectations, with some staff experiencing high personal costs (p. 36). This report also identified that some staff were not convinced by the merits of collaboration.

5.5 Hawke's Bay Regional Council

What's been done?

Defined as a "community-based" approach to decision-making, the Hawke's Bay Regional Council created a collaborative stakeholder group in 2012. The group's terms of reference were updated in 2014, and again in 2016. While a range of water quantity issues in the Ngāruroro and Karamū catchments instigated the creation of the group, helping council meet its obligations under the NPS-FM was also a purpose of the group. See: https://www.hbrc.govt.nz/hawkes-bay/projects/tank/about-tank/

The group was convened to provide consensus recommendations on objectives, policies, rules and other approaches to the Council via its Regional Planning Committee for the management of land and water in the Greater Heretaunga and Ahuriri catchment areas. These areas comprise the catchments as well as estuarine and coastal marine areas of the Tūtaekuri River, Ahuriri Estuary, Ngāruroro River and Karamū River (i.e. TANK). The last TANK meeting was its 42nd and was held in July 2018. Newsletters and meeting information can be found here: https://www.hbrc.govt.nz/hawkes-bay/projects/tank/resources/

Who was involved and how?

The TANK group is a stakeholder group. It comprises around 30 members and represents a range of interests and sectors (e.g. tangata whenua, irrigators, farmers, dairy, pip fruit, Forest & Bird, Fish and Game, local district health board, district and city councils, wine and vegetable growers). Details can be found here: https://www.hbrc.govt.nz/hawkes-bay/projects/tank/whos-in-tank/#tank

The terms of reference state that members were nominated by their respective sector or group to be their representative. The expectation was that members would be feeding information from their wider networks into the group, and that the views expressed by members would be representative and endorsed by the group they represented.

The terms of reference also state that the Regional Planning Committee has "agreed to have particular regard to any TANK consensus outcome, if one emerges", with the regional council having "given a good faith undertaking to implement the recommendations of the TANK Group" (p. 3). The terms of reference note that any recommendations have to be consistent with higher-level documents (e.g. the Resource Management Act 1991) as well as national and regional policy statements.

The Council's July 2018 newsletter explains that the draft plan change developed by the TANK group had been completed but did not have consensus on all aspects.

How did they go about it?

The group had an independent facilitator. There were also broader public relations activities, including the monthly *THINK TANK* newsletters, which started in July 2016:

https://www.hbrc.govt.nz/assets/Document-Library/TANK/Time-for-the-Heavy-Lifting-web.pdf

In October 2017 the group released The TANK Plan. This eight-page, high-level and professionally produced document identifies what and where the region's water issues are, as well as giving an overview of issues, proposed fixes, and options for specific locations: https://www.hbrc.govt.nz/assets/Document-Library/TANK/TANK-booklet2017.pdf

Five working groups were established. These groups address the following topics: community engagement, stormwater, wetlands/lakes, mana whenua, and economic assessment. The working groups consisted of TANK members as well as others outside TANK.

The terms of reference prescribe how consensus decision-making will work and how disagreement will be dealt with. For example, a consensus decision commits the group member to consensus in subsequent public discussion and planning processes.

A meeting allowance was available for non-paid members.

According to the terms of reference, members of the Regional Planning Committee (regional councillors and tangata whenua representatives) were not members of TANK, although they could attend meetings as observers and had speaking rights. The terms of reference state: "For clarity, members of the Regional Planning Committee are not to take part in TANK Group decision-making to ensure a clear separation, both actual and perceived, between statutory governance and the advisory role of the TANK group" (p. 5). See: https://www.hbrc.govt.nz/assets/Document-Library/Projects/TANK/2016-TANK-Terms-of-Reference.pdf

TANK held all-day meetings, often at the iwi tuawhenua.

Strengths

- Detailed terms of reference were developed, setting out expectations, roles, requirements, etc., as well as information on the planning framework, a proposed meeting schedule and protocols.
- The *THINK TANK* newsletters and The TANK Plan were useful ways of keeping the broader community informed of what the issues are, as well as the TANK work, plans and progress.
- An implementation plan has been developed with the TANK group.
- An independent facilitator was used.
- A meeting allowance was available for non-paid members.

Challenges

- Thirty-plus members is a large group to manage to achieve consensus decisions.
- Four years is a considerable period of time, which can result in a high turnover of group members and a loss of collective and cumulative learning.
- Consensus decision-making had its limits: agreement was not reached on all aspects of the proposed plan change.
- While many interests and sectors were represented, it is not clear who was representing the broader community with no particular interest in freshwater, future generations, youth, recreation or tourism.

5.6 Summary

In summary, the snapshots show the different types of participation summarised Figure 1. The Bay of Plenty Regional Council is 'involving' its reference groups in decision-making in an advisory capacity. Tasman and Northland have created 'collaborative' groups. In the Waikato the stakeholder group wrote the plan change, which would be at the 'empower' end of the public participation spectrum. However, in each case, councillors (with a co-governance group in the Waikato) have the final say on whether and which of a group's outputs (whether recommendations or a draft plan change) can proceed to the statutory process.

A range of approaches has been adopted for selecting participants, with a range of successes and challenges (see Table 1). While the literature suggests that not allowing a participatory group to have the final say can be a disincentive to commit the significant resources required to contribute, it is clear that across New Zealand, community members and stakeholder group representatives are willing to be involved, even though the commitment is prolonged and significant and the issues complex and contested.

Table 1: Summary of key aspects of processes in the regions of Northland, Bay of Plenty, Tasman, Hawke's Bay and Waikato

Council	Participants	How participants are chosen	Type of decision-making	Meetings	Mandate/power of group	Access to group meetings	Main strengths	Main challenges
Northland Small council, dispersed population, resources limited	Tangata whenua, stakeholder groups including community members, district and regional councillors Group size: c. 19	• Advertised expression of interest • Process for sector groups to choose representative	Consensus	• 3–4 years • 2013/14 to 2017	Involved as advisory group and provided recommendations to council	• Group meetings open to public • Workshops closed	• Catchment groups have developed regulatory and non-regulatory actions • Detailed terms of reference • Broad inclusion of tangata whenua (i.e. not only iwi)	• Running 5 groups concurrently is a high workload for all involved • Unclear how stakeholder groups communicated back to constituents
Bay of Plenty Medium-sized council, high population, diverse agricultural industry	Tangata whenua, stakeholder groups including community members identified as interests (e.g. rural, urban, recreational, forestry). Regional group size: 16 Community group size: 20–25	• Advertised expression of interest	Consensus	• Started in 2015 and ongoing • 8 workshops to date in each water management area	Involved as advisory group and providing recommendations to council	• Group meetings closed to public	• Council clear about 'involve' role of group • Regional group as well as catchment groups • Community broadly defined in terms of multiple interests • Pre-workshop briefing notes	• Running 3 groups concurrently is a high staff workload • Can be difficult to distinguish between regional and catchment responsibilities • Large regional group of very busy people • Unclear how regional group decisions were made or contributed to process • Long periods of time between meetings
Tasman Small unitary authority, dispersed population, resources limited	Tangata whenua, community-based membership with regional councillor Group size: 12	• Advertised expression of interest	Consensus	• Started in 2014 and ongoing • 31 meetings to date	Involved as advisory group and provided recommendations to council	• Group meetings closed to public	• Small group • High levels of commitment from members • High level of trust within group	• Prolonged process over several years • Controversial water issues in region have caused community division, with group members targeted
Waikato Large council, high population, considerable resources available, tangata whenua commitments	Tangata whenua, stakeholder groups and community representatives Group size: 24	• Advertised expression of interest	Consensus with unanimous decision-making protocol	• 2.5 years • March 2014 to September 2016 • 30 meetings	Involved as advisory group but drafted regional plan change for approval by co-governance group and council	• Group meetings and workshops closed to public • Held at same venue	• Detailed terms of reference • Unanimous agreement on many aspects • Policy selection criteria • Strong iwi relationship	• Some areas of disagreement • Councillors not fully supportive (8:7 vote) • Council concerned about enforceability of plan • Inordinately high staff workload • Voting
Hawke's Bay Medium-sized council, high population, diverse agricultural industry	Tangata whenua and stakeholder groups Group size: c. 30	• Chosen by council	Consensus	• 2012 to July 2018 • 42 meetings Meeting 22 was on 9 August 2016	Involved as advisory group but drafted regional plan change for approval by council	• Group meetings open to the public and held in different venues, including iwi tuawhenua	• Detailed terms of reference which were updated as process evolved • Agreement on many aspects of plan change • Independent facilitator • Attention on implementation	• Prolonged process • Some areas of disagreement • A large group of stakeholders can be difficult to facilitate and come to agreement • Representation beyond stakeholder groups not involved

6 Observations and Options

The following observations and options draw together our knowledge and experience based on information gathered for the snapshots above, as well as from Greater Wellington Regional Council, Canterbury Regional Council, Gisborne Regional Council and Horizons Regional Council, and the Motueka Integrated Catchment Management research programme.

These observations and options have been structured using the governance principles set out earlier and include useful resources contained in the appendices for further reference.

Observations	Options
Legitimacy	
• Councils have adopted a range of structures to extend decision-making beyond 'inform and consult' (e.g. community members, stakeholder groups or a combination of both). • Councils are drawing on a range of community values and interests within their participatory groups. • The criteria for choosing group members are similar (e.g. skills, geographical representation and ability to work collaboratively), with the Bay of Plenty Regional Council calling for its community group to have representation from a wide range of community interests (e.g. youth, food gatherers). • A single person can wear multiple hats to meet the criteria set by the council. • Involving and working with tangata whenua is not only required by legislation, but their involvement can enhance processes by contributing knowledge, experience and local perspectives, and by taking a long-term view. Their involvement can also build the foundations for partnerships for the implementation phase. • A focus on representation from interests considered to be *directly* affected by	• Select people with a broad spectrum of values and interests that go beyond vested interests in maintaining the *status quo*. • The forum could be composed of people representing locally perceived issues or the values identified in the National Policy Statement for Freshwater Management. For example, the two compulsory national values are human health and ecosystem health, with a range of other national values. • While there is merit in including people with existing connections, skills and/or experience, if things are to change, new thinking and creativity are required, which could be found through engaging with young people, emerging leaders and a culturally diverse mix of people (e.g. including immigrants). This move could build legitimacy with some parts of the community, but could diminish it with stakeholder groups with interests at stake. • Concerns and aspirations of future generations can be accessed by involving young people. • Interests and conflicts of interest can be disclosed at the beginning of the participatory process. In Canterbury, conflicts of interest of zone committee

Observations	Options
decisions can overlook ordinary citizens or citizen groups. • Composing a group with a high number of participants with interests at stake could result in decisions that retain the *status quo* or recommend changes that are difficult to monitor or verify. Under these circumstances, group decisions can struggle to attain and/or retain legitimacy with groups other than those that benefit, which can diminish the legitimacy of the group and the council, and the plan changes that follow. • While community group members might be asked to work to further all community interests, any community member is likely to have multiple interests.	members are recorded in meeting minutes. Environment Canterbury has declarations from the Office of the Auditor General removing zone committee members from the conflict of interest requirements of the Local Government Act 2002.

Resources

- Appendix 3: Bay of Plenty Regional Council Community Reference Group selection criteria
- Appendix 5: Policy brief setting up a collaborative process: stakeholder participation (Cradock-Henry et al., 2013)
- Appendix 6: Policy brief collaborative processes and the roles of the council (Berkett et al., 2013).
- Appendix 7: Policy brief Māori involvement in collaborative freshwater planning – insights from Hawke's Bay (Sinner and Harmsworth, 2015

Accountability	
• Recruitment of group members has been occurring predominantly through expression of interest processes. This can involve nominations of self or others and does not preclude shoulder-tapping.	• Develop criteria for selection and a selection process well in advance of the notification of expressions of interest. • To ensure the group consists of committed people who meet the council's selection criteria, a multi-staged selection process could be used, which could involve meeting with potential members and seeing how they interact with other potential members. • Recognise that iwi/hapū have their own processes to decide who should be involved. • Ensuring there are enthusiastic leaders

Observations	Options
	within a council to support the forum can help champion the process, the group and process outcomes.
• Terms of reference establish the foundations for a group, how it proceeds, and how disputes are to be resolved. The snapshots have shown there is a wide range of topics and issues that can be included.	• The council can provide guidance on the terms of reference, or the forum could create its own. While the latter could be time intensive, having the forum produce them or at least contribute to them can be useful for generating buy-in and commitment, and for ensuring everyone is clear on what is required and how the process is expected to proceed.

Resources

- Appendix 3: Bay of Plenty Regional Council Community Reference Group selection criteria
- See weblinks in snapshots
- See Appendix 2 for a list of topics that can be included in terms of reference, as well as examples from Hawke's Bay Regional Council and Northland Regional Council

Transparency	
• All councils are making information from meetings available on their websites. How this is done varies (e.g. PowerPoints, minutes, anonymised minutes, notes including images). • Meetings are predominantly closed to the public to allow free and frank discussion. • When issues have been contentious, meeting minutes that specify who said what have put group members at risk of criticism within their local community (see Tasman District Council).	• Holding meetings in public ensures transparency, but these can be combined with closed meetings or having parts of meetings closed, which can help group members talk freely and frankly among themselves (e.g. two hours for members only for a workshop perhaps, and four hours for a public meeting). • Decisions will be needed on how information from meetings will be made available to those who cannot attend meetings. It is important to note that the principle of transparency is achieved not only through the visibility of decision-making, but also by communicating the reasoning behind decisions. Hence, verbatim records of meetings might not be the best way to achieve transparency, especially as forum members learn and potentially change positions previously recorded as they move through the process.

Observations	Options
	• At public meetings there could be opportunities for the public to contribute if questions are directed to the chairperson. While this approach might divert attention to issues beyond the forum's mandate, it can contribute to identifying important issues and the transparency of the process. • Undertake activities to bring the community along with the council and the group.

Resources

- See weblinks in the snapshots section of this report for examples of meeting minutes, etc.

Inclusiveness	
• A reason for including stakeholder groups is that they have communication lines back to their groups. While this requirement can be included in terms of reference, if it is done, how it is done, or if it is done effectively appears to be a knowledge gap. This is an area that groups and processes struggle with. • Requiring community or stakeholder group members to take on the responsibility of seeking endorsement from their wider constituency for decisions can be daunting and can place members at risk of criticism in their communities. It can also be challenging when there are divisions within the constituency of a group. • Excluding stakeholder groups can mean community members are subjected to private lobbying at public meetings.	• It can be helpful for stakeholder group constituents to choose their representative (e.g. industry groups ran a process to do this in Northland) and discuss how they will communicate during the process. • A participatory group is only one part of involving or collaborating with the community. This means communication lines from forum members to the broader community and/or stakeholder group supporters/constituents cannot be relied on to bring the broader community with the council. Therefore, while empowering the forum to communicate with the community as far as possible, the council will also need to undertake conversations and activities with the broader community to ensure people are brought along with the forum and the council. • In addition to web-based communications, pathways and venues can be created by the council for a range of community contributions and activities (e.g. a drop box at the council for ideas and concerns, drop-in sessions and information gathering in schools,

Observations	Options
	community meetings, and places where community members go (e.g. a library, a football game). • Interactive engagement from the council needs to be regular and not left until key decisions have been made or need to be made. • Regular engagement helps the broader community (i.e. those not sitting around the forum table) to understand the issues the forum is dealing with and how their work is proceeding.
• A diversity of interests can be inadequately represented due to a lack of funding or payment for someone to contribute their time (e.g. health boards, community groups).	• Power imbalances can be reduced by providing funding to unpaid, under-resourced or underprivileged groups.
• Stakeholder groups can feel compromised if the process in which they are involved is seen to be constrained by pre-defined decisions or a political mandate that does not accommodate their values and interests. For example, some environmental groups disengaged from the Land and Water Forum because they saw themselves as legitimating a process that did not align with their mandate. • Having members of a participatory group submit against a plan they contributed to developing can weaken the case for the plan change at the hearings stage.	• Ensuring a group is composed of diverse interests and capabilities, building trust within a group, and ensuring the process is legitimate transparent, accountable, inclusive, fair, integrated, capable and adaptable can help overcome these issues. • An independent facilitator can build legitimacy for the council and the group by redressing power imbalances that might be perceived if the council is seen as running the group through a facilitator who is perceived to be pursuing a predetermined agenda or outcome.
• With limited decision-making power given to a participatory group (e.g. involve rather than collaborate), stakeholder groups might see their intervention at the plan submission and appeals stage as more cost effective than continued involvement. This might arise from their lack of resources (which is usually the case for environmental or recreation groups) or interests at stake (which is often the case for industry	• Hawke's Bay Regional Council addresses this issue in its Terms of Reference and expects a consensus decision to be endorsed publicly and into the planning process. • The council would need to go down the statutory collaborative process route to avoid merit appeals to the Environment Court.

Observations	Options
sector groups). Of course there is little to stop any group or group member submitting against decisions at the end, although having been involved in a consensus decision-making process does imply this should not occur. It is for this reason the Land and Water Forum (2012) recommended disallowing merit appeals to the Environment Court on decisions made through collaborative processes. This recommendation has been partially adopted in the Resource Management Legislation Amendment Act 2017.	

Resources

- Appendix 5: Policy brief setting up a collaborative process: stakeholder participation (Cradock-Henry et al., 2013)
- Sinner and Harmsworth, 2015: *Representation and legitimacy in collaborative freshwater planning: stakeholder perspectives on a Canterbury Zone Committee.*
- Appendix 8 Policy brief: evaluating a collaborative process (Cradock-Henry, 2013) with criteria to evaluate process, outcomes and overall success
- See Appendix 9 for an evaluation framework with criteria for assessing process; and Appendix 10 for an evaluation framework for assessing outcomes (Frame et al., 2004)

Integration	
• Councillors (or a co-governance group) have had the final say on the outputs of the participatory group in the snapshot regions before moving through to a planning phase. • The relationship between councillors and the participatory group can foster or diminish trust for what results from a participatory process. • Having councillors as members of participatory groups appears conducive to building support for a group's outputs, fostering understanding and creating links across council. This arrangement should not be seen as a substitute for council staff keeping all councillors up-to-date with progress and issues, however.	• Lines of communication and delegation between councillors, council and a participatory group are important and need to be established and formalised from the beginning. These can be set out in the terms of reference. • Regular briefings with councillors ensure they are kept up to date with the progress and issues of a participatory group. • It could be useful for councillors to consider how they will communicate with their constituents on the work of the forum.
• The length of time required to	• The end-point of the participatory

Observations	Options
undertake a participatory process has been consistently underestimated by councils.	process and the steps to get there will need to be well thought out at the beginning of the process, with realistic timeframes. The steps need to be made clear and reiterated within the council, within a group and the broader community.
• Inclusion of iwi and/or Māori interests should not be assumed to be representative of all tangata whenua.	• See resources below.
• Being inclusive involves conducting meetings at times when people can attend. However, this can be challenging. Holding meetings during the day can exclude people that work. Nevertheless, many groups did hold meetings during the day. Stakeholder groups are likely to have availability during the day as part of their working day. While evening meetings might provide greater opportunities for people to attend, this also has its challenges (e.g. for those with families, and implications for staff who also have families).	• Decisions on the composition of the forum will influence decisions on the optimal time for meetings.
• A focus on writing a plan or a plan change can overshadow discussions on how the plan will deliver the desired outcomes across the social, environmental, economic and cultural well-beings.	• Recognise that a plan or plan change is only a small part of a much bigger picture of implementation and on-ground action picture. • A focus on implementation keeps a group focused on outcomes rather than outputs (e.g. rules in a plan or plan change).

Resources

- Appendix 6: Policy brief: collaborative processes and the roles of the council (Berkett et al., 2013)
- Appendix 7: Policy brief: Māori Involvement in collaborative freshwater planning – insights from Hawke's Bay (Sinner and Harmsworth, 2015; see also Harmsworth et al., 2013).

Fairness	
• Most groups have adopted consensus decision-making, which means decisions have some level of buy-in for	• Consensus might not mean full agreement but an 'able to live with'

Observations	Options
all involved. • It can also mean that decisions take a considerable period of time to make. • Consensus decision-making could encourage bringing together people expected to agree to make the process as straightforward as possible. However, depending on how a group is composed and facilitated, this way of constructing consensus decision-making could entrench the *status quo* and diminish the legitimacy of the group, its decisions and the council. Change is more likely to come from a group with diverse values and interests	decision. • How consensus decision-making is to work can be included in the terms of reference.
• There is a tendency to underestimate the time it takes to reach consensus, especially on the detail. This can become problematic, especially at the end of the process when hard decisions need to be made and time is short. • Short timeframes for deliberation, which can arise from a lack of organisation or preparation, can create problems for group members, who will feel rushed to make decisions. This can affect the legitimacy of the final advice and recommendations, which can filter out to the broader public. Hence, processes need to be well planned, flexible and well resourced. • Community conversations can raise unexpected questions that need to be answered. Getting answers takes time, and even with answers, discussions can go back and forth, which also takes time.	• Being realistic about what needs to be done and what can be achieved in one meeting ensures the process is fair. Providing group members with appropriately detailed and useful materials before meetings can help. • Ensure the end-point of the participatory process and the steps to get there are well thought out at the beginning of the process, with realistic timeframes. The steps need to be made clear and reiterated within the council, within the forum, and within the broader community. • A good (and independent) facilitator is essential for maximising available time and ensuring fairness.

Resources

- Fenemor (2014): Making technical communication and information risks during collaborative catchment limit-setting processes.

7 Useful Techniques and Practical Tips

As was the case with the observations and options set out above, the following techniques and tips are drawn from our knowledge and experience, information gathered for the snapshots, and from Greater Wellington Regional Council, Canterbury Regional Council, Gisborne Regional Council and Horizons Regional Council, and the Motueka Integrated Catchment Management research programme.

- Have meeting agendas and briefing information available for forum members as early as possible to enable them to be as prepared as possible for meetings and workshops.
- Preparation of materials and technical information for the forum might require planners, science communicators and land management people to work together.
- Provide information on a council's website about whether a meeting is open to the public or not.
- If meetings are public, make information on the next meeting available in a prominent place on the council website, and advertise it.
- For selecting group members, Canterbury's experience might be useful. Its selection process involves a workshop where each potential zone committee member gives a presentation to introduce themselves to a selection panel that includes representatives from the council and rūnanga. Potential members also take part in group exercises to show how they work collaboratively.
- In Canterbury the community members are appointed for three-year terms but can re-apply as there is no limit on the number of terms they can serve. Zone committees have been established to implement the Canterbury Water Management Strategy, which is a long-term commitment that includes but extends beyond developing a plan.
- If stakeholder groups are not included in the structure of the forum they can be involved in other ways. For example, they can be invited to provide pre-workshop materials to forum members or give presentations. In Canterbury (where the community model has been adopted), stakeholder groups (e.g. irrigators, Fish & Game, Department of Conservation, District Health Board, Dairy NZ and Beef + Lamb) are involved through a Science Stakeholder Advisory Group in the Waimakariri zone. This group has been working with the regional council and the zone committee to review the science that goes into their collaborative process. These processes have been created to find a way to include stakeholder groups and to minimise the exploitation of scientific uncertainty by groups with interests at stake at the appeals end of the process (see Weber et al., 2011).
- A regular newsletter containing information about water issues and the work of the forum can be distributed to people who subscribe online. It could also be made available in paper format for those without online access or coming into council offices.
- An FAQ page on the website that explains the forum's purpose, role, reasons for its structure and who is involved is a good idea.
- Information from forum meetings should be made available on the council's website. All regions provided information as typed commentary of what occurred at meetings

(including the range of questions asked and addressed) and PowerPoint presentations. Others also provided pre-workshop materials. Recordings might be another option, although this is likely to inhibit those talking, and the audio without the visual components can be challenging to follow.

- A council should record meetings in any case for its own purposes so that points can be clarified, if needed, after a meeting. These recordings also allow minutes of the meetings to be prepared.
- Decisions on recordings will need to be discussed with forum members to ensure they are comfortable with how they will be done and used.
- A formal submission process on a draft plan the forum might develop would give the broader community an opportunity to provide feedback. It would also be a feedback process from the community to the forum.
- Hold meetings with iwi/hapū in addition to other meetings, and recognise that face-to-face talking is often the preferred way to communicate.
- At the beginning of each meeting, group members can be asked if there is anything that has changed for them since the last meeting. This can help people get concerns off their chest and open discussion.
- Forum members could develop rules of acceptable behaviour. Putting the rules of acceptable behaviour on the whiteboard at every meeting is a good reminder. These could be incorporated into the terms of reference.
- At the start of meetings remind everyone of the endpoint, what steps have been made and the steps remaining. This provides a reality check for everyone and helps everyone know where they are going.
- A 'Planning 101' session can help forum members understand what a plan is, and what scope they have for their decisions, including the structure of their decision-making within a Resource Management Act 1991 plan. (Note that the Hawke's Bay Regional Council included information on the planning framework in its terms of reference.)
- Field trips are essential, and holding them early in the process is ideal. They allow people to engage with one another and get to know each other. Most importantly, they help group members see issues first-hand and better understand the implications of decisions on the ground. It can also provide opportunities for members of the broader community to be involved (e.g. iwi/hapū).
- Building and maintaining relationships is key to involving the community in participatory processes in whatever structure is chosen.
- Council-led engagement sessions can be creative and inclusive. A useful example is the Travelling River work instigated through the Motueka Integrated Catchment Management programme. It was a collaboration of artists, scientists and the people of the Motueka River catchment and involved bringing together different ways of understanding the river, from the mountains to the sea. A further example is the Watershed Talk process, in which group members identified issues for discussion with the group through the use of personal photographs. See:
  http://icm.landcareresearch.co.nz/research/research.asp?theme_id=4&research_id=32
  http://icm.landcareresearch.co.nz/research/human_dimensions/travellingriver.asp
  http://icm.landcareresearch.co.nz/research/research.asp?research_id=68&theme_id=4

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Appendix 1: Collaborative Principles

Adapted from Ministry for the Environment (2017a)

1 **Representative:** A representative process ensures the interests of all relevant stakeholders are effectively advocated for.

2 **Accountable**: An accountable process ensures that all participants in the process are answerable to those they represent.

3 **Inclusive**: This criterion considers how the process provides for input from those outside of the collaborative group, and to what extent all the issues raised were considered.

4 **Deliberative** This characterises a process in which views are exchanged, arguments are critically examined, and shared knowledge is built up in a context of civility, respect and trust.

5 **Impartial**: An impartial process treats all parties equally. This is a distinct quality of the process that makes for good deliberation.

6 **Empowering**: This focuses on the extent to which participants are empowered to have a substantial influence on policy outcomes.

7 **Transparent**: A transparent process governs itself through clear and public rules.

8 **Lawful**: A lawful process upholds all existing statutes and regulations.

Appendix 2: Terms of Reference

Drawing on our review of the various council terms of reference and guidance from the Ministry for the Environment (2015), the following issues have been identified to be important to include:

- a clearly articulated purpose of the group
- the issues that have instigated the creation of the group
- intended outputs and outcomes
- the mandate and decision-making authority of the group
- reporting arrangements from the group to the broader community, across institutions and related groups, and to councillors
- how advice or decisions will be used in subsequent decision-making processes
- timeframes for the process, and expected frequency of meetings
- contingency arrangements for when more meetings are required
- criteria for representing a group and individual selection criteria
- how stakeholder groups will be involved and the role of their constituents/supporters
- appointment and role of officers, such as chairs, deputy chairs and facilitators
- the relationship of the group to council and councillors
- involvement of councillors and other elected members
- how tangata whenua will be involved and their role
- the role of the facilitator and his/her standing in the process
- how conflicts of interest will be managed
- protocols for deliberation within the group (e.g. by consensus, but also what is to occur if a consensus cannot be reached)
- external engagement protocols, including engagement with the media
- whether (and when) meetings will be held in public or private
- whether groups are formal or informal committees of council
- council expectations of the group beyond the planning process
- expectations of the members of the group (e.g. communicating with broader community, stakeholder and interest groups)
- how meetings will be organised, conducted, recorded and publicised
- the level of commitment required
- levels and conditions of remuneration and how reimbursements can be obtained
- mediation processes for when things do not go to plan
- how group members will be supported if help is needed
- what is in it for group members
- how members of the public will be included in public meetings (e.g. no comment allowed, or through questions to the chairperson)
- are substitute members to be allowed? (a lack of commitment to the entire process can mean learning built up within the group not lost)

- how the group will engage with stakeholder groups beyond the form
- what the communication lines will be between the forum and the council and councillors.

Examples of terms of reference from Hawke's Bay Regional Council and Northland Regional Council follow.

Hawke's Bay Regional Council

See next page.

Greater Heretaunga and Ahuriri (TANK) Collaborative Stakeholder Group
Terms of Reference

as updated October 2014 and April 2016

1. Purpose

This document updates the TANK Group's Terms of Reference which were adopted in 2012 to reflect the extension of the project timeframe through to 2017.

The purpose of this document is to describe and update the Context, Role and Operating Procedures for a Collaborative Stakeholder Group (the TANK Group).

The TANK Group has been convened to provide recommendations to the Regional Planning Committee for the management of land and water in the Greater Heretaunga and Ahuriri catchment area, comprising the Tutaekuri, Ahuriri, Ngaruroro and Karamu catchments and associated estuarine and coastal receiving environments.

The TANK Group will identify values, and recommend objectives, policies, rules and other methods to be included in the Regional Resource Management Plan (RRMP) to provide for those values. This area, including the coastal environments, will be colloquially referred to as the TANK catchments.

2. Study Area – TANK catchments

The study area is shown in Appendix 1. The key reason for the extent of the study area is the interconnectedness of the Heretaunga Plains aquifer systems with the surface water catchments – Karamu, Ngaruroro, Tutaekuri and Tutaekuri-Waimate, Ahuriri and the Taipo and Napier urban waterways. Some areas are more connected than others. The area will be broken down into manageable hydrological units which take into account the need to integrate the groundwater resource.

3. Key Drivers

There are some 3600 current consents in the TANK catchment area representing approximately half of the region's consented activity. Of these, some 2500 (approx. 70%) relate to the taking and use of surface water and groundwater. The bulk of the Ngaruroro and Maraekakaho takes expired in 2015, and the majority of the Tutaekuri consents expire in 2018. The majority of the groundwater takes from the Heretaunga Plains unconfined aquifer expire in 2019. The Karamu catchment consents expired in 2013.

The Ngaruroro catchment is at full allocation and the Karamu catchment is currently considered to be over allocated, largely by virtue of the Regional Resource Management Plan setting zero allocation limits. Issues have also been raised about the methodology for setting the minimum flows in the current plan. The minimum flows need to be reviewed.

In addition, the National Policy Statement for Freshwater Management (NPS), originally released in 2011, subsequently revised and came into effect in 1 August 2014, requires regional councils to set freshwater objectives, water allocation limits and water quality targets for every water body, so that overall quality of fresh water in the region is maintained or improved. There are no allocation limits in the RRMP for the Heretaunga Plains aquifer systems and the RRMP only contains water quality guidelines.

Council has given the assurance that it will provide clearer policy direction for upcoming consent processes for both applicants and submitters alike.

4. Planning Context

The planning framework within which the TANK Group is to function includes a variety of legislative requirements and both statutory planning instruments and non-statutory processes and documents as shown in Figure 1. A detailed explanation of the planning framework is provided in Appendix 2. As well as these, the TANK Group should also take into account the principles of the Treaty of Waitangi, iwi and hapū planning documents, and other agency and industry strategies. A list of relevant supporting documents will be provided to and discussed with the TANK Group as the collaborative process evolves.

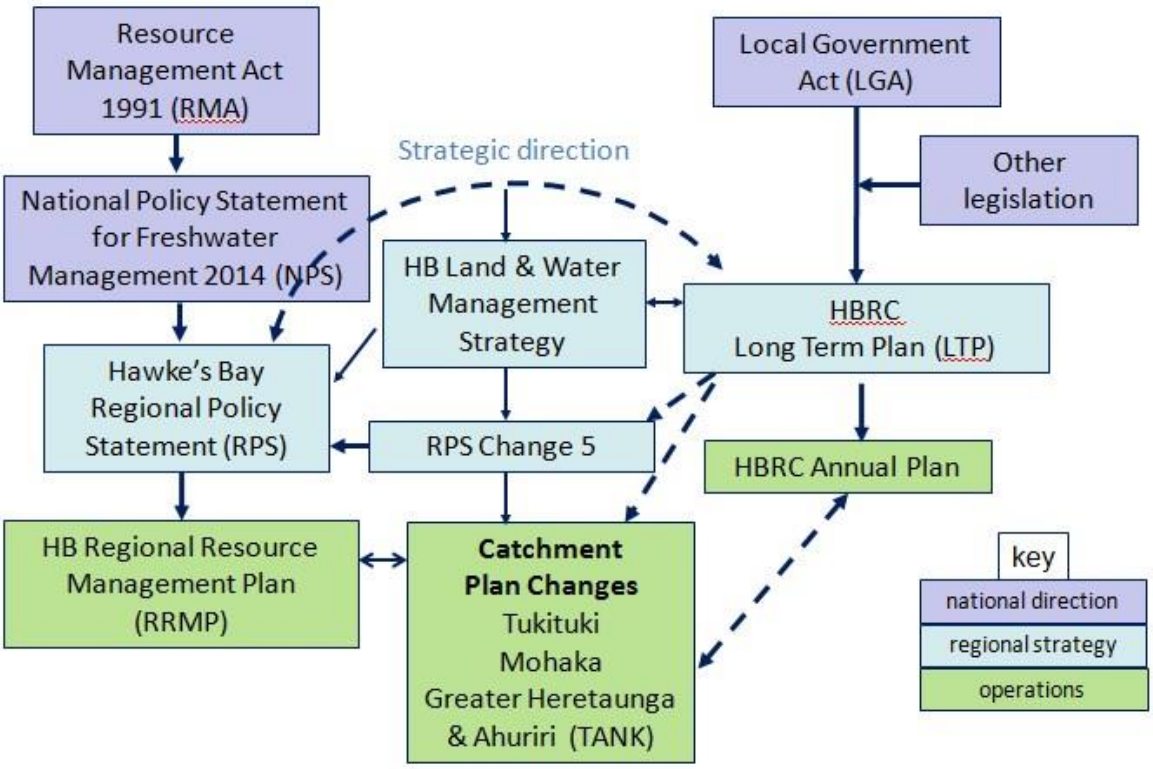


Figure 1 Greater Heretaunga and Ahuriri Plan Change planning framework

5. Role of the TANK Group

The TANK Group is undertaking a collaborative stakeholder process with the aim of providing the Council (via the Regional Planning Committee) with consensus recommendations regarding objectives, policies and methods, including rules for a plan change to the RRMP for the Greater Heretaunga and Ahuriri catchment area. To provide those recommendations, the TANK Group does not start from a blank canvas, nor operate in a silo as outlined in Section 4, Planning Context.

The Regional Planning Committee has agreed to have particular regard to any TANK consensus outcome, if one emerges[1], and the Regional Council has given a good faith undertaking to implement the recommendations of the TANK Group[2]. Any recommendations must also be consistent with the following higher level documents:

- Resource Management Act
- National Policy Statements
- National Environmental Standards
- Regional Policy Statement

6. Membership and relationships

All members of the TANK Group have been nominated by their respective sector or group to be their representative and as such are expected to convey ideas and perspectives from their wider networks. However, the views expressed by members will be assumed to be their own until such time as they have been formally endorsed by their wider networks. A subsequent process, with a reasonable timeframe (to be decided by the TANK Group), will be required to get formal endorsement.

The TANK Group will adopt measures and processes to ensure that local iwi/hapū, community and TANK sectors and groups are informed and have opportunity for input and provide comment on the work of the Group. This includes through the establishment, as necessary, of working groups or communication strategies that provide regular updates about TANK Group outputs and provide opportunities for community and stakeholder feedback.

Some important points to remember about being a TANK Group member:

- A meeting allowance will be available for those who are not paid representatives for a particular interest.
- Members are expected to make every effort to attend all meetings. Between sessions, members will be expected to interact with their wider networks to obtain feedback on policy options.
- The Group has been working together for an extended period and a further two years is required to complete the decision making and produce a draft plan change. A commitment to regular attendance will be critical for continuity and consistency for this time. Substitutes (temporary) and replacements (permanent) are therefore discouraged. Any

[1] Regional Planning Committee Resolution, 19 February 2014.

[2] Regional Council Resolution, 29 August 2012

substitute or replacement must be pre-agreed with the Independent Facilitator and must be well briefed by the member they are replacing in advance of the meeting.

- If a meeting is missed, or if a substitute does participate, members will be expected to "catch up" and to raise any concerns arising from that meeting with the Independent Facilitator no later than the next meeting.
    - Time will not generally be provided within subsequent meetings to re-visit issues already addressed or resolved in the missed meeting unless new and relevant information is provided. Re-visitation of issues will be at the discretion of the Independent Facilitator.

7. Protocol for collaborative deliberation

This process is not just another consultation exercise – it is a new way of decision-making. Rather than simply advocating for a particular point of view, participants will be expected to explore, consider and deliberate on solutions that accommodate diverse views and interests, and to refrain from tactics that are divisive.

The protocol includes matters relating to respect, communication and consensus decision making:

Respect and Communication

- Members must be willing to participate cooperatively for the "greater good" of sustainable water resource management in the TANK catchments.
- All members agree to act in good faith. This means that members must commit to open, honest, constructive, robust and collaborative deliberations. To this end, we will follow the Chatham House Rule. This means that participants are free to discuss aspects of the process with other parties (excluding debating issues through media channels, see point below) but shall not attribute speakers or their affiliations to discussed options or opinions.
- TANK Group meetings are not open to the public; however Meeting Records and the list of participants will be made public.
- Contributions made within the Group will be "without prejudice". That is, nothing said within the Group may be used in a subsequent planning or legal process except for any recommendations and agreements reached by the Group.
- Members agree to refrain from debating issues through public media channels and to keep the debate within the TANK Group.
- Members agree to show restraint and respect for other views when communicating with wider networks and to avoid promoting discord within the group.
- Any public statement about discussions or decisions by the group must be agreed by the group and made through an agreed spokesperson. This also applies to researchers, council staff and others who attend the meetings in support of the TANK Group.

The Group may add to this protocol by unanimous decision making. Any agreed additions are collated and appended to the Terms of Reference as an addendum.

Consensus decision making

- The group will strive to make decisions by consensus. Consensus is defined as every member (i.e. 100%) of the group agreeing that they accept the group's recommendations to Council.

- At the end of the process, members and their networks will be asked to formally endorse and sign any recommendations that have been reached by consensus.
- Where 100% consensus cannot be reached on a topic or specific point, the reasons for disagreement will be noted, any alternatives defined, and the reasons for positions on the alternatives recorded.
- If the group reaches a consensus, members will be expected to support that consensus in subsequent public discussion, including appearing at any subsequent hearing if requested.

8. Council and Council staff roles

The HBRC, through its Regional Planning Committee, has established and is resourcing and supporting a collaborative approach to reaching broad agreement on, and developing recommendations for future water management by the TANK Group.

HBRC staff will be assigned to assist and support the TANK Group in delivering the required outputs within the agreed timeframes.

Members of the Regional Planning Committee, both councillors and tangata whenua representatives, may attend TANK meetings as observers with speaking rights. For clarity, members of the Regional Planning Committee are not to take part in TANK Group decision making to ensure a clear separation, both actual and perceived, between statutory governance and the advisory role of the TANK group.

The TANK Group will regularly update the RPC about its work. This update will coincide with scheduled RPC meetings and may also include special meetings if necessary. The TANK Group does not have the authority to commit the Council to any path or expenditure.

Officers from the Napier City and Hastings District Councils have been appointed to the TANK Group to represent the interests of these local authorities.

9. Role of facilitator

Most meetings of the TANK Group will be led by an independent facilitator, who will:

- Ensure a fair and equitable group process
- Foster an atmosphere of respect, open-mindedness and group learning
- Design an enjoyable and productive process to enable the group to achieve its task
- Facilitate input from all members of the group, so that every voice is heard
- Provide guidance on collaborative deliberation techniques, including constructive ways to voice disagreements and negotiate potential conflicts.
- Manage discussion and decision making processes in a way that assists with meeting the objectives for each meeting within the agreed timeframes and according to agreed protocols.
- Support as necessary, operation of any working group formed by the TANK group to assist the Group in its decision making.

10. Work Programme

The TANK Group will adopt a Work Programme with agreed timeframes required to deliver the outcomes specified. The Work Programme will be regularly reviewed and progress reported to the RPC.

There are four main phases for this project (Phase 1 has been completed) and the TANK Group will be involved in all four phases.

Phase 1 (completed)

Identification of values, objectives, and general agreements on approaches for developing policy options for a plan change.

Output: a document detailing interim agreements and any areas where agreement could not be reached, for presentation to the Regional Council's Regional Planning Committee.

The TANK Group held 11 meetings between October 2012 and December 2013 and reached interim agreement on a number of topics. These are captured in the report *Collaborative decision making for freshwater resources in the Greater Heretaunga and Ahuriri Region: TANK Group Report 1 – Interim Agreements ("Phase 1 - TANK report")*. These 11 meetings and the TANK Report will be referred to as "Phase 1" of the TANK process.

The interim agreements in the Phase 1 - TANK Report are "supported in principle" by most parties but not all. The areas of disagreement will be addressed in the early stages of Phase 2 of the TANK Group process.

Phase 1 - TANK Report will be used as a foundation document for progressing through Phases 2 and 3 of the TANK process (outlined below).

Phase 2

Building on and, where necessary, amending Phase 1 Interim Agreements to develop and evaluate policy options including determining appropriate limits/thresholds (quantity and quality) and/or methods for setting them. This phase will require further assessment of subcatchment level values and objectives.

Outputs: agreement on objectives, attributes and desired attribute states for identified water bodies or groups of water bodies in relation to the identified agreed values for which the water bodies are to be managed.

Agreement on the policies and methods that will be used to achieve the stated objectives for each water body or group of water bodies and identification of alternatives on any areas where agreement could not be reached, for presentation to Council's Regional Planning Committee.

Phase 3

Plan Change writing to incorporate any preferred/agreed policy response arising out of Phases 1 and 2 into the Regional Resource Management Plan. During Phase 3, the TANK Group will meet as required to make further recommendations on issues that arise during drafting of the plan change.

Public consultation on a draft plan change may be undertaken in partnership with the RPC, ahead of formal notification, if deemed a necessary supplement to the public and hapū/whanau engagement programme.

Outputs: a draft Plan Change ready for consideration and approval by the Regional Planning Committee by end of 2017 and a report on the TANK process (to inform Council's section 32 RMA evaluation report).

Phase 4

Consideration of the proposed plan change by RPC and subsequent recommendation to the Council for either public or targeted consultation on draft, or should public engagement have been sufficient in phases 2 and 3 then notification by the Council in early 2018.

The RPC may refer matters back to the TANK Group for further advice and/or recommendations prior to recommending a final plan change to the Council for notification.

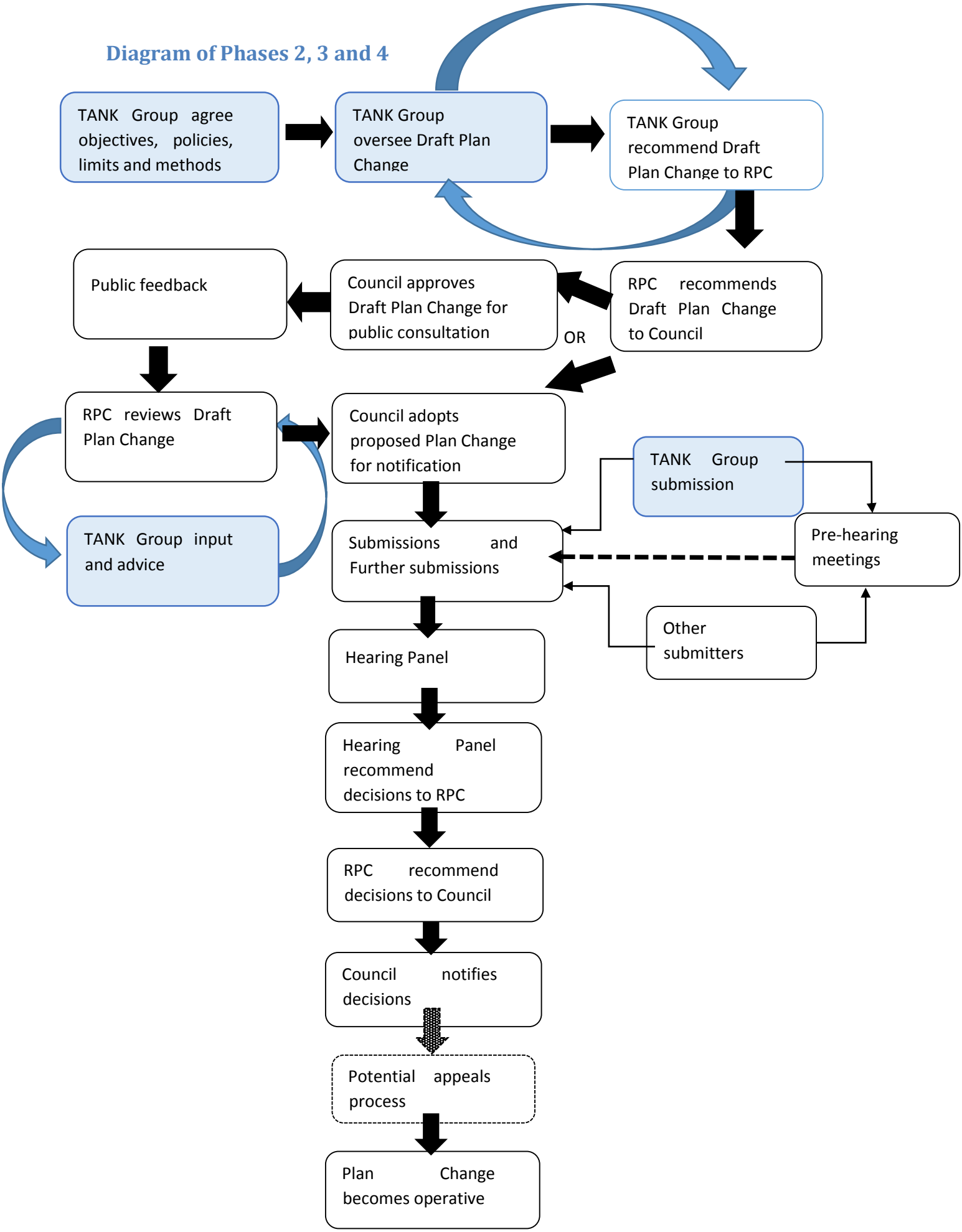
The TANK Group will be encouraged to make a submission on the proposed plan on behalf of the Group and will be assisted in this by Council staff if necessary.

This is to encourage on-going TANK commitment and involvement in any refinements to the plan change, including involvement in hearings and pre-hearing meetings and on-going commitment to plan implementation.

Hearing of submissions will be by the full RPC. (*editorial note: this proposal is amended by the recommendation in the report to RPC 20th April 2016 to a hearing panel consisting 3 councillor and 3 iwi members).* The RPC has been appointed by the Council to hear and make recommendations[2] on the submissions and further submissions on Proposed Plan Changes and make recommendations to the Council about the decisions to be made.

[2] The function of approving the Plan Changes under Clause 17 of Schedule 1 of the RMA was not delegated. That function remains with the Council

Diagram of Phases 2, 3 and 4



11. Meeting schedule for TANK Group – Phases 2 & 3

The Tank Group will set the meeting schedule for meetings in Phase 2 and it will then become an attachment to this update (see attachment 3). Near the end of Phase 2, the meeting schedule for Phase 3 will be developed by HBRC's Project Team in consultation with TANK Group members. The schedule will be adapted as necessary to suit the availability of as many Group members as possible.

12. Contact details

Facilitator

Robyn Wynne-Lewis, Core Consulting, ph 8772359 or 027-4431129, email robyn@coreconsulting.co.nz

HBRC staff

James Palmer, Group Manager Strategic Development, ph. 06-833 8045 email james.palmer@hbrc.govt.nz.

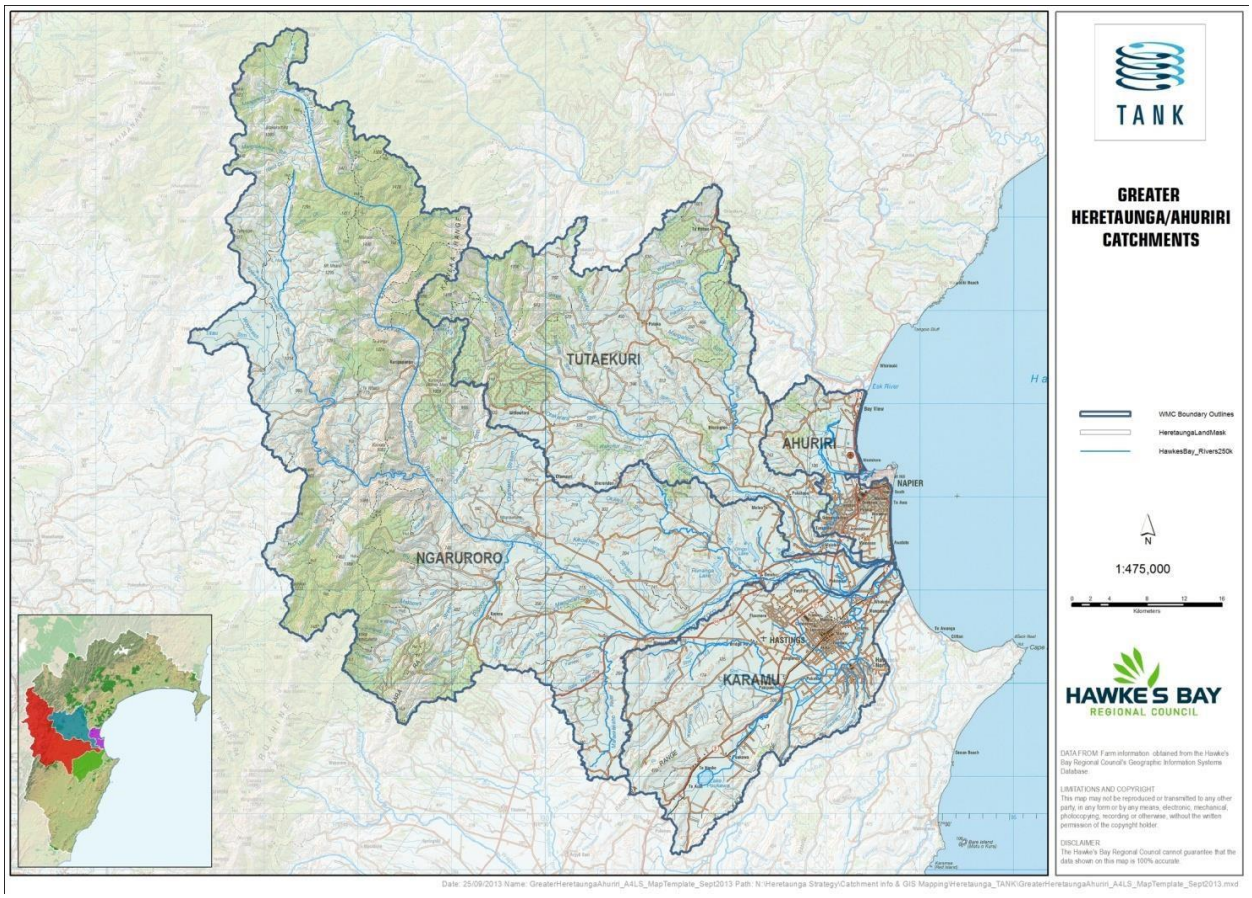
Iain Maxwell, Group Manager Resource Management, ph. 833 8011, email iain@hbrc.govt.nz

Mary-Anne Baker Senior Planner Policy, ph. 06-833-5478 email marya@hbrc.govt.nz (Policy and Planning).

Desiree Cull, Programme Leader, ph. 06-833 8037 email Desiree.Cull@hbrc.govt.nz (Project management).

Appendices

Appendix 1: Study Area



Appendix 2: Planning framework

Resource management context

There are numerous documents that set the context and scope of this project – see Figure 1. Looking first at the left side of Figure 1, at a statutory level is the **Resource Management Act 1991** (RMA).

The RMA specifies the functions of regional councils with respect to resource management, states the purpose (to promote sustainable management, defined in RMA section 5) and sets some highlevel direction for how this is to be done (e.g. in RMA sections 6-8). (Refer to pp7-8 of slides from Meeting 1.)

The central government can issue national policy statements when it wants to provide direction on how it wants local authorities to carry out their functions. The **National Policy Statement on Freshwater Management (NPS)**, issued in 2014, directs regional councils to, among other things, set allocation limits and water quality targets for every water body, so that overall quality of fresh water in the region is maintained or improved.

HBRC developed the **Hawke's Bay Land & Water Management Strategy (LaWMS)** to provide a strategic overview to all its programmes regarding land and water management. LaWMS is a non-statutory document developed using a stakeholder reference group to set the higher level strategic direction for land and water management in Hawke's Bay. It contains a number of policies and possible actions that should be considered as part of the process for developing specific land and water management policies for the Greater Heretaunga and Ahuriri area. Some aspects of LaWMS are already being further developed through statutory processes such as Plan Change 5 to the Regional Policy and Plan Change 6 for the Tukituki catchment.

To implement the NPS, HBRC is also amending its **Regional Policy Statement (RPS)** to clarify its strategic intent for the region's main catchments (**RPS Change 5**). Although originally a separate document, the RPS now forms the strategic component of the Hawke's Bay **Regional Resource Management Plan (RRMP)**, which contains the more detailed provisions to set allocation limits and water quality targets, in some cases involving rules on land and water use. As at 31 August 2014, Change 5 remains subject to parts of two appeals. Appeals on 'wetland' related provisions are dependent on further ephemeral wetland mapping work. An Environment Court hearing is scheduled for early December regarding RPS objectives for groundwater quality.

Plan Changes to the RRMP are being developed for the seven major catchments in Hawke's Bay with the Tukituki, Mohaka and Greater Heretaunga and Ahuriri (TANK) catchments currently underway (lower green box in Figure 1).

Plan Change 6 for the Tukituki catchment was publicly released by a Board of Inquiry on 26 June 2014 as part of the Tukituki Catchment Proposal. As at August 2014, two appeals have been lodged on the Board of Inquiry's Final Report and Decisions and are due to be managed at the Wellington High Court.

The TANK process for the **Greater Heretaunga and Ahuriri zone** will similarly lead to a plan change to the RRMP and may also recommend other measures that are outside the RRMP structure.

Local government context

This brings us to the right side of Figure 1. The **Local Government Act 2002 (LGA)** describes the role of regional councils more generally; it "provides for local authorities to play a broad role in promoting the social, economic, environmental, and cultural well-being of their communities, taking a sustainable development approach". In giving effect to this mandate, councils have responsibilities under a number of statutes as well as the RMA.

Every three years, each local authority updates its **Long Term Plan (LTP)**, which states its priorities and indicative funding intentions for the next 10 years across all of its responsibilities. Thus, if the council anticipates a significant plan change, roading project or biodiversity initiative, these are signalled in the LTP along with the project cost and how it will be funded. The strategic direction in the LTP should align with that set in the RPS and in non-statutory documents such as the Land & Water Management Strategy. However, because only one of these can be changed at a time (*e.g.* the RPS cannot be amended via the LTP), it tends to be an iterative process of updating these documents over time to keep them aligned.

Funding and action plans are then confirmed annually through the **Annual Plan**, which specifies what projects will get done, the funding provided for each, and the rates that will be collected.

Summary

In summary, this process aims to provide the key content of a new chapter in the RRMP that specifies objectives, targets and limits for the TANK catchments. This must be consistent with the statutory direction in the RMA and NPS, and with the priorities set in the LTP. The Land & Water Management Strategy provides further strategic guidance regarding the broad objectives, and these will be given more focus through the RPS change underway. The priorities set in the RPS and in the Greater Heretaunga and Ahuriri plan change will need to be aligned. Any initiatives that require additional funding will need to be approved through the LTP and Annual Plan processes.

Appendix 3: Meeting Schedule for Phase 2

MEETING	Date
Meeting 19	5 April 2016
Meeting 20	24 May 2016
Meeting 21	28 June 2016
Meeting 22	9 August 2016
Meeting 23	20 September 2016
Meeting 24	2 November 2016
Meeting 25	13 December 2016
Meeting 26	9 February 2017
Meeting 27	22 March 2017
Meeting 28	3 May 2017
Meeting 29	14 June 2017
Meeting 30	26 July 2017
Meeting 31	5 September 2017
Meeting 32	18 October 2017
Meeting 33 (reserve)	22 November 2017

Addendum: TANK Group Operational Protocols

Attendance Protocol (from Meeting 12)

A TANK Group meeting is not a public forum. Any substitutes or visitors must be pre-approved.

Visitors or observers will not have speaking rights (unless this has been pre-arranged for a specific purpose). Visitors and observers must abide by the Group's meeting protocols and engagement etiquette.

Decision Making Protocol (from Meeting 18)

In terms of administrative decisions, those would typically be made by the Project Team or on the basis of a majority vote of those members present at the meeting. In terms of process-related matters, there is no single pre-defined approach but instead on a case-by-case basis, the Group should aim for consensus otherwise a majority vote would apply if striving for consensus was not going to be achievable or not straightforward. In such cases the independent facilitator will decide on the appropriate decision-making method.

Northland Regional Council

Terms of Reference: Mangere Catchment Group

Purpose:

To work collaboratively to maintain and improve the state and management of the Mangere River Catchment's freshwater.

To work with the Northland Regional Council and its Environmental Management Committee in the Mangere River Catchment to deliver the Waiora Northland Water programme, including the review of the freshwater provisions of the current Water and Soil Plan for Northland to give effect to the Freshwater NPS.

To discuss and develop objectives, policies and rules to be included in the Water and Soil Plan for Northland (or other relevant regional plan) and other related actions for recommendation to the Northland Regional Council and others.

The Mangere Catchment lies approximately 12 kilometres west of Whangarei and has a catchment area of approximately 7650ha. The Mangere River is a low-lying, sluggish tributary to the Wairua River, which flows through a mostly intensive agricultural catchment. The river begins as the Mangere Stream, which flows east out of the Pukenui forest near Whangarei. It becomes a river on the flats before joining the Wairoa River just west of Kokopu.

Under the National Policy Statement for Freshwater (Freshwater NPS), councils must set freshwater objectives, and water allocation and water quality limits for all waterbodies in Northland so that the overall quality of freshwater in the region is maintained or improved.

Councils will remain responsible for preparing resource management plans and plan changes to give effect to the Freshwater NPS (in particular setting freshwater objectives and limits). Work on this in Northland will commence during 2013-14 when the Council has made decisions on the Proposed Regional Policy Statement and the review of regional plans begins.

The Mangere River Catchment has been identified as a priority catchment for the setting of objectives and limits by the Northland Regional Council. Limits need to be set in a statutory document (the appropriate statutory document is currently the Water and Soil Plan for Northland, or in future, a combined regional plan).

The collaborative stakeholder group will determine the values for management of the Mangere River Catchment to be included in these plans and the environmental state to be achieved (which can be selected from a range of options from maintenance through to various degrees of improvement) based on the local context and community aspirations.

The collaborative stakeholder group will develop regulatory (e.g. limits, policies and rules) as well as non-regulatory management options to achieve the agreed environmental objectives with the aim of providing the Environmental Management Committee (and the Northland Regional Council) with consensus recommendations for a plan change to the Water and Soil Plan for Northland and an agreed plan for implementing the non-regulatory management options.

The Environmental Management Committee will implement the recommendations of the Mangere Catchment Group where they are able to do so and will promote the recommendations that require Northland Regional Council or other committee, or stakeholder endorsement. To facilitate this occurring, the recommendations from the Mangere Catchment Group must also be consistent with the Resource Management Act 1991, relevant National Policy Statements and Environmental Standards, the Regional Policy Statement, the Local Government Act 2002 and the Northland Regional Council's Long Term Plan.

Establishment:	The Mangere Catchment Group is established as a subcommittee of the Northland Regional Council Environmental Management Committee under the Local Government Act 2002.
Chair:	The Group will select a Chair and Deputy Chair from amongst its members.
Quorum:	A quorum shall include the Chair or Deputy Chair and a total of at least 50% of the normal membership.
Membership:	Members have been selected to reflect the broad interests in water management in the Mangere River Catchment and to provide a cross-section of values, understanding and perspectives. It is expected that members will engage with their organisations and wider networks to share information and get feedback on the matters being considered. Joe Carr (ex officio) - Environmental Management Committee member and Northland Regional Councillor Alan Clarkson – Environmental Management Committee – Farming representative David Coleman - Whangarei District Council representative Royce Kokich – Dairy industry representative Denis Anderson – Dairy industry representative Shayne O'Shea – Dairy industry representative Gerry Brackenbury - Pukenui Western Hills Forest Charitable Trust Roger Holder – Catchment resident Rob Pye – Non-Dairy industry representative Hona Edwards – Te Uriroroi representative George Tuhiwai – Te Parawhau representative Allan Halliday – Ngāti Hau representative Tania Pene – Te Runanga A Iwi O Ngapuhi representative Murray Smith – Catchment resident Ian Pritchard – Catchment resident Members are generally mandated sector or group representatives. Where members have not been given a mandate from their sector or interest group they will participate as individuals and are expected to convey ideas and perspectives from their wider networks. Councillors and council staff have particular statutory (and non-statutory) responsibilities outside of the Mangere Catchment

Group, but within the group they have the same rights and responsibilities as all other members. In addition to the particular knowledge, expertise and perspectives, they will represent the interests of the wider district and regional communities.

To assist the Mangere Catchment Group to make satisfactory progress and build consensus, members are expected to attend all meetings. Substitutes are discouraged and must be approved by the Chair in advance. (If a meeting is missed, or if a substitute does participate, members will be expected to catch up and to resist the temptation to re-litigate matters that have been agreed in their absence.)

Between meetings members are expected to interact with their nominating body / wider networks to obtain feedback on options being discussed.

As the group is undertaking a collaborative exercise based on consensus decision-making, at the end of the process, members will be asked to declare whether they can support the outputs and recommendations to the Environmental Management Committee that have been produced by the process and will be expected to promote them to their organisations and networks. Members will also be asked whether their nominating organisations / organisations they represent (where appropriate) will formally endorse the consensus agreement.

Where it becomes known that an important sector, interest or perspective is not represented on the Mangere Catchment Group, the Environmental Management Committee will consider adding another member, taking into account their interest/perspective, their availability and the need to keep the group to a size that can work effectively together.

The Mangere Catchment Group may establish working groups to advance work on specific topics and may request research and expert advice from, but not limited to, the Northland Regional Council.

Collaborative decision making: Collaborative decision making is not consultation. A credible commitment to the collaborative process by the individuals and organisations involved is required. Decisions need to be made by consensus (near consensus) not majority rule.

Consensus: Consensus is defined as every member of the Mangere Catchment Group agreeing that they can accept the agreement / recommendation.

Principles of participation:

To this end all members will:

- Participate cooperatively and civilly.
- Be committed to achieving a balanced – environmentally, economically, culturally and community – management regime for the catchment and Northland's freshwater.
- Commit to open, honest and collaborative discussions and decision making.
- Chatham House Rules will be followed. Members and participants in working groups are free to discuss matters with other parties – but not the media – but won't attribute people to the options or opinions discussed.
- Contributions are made without prejudice – i.e. nothing said within the group may be used in subsequent planning or legal processes except for any recommendations or agreements reached by the group.
- Members are expected to show respect for other views and avoid promoting discord within the group.
- Any public statements by the group must be agreed by the group and made through an agreed spokesperson. (This also applies to those technical advisors, staff and others who attend the meetings in support of the Mangere Catchment Group.
- Support decisions and recommendations reached by consensus by the group in subsequent public discussion, including appearing at any subsequent hearing if requested.

The Chair of the Group / Facilitator will:

- Ensure a fair and equitable group process
- Foster an atmosphere of respect, open-mindedness and group learning
- Design an enjoyable and productive process to enable the group to achieve its task
- Facilitate input from all members of the group so that every voice is heard
- Provide or acquire guidance on collaborative decision making techniques, including constructive ways to voice disagreement and negotiate potential outcomes.

Key Tasks:

1. Establish objectives, uses and values (e.g. ecosystem health, stock watering, etc.) for the catchment.
2. Establish desired environmental state (and confirm the current state - does this mean things have to improve and by how much).
3. Determine freshwater limits to achieve the desired environmental state (both quality and quantity).
4. Determine the potential policy and management options (regulatory and non-regulatory) to achieve the preferred state.
5. Develop good management practices and other non-regulatory tools for maintaining and improving the catchment's freshwater and its management and establish

the on the ground costs and benefits of them (which may include trials).

6. Develop an implementation plan and recommendations (including a draft plan change) for:
    a. the Environmental Management Committee to consider / implement / recommend to the Northland Regional Council as part of regional plan changes and annual and long term planning
    b. other relevant parties such as government, industry, community groups, landowners etc. to consider / implement.

In completing the tasks the Mangere Catchment Group will:

- Consult with relevant stakeholders throughout the development of the implementation plan and recommendations.
- Receive, review and consider technical material as well as consultation and engagement feedback and results.

Key outputs and timeframes:

1. Report documenting the values, objectives, desired environmental state (and freshwater limits to achieve it), and agreed management options for the catchment [initially suggest April 2014].

2. A draft plan change ready for notification incorporating any preferred / agreed management responses.

Technical advice:

The Mangere Catchment Group will be supported by a technical group made up of technical advisors across a range of specialisms relevant to the catchment including: environmental science, matauranga Maori and Maori values, farm systems and land management, economics and social science.

NRC shall provide secretariat and administrative support, as well as technical support in line with NRC functions and work programmes.

Appendix 3: Bay of Plenty Regional Council Community Reference Group selection criteria

Selection criteria for membership of the Community Groups for Water Management Areas

The Community Group

The Community Group needs to represent a wide range of interests in fresh water. Members of the group should also represent the different local communities of the water management area and be a mix of ages and genders. This will ensure a good range of perspectives are brought to the group.

The Community Group should represent the following groups, for example:

Community interests

- Māori
- Urban
- Rural
- Recreational
- Farm
- Environmental groups (e.g. Care Groups)
- Forestry
- Horticulturalists
- Youth/schools
- Electricity
- Tourism
- Wood processing
- Food gatherers

Local stakeholder interests

- Land Trusts
- Local government
- Fish and Game
- Department of Conservation
- Forest and Bird
- Taiapure (fisheries management)

The Community Group should represent the following communities/areas:

Kaituna and Maketū include:

- Maketū
- Pāpāmoa East
- Rangiuru
- Te Puke
- Ōkere Falls
- Mangorewa River Catchment
- Kaharoa

Pongakawa and Waitahanui include:

- Little Waihī
- Paengaroa
- Pukehina
- Ohinepanea
- Ōtamarākau
- Pongakawa

Rangitāiki include:

- Thornton
- Edgecumbe
- Te Teko
- Te Māhoe/Waiōhau
- Galatea
- Murupara
- Whirinaki (Minginui, Te Whaiti, Ngāputahi)
- Rerewhakaaitu
- Rangitāiki at SH 5

Selection criteria for individual members

Members will be selected based on their presence in the respective catchment, their interest, level of commitment and experience in freshwater management, and for their ability to:

- Explain their views clearly.
- Listen to others.
- Be open to multiple viewpoints and seek options cooperatively.
- Consider and actively contribute to discussion on a range of information.
- Understand, assess and balance a range of values in their catchment area.
- Consider issues from multiple viewpoints and seek options cooperatively.
- Assess trade-offs that are required to set water quantity and quality limits.
- Commit to finding an agreed way forward and seeking agreement with the group on its advice to Council.
- Commit to reading pre-circulated background material and meeting agenda documentation.
- Do work outside of meetings such as engaging with community that they represent.
- Commit to participate in this two-year (likely minimum) process

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA Freshwater futures

Appendix 4: Waikato Regional Council Community Stakeholder Group policy selection criteria [2]

See next page.

[2] https://www.waikatoregion.govt.nz/assets/PageFiles/36829/Collaborative%20Stakeholder%20Group%20policy%20selection%20criteria.pdf

The Collaborative Stakeholder Group's policy selection criteria

OCTOBER 2015

About the policy selection criteria

The policy selection criteria (below and overleaf) are filters the Collaborative Stakeholder Group (CSG) will use to help select the policy options to incorporate into the proposed plan change they will recommend.

The CSG developed the policy selection criteria over a number of months, with input from the public, River iwi and the Healthy Rivers Wai Ora Committee.

The selection criteria are in addition to requirements under the Resource Management Act (section 32) for new proposals to be examined for their appropriateness in achieving the purpose of the RMA, and the policies and methods of those proposals to be examined for their efficiency, effectiveness and risk.

Testing potential policy options against the pre-agreed selection criteria will:

- assist the CSG in their collective decision making
- identify any areas not adequately addressed, as it's likely that any one policy option will not fulfil all of the criteria. Alternative solutions or additional policy options may be required in such cases.

The policy selection criteria

Gives effect to Te Ture Whaimana/the Vision and Strategy

Does the policy give effect to the Vision and Strategy for the restoration and protection of the health and wellbeing of the Waikato and Waipa rivers?

RMA (including the NPS Freshwater Management)

Does the policy:

- comply with the RMA (including the purpose and principles of the Act)?
- take account of existing policy frameworks?
- achieve the range of values identified?

Provides for aspirations of River iwi

Does the policy:

- provide for them to retain and use their taonga in accordance with their tikanga and kawa?
- give effect to their environmental, economIc, cultural and social relationships with land and water?

Gives positive social and community benefits

Does the policy:

- minimise social disruption and provide social benefit?
- enhance people's use of the river?
- take account of unique features and benefits?
- result in outcomes people can identify with, own and feel proud of?

Acceptable to the wider community

Does the policy:

- achieve sound principles for allocation?
- recognise efforts already made?
- exhibit proportionality (those contributing to the problem contribute to the solution)?

Optimises environmental, social and economic outcomes

Does the policy:

- aim for cost-effective solutions?
- provide confidence and clarity for current and future investment?
- provide realistic timeframes for change?

Achieves the restoration and protection of native habitats and biodiversity

Does the policy:

- support resilient freshwater ecosystems?
- support interconnectedness and connectivity between land and water?
- support healthy populations of indigenous plants and animals?

Realistic to implement, monitor and enforce

Is the policy:

- able to be measured, monitored and reported?
- implementable and technically feasible?
- administratively efficient?

Allows for flexibility and intergenerational land use

Does the policy:

- foster innovation?
- encourage positive actions being taken?
- allow for change and review as new information and issues arise?
- provide flexibility of future land use (including Treaty settlements land and multiple Māori owned land)?
- take account of complexity and difference between farming systems and farm enterprises?

Supported by clear evidence

Does the policy:

- take an evidence-based and knowledge-based approach (including Mātauranga Māori)?
- transparently show the costs for meeting the outcomes?
- prioritise efforts to achieve catchment solutions?
- set transparent limits and definitions?

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Appendix 5: Policy Brief Setting up a collaborative process: stakeholder participation

See next page.

Landcare Research
Manaaki Whenua
POLICY BRIEF
Insights for government, councils and industry

Setting up a Collaborative Process: Stakeholder Participation

Nick Cradock-Henry[1], Natasha Berkett[2] and Margaret Kilvington[3]

SUMMARY

Evidence from the literature on collaboration is clear: the composition or inclusiveness of the group is highly correlated to levels of stakeholder satisfaction with collaborative processes. In practice however, there may be a much broader range of criteria of which conveners should be aware when deciding on group composition.

Stakeholder recruitment entails consideration of how and why participants are chosen, as well as being aware of the pros and cons (and potential biases) related to various methods of stakeholder selection.

Mandate can refer to the authority stakeholders hold within the process, or the accountability of the process to the wider community and regional council. The standing of the collaborative process within the existing planning and policy processes underway is a very important issue to resolve within the regional council or other convenors of a collaborative process.

Māori have resource ownership and management rights through the Treaty of Waitangi and have a unique position in collaborative processes that should be considered from the earliest stages.

Perceived failures in managerial and adversarial approaches have seen a rise in popularity of collaborative processes for decision-making. Collaborative processes are now being widely promoted as a promising approach to resolving conflict over the management of freshwater resources in New Zealand (Land and Water Forum 2012, MfE 2013).

Collaborative approaches are unique from other methods of public participation in some key features. The basic, and seemingly straightforward, assumption at the heart of collaboration is that those best suited to decision-making are the individuals or groups who will be most impacted by the planning outcome (Morton et al. 2011). Ideally, collaborative processes bring all relevant stakeholders together for face-to-face discussion and negotiation that result in administrative decisions around a particular issue. The decision-making approach itself is generally (but not exclusively) based on consensus rather than on majority rule.

The ways in which stakeholders are involved in the collaborative planning process can have a significant impact on its overall success (Andrew 2001). This policy brief presents three design considerations related to stakeholder involvement in collaboration: group composition, stakeholder recruitment, and mandate. The role of tangata whenua in collaborative processes is also highlighted.

The paper draw on insights obtained from the TANK collaborative process (see Box 1) currently underway in the Hawke's Bay and the extensive literature on collaboration. These considerations are intended to provide insights for practitioners to use as they make decisions about the design of participatory processes.

Box 1: The TANK process

In 2012 the Hawke's Bay Regional Council convened a collaborative stakeholder group to recommend water quantity and quality limits for the Greater Heretaunga and Ahuriri catchment plan change. The process, referred to locally as the TANK group (an acronym for the Tūtaekuri, Ahuriri, Ngaruroro, and Karamu river catchments) is made up of approximately 30 individuals from agricultural and horticultural sectors, environmental and community interest groups, and tangata whenua.

STAKEHOLDER GROUP COMPOSITION

As part of the scoping phase, before committing to a collaborative process, identifying who needs to be represented around the table is among the first considerations. Deciding what the composition of the group should be and achieving representativeness can be challenging and complex. Stakeholder composition is integral to other scoping tasks such as context assessment, and process orientation, to help determine the overall approach to collaboration.

In the Hawke's Bay TANK process, a long list of stakeholders – those most likely to be affected by changes in water quality and quantity limits – was prepared by council staff. The group included representatives from primary production and processing sectors, public agencies, local government, tangata whenua representatives, and community and interest groups. To ensure the representativeness of the group was appropriate from a stakeholder perspective, at the first meeting participants were asked "who is not here". Additional stakeholders were invited to

join, based on the feedback from the other stakeholders, and the final group composition was established by the third meeting. One aspect of stakeholder representation that the group and organisers needed to consider early on in the process was the representation of local interests by local members of national organisations, or by their national representatives residing outside the region. A recommendation was made by the group, to keep the process 'local'. Stakeholders could draw on expertise and advice from national organisations and their wider networks, but all the participants in the group are Hawke's Bay residents.

Involving technical and science staff in the TANK process has been another challenge. Technical/science representatives are not participants per se; rather they provide input and inform the process at key times. The cost and time of having science staff attend every meeting, given all their obligations, were weighed against the consequences of their not being familiar with the on-going discussions and negotiations that established the context for decision-making. There have been meetings at which input from science staff would have been useful, but they were unable to attend because of commitments to other processes that also required technical information. Summary documents that identify objectives, management variables, and performance measures recognised by participants as being important have been useful in this regard, and reports have been shared with stakeholders on a website dedicated to the TANK process. Careful consideration needs to be given to striking the balance between a stakeholder-led process that is not subject to council bias and dominance, and the provision of good quality and timely scientific information that meets the needs of the process participants.

While various options for group composition are described in the literature (see Table 1), the final composition of the stakeholder will depend on the particular context of the collaborative process. Council representatives and/or staff with a clear understanding of the history of water management in an area, and familiarity with local interests, values and issues, and will be valuable in determining the full list of potential stakeholders for any process.

Table 1: Options for choosing group composition (Davies et al. 2005, Bryson et al. 2013)

Type of group composition	Definition	Considerations
Singular	Participants are drawn from a single sector or from a single criterion or category of interest.	Not generally used for collaborative processes, because it is not representative of wider interests. This may work well to form smaller working groups.
Universal	Group composition reflects all relevant categories.	May not be practical for collaborative processes given the diversity of interests involved
Anarchic	Self-selection of participants willing to be involved.	Not favoured by collaborative processes as easily captured by well-organized interests
Selective	Stakeholders are deliberately chosen to represent a chosen selection of categories.	Commonly used in collaborative processes. Categories could be determined through community consultation, expert knowledge or based on the purpose of the collaboration.
Proportionate	All relevant categories and criteria are represented relative to their distribution in the wider population.	Also used in collaborative processes. Risks are that such groups cannot make decisions that run contrary to the status quo.

STAKEHOLDER RECRUITMENT

There are several options for recruiting stakeholders (Table 2). In practice a mixture of approaches is commonly employed, including elements of selection based on social/and or demographic categories, together with deliberately inviting parties known to have relevant credentials and experience.

Table 2: Options for recruiting stakeholders (Bryson 2004, Davies et al. 2005)

Type of recruitment strategy	Definition	Considerations
Election	An interest or group of stakeholders directly appoints a representative.	Ensures there is competent representation of the interest group but may prejudice the process against less formally organised interests.
Sortition	Reasonably random participant selection based on social and/or demographic categories.	Downside is that this approach assumes those in a social category hold uniform views.
Purposeful sampling	Stakeholders are invited to participate based on organizational affiliation and relevant credentials, knowledge or experience.	This approach assumes representativeness and excludes those not affiliated with an organisation.
Volunteerism	Participants volunteer to participate in the process.	While more open than other selection methods this can lead to capture by special interest groups, if they mobilize a large number of volunteers.
Issue orientation	Participants selected to achieve fullness of representation with respect to identified issues. Method, e.g., Q Methodology, required to itemize the issues and arguments for and against positions over those issues, and to identify the representativeness of such arguments and positions.	Allows for broad expression of opinion but does not ensure competence of the participant making those arguments within the deliberative context. Also complex to undertake.

The majority of participants in the TANK collaborative process were purposely recruited by the Council, with some additional participants being invited to join after nomination by their peers. Three councillors volunteered to be involved to ensure the Council's statutory responsibilities were met with respect to any recommendations/decisions coming from the process and to represent the interests of the Hawke's Bay community at large. Following the first meeting, representatives from the District Health Board, Friends of Ahuriri, and the Napier branch of Forest and Bird were approached to join the TANK process, as were additional Māori representatives, all of whom subsequently accepted and are actively involved in the group.

Depending on the context for the collaborative process, it may be useful to consider more closely, various considerations related to stakeholder recruitment:

- Are there certain competencies required of participants, i.e. in addition to having a vested interest in the outcome, are there personal skills or capacities required of representatives in the group?
- Should the collaborative process use existing representatives of stakeholder groups/interests or seek novel ways of representing interests?
- Are representatives included solely because of their knowledge and perspective or should they have a legitimate mandate to make decisions on behalf of others?
- How can the interests not represented by a spokesperson in the collaborative process be included in discussions?
- How will those with an interest in the collaborative process, but who cannot participate, be informed or involved?

STAKEHOLDER MANDATE

Various possibilities for individual mandate within collaborative processes are shown in Table 3. Within the TANK process, the question of individual mandate was discussed very early in the process. For some stakeholders, it was initially unclear whether or not they had sufficient authority to speak on behalf of their respective sector or group, or whether they were there participating as individuals. The issue was resolved by inserting the following section into the Terms of Reference:

> *The members of the TANK group have, in the main, been nominated by their respective sector or group to be their mandated representative. Where members have not been given the mandate of their sector or group, they will participate as individuals and are expected to also convey ideas and perspectives from their wider networks. In meeting three, each member will declare whether they are mandated representatives or not. At the end of the process, each member will declare whether they can support the proposed agreement and promote it to their organisations and networks (see definition of consensus below). Members will also be asked, at that point, whether their organisations (where relevant) would formally endorse the consensus agreement.*

Stakeholders involved in the TANK process have contributed based on their own personal experiences and perspectives, and in some cases, they have been provided with a mandate from a wider group. To support stakeholders in communicating with their networks and organisations, an interim report is being prepared summarizing the process to date, detailing those topics on which there is consensus, and outlining the objectives, management variables, and performance measures identified by participants.

It is likely that there will be additional discussions related to mandate throughout the process as the group begins to make agreements where stakeholders must decide whether or not they endorse a set of consensus recommendations as individuals, or on behalf of their organisations and/or other networks.

Table 3: Options for stakeholder mandate (Davies et al. 2005, Bryson et al. 2013)

Type of mandate	Definition
Delegates	Selected, or possibly elected, directly to represent a particular position on behalf of a party or constituency. Delegates are often bound to this position and accountable for representing it. This may not be the most productive starting point from which to begin a collaborative process.
Trustees	Also selected or elected to represent a constituency, but have a more flexible mandate, allowing them room to exercise judgment in the interest of their constituency. Their mandate leaves room for them to be persuaded and move positions.
Guardians	Accepted as the representatives of a constituency unable or incompetent to represent their own interests, i.e. children or future generations.
Individuals	Represent only themselves, with no formal or informal accountability to anyone else. It is assumed, or arranged, though, that their views are representative – as in purposive sampling or issue-oriented recruitment. The concern is whether they exercise a public, rather than private or group interest in their participative practice.

TANGATA WHENUA AS PARTICIPANTS IN COLLABORATIVE PROCESSES

In New Zealand resource ownership and management rights accorded to Māori through the Treaty of Waitangi, and the associated negotiations with national, and regional government agencies, represent significant contextual factors for collaborative process initiatives across New Zealand (Memon & Kirk 2012). Relationships between regional and territorial agencies and tangata whenua vary widely. The capacity and organising potential of iwi, and their success or otherwise in achieving levels of autonomy and resource independence through Waitangi Tribunal settlements clearly have profound impacts on the use of collaborative processes. Most importantly for collaborative processes, the Treaty of Waitangi provides tangata whenua with the standing of a direct treaty partner with the Crown. The challenge for collaborative processes is to facilitate tangata whenua participation while recognising they hold a unique position and should be regarded as more than just an interest group.

Developing a collaborative process that is responsive to the particular relationship needs between tangata whenua and the organisers of a collaborative process requires particular effort in relationship building.

In the TANK process, tangata whenua representatives have been involved from the start, and include members of high-standing within the community. The collaborative process meetings are generally held at the local taiwhenua offices, and there has been an opportunity to visit other marae in the region, as part of a group fieldtrip.

In the main, tangata whenua considerations include respect for the unique position of Māori within a collaborative process, clarification of iwi and local government roles and expectations, and appreciation of the importance of historic issues and on-going concerns of Māori. Good practice guidelines for working with tangata whenua and Māori organisations, reviews of past collaborations between tangata whenua and local government, straightforward ideas about how to progress important matters are summarized in Harmsworth (2005) and Harmsworth et al. (2013).

CONCLUSIONS

Insight and good practices for stakeholder recruitment, group composition, and mandate have been drawn from the Hawke's Bay TANK process and the literature on collaborative processes. Stakeholder composition and recruitment are the success factors most widely agreed on by most participants. There are many options available for recruiting stakeholder participants but the choice of what approach to take depends on knowledge of the context and intentions of the collaborative process. Since no approach to stakeholder composition and recruitment will meet all needs, it is important to reflect on what bias may be unconsciously included and act to mitigate this. Stakeholders' mandate for the TANK process was discussed early on, but is not likely to be fully resolved until the final consensus decisions are made. By providing stakeholders with an interim report, and encouraging them to communicate with their organisations and wider networks, the workings of the process are shared with the community. It is also important to consider the unique position Māori have in collaborative processes, and undertake appropriate consultation as part of scoping and planning stages.

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ACKNOWLEDGEMENTS

The authors gratefully acknowledge the Ministry of Business, Innovation and Employment for funding to support the Values, Monitoring and Outcomes Programme. We would also like to thank the TANK collaborative process participants and the Hawke's Bay Regional Council for allowing us to be actively involved in supporting their process.

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Appendix 6: Policy Brief Collaborative Processes and the Roles of the Council

See next page.

Landcare Research
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POLICY BRIEF
Insights for government, councils and industry

Collaborative Processes and the Roles of the Council

Natasha Berkett and Jim Sinner, Cawthron Institute

RECOMMENDATIONS

Regional councils hold a number of roles within a collaborative process. Articulation of these roles is necessary to ensure council staff and stakeholders understand when and what roles are being undertaken at any one time. We offer the following recommendations for how councils can manage the likely tensions between the various roles they can play in collaborative processes.

Leader: The role of leader should be filled by a councillor or senior staff member who champions the collaborative process, secures a mandate and resources and has sufficient authority to keep the process on track and the participants around the table. An effective leader is committed to finding an outcome that reflects a genuine consensus rather than one that is dominated by a particular interest.

Facilitator: While the facilitator may be paid by the council (or other sponsoring body), perceptions of bias can be reduced if the facilitator is not an employee of the council. In practice, however, performance is probably more important than perceptions based on employment status. That is, participants will judge a facilitator for themselves after a few meetings; the facilitator must maintain impartiality or the process is likely to falter.

Expert/Analyst: Council science staff will be called upon to provide expert analysis and advice to a collaborative stakeholder group (CSG). To mitigate the risk that this advice will be seen as serving the council's own interest as a stakeholder, at least one science staff member should participate in CSG meetings from an early stage to build mutual trust with other participants. Non-council participants of CSGs should also be encouraged to present their information and analysis.

Stakeholder: As a stakeholder, the council has additional interests to its duty to represent the wider community. Councillors can serve as members of the CSG to represent interests not at the table and the wider community, while senior staff represent the statutory and organisational interests of the council. These CSG members should liaise with other councillors and staff in the same way other stakeholders are expected to liaise with their networks, to ensure there are no surprises and that a consensus reached by the CSG will hold after the signatures on the paper are dry.

BACKGROUND

THE FRESHWATER REFORMS AND COLLABORATIVE PLANNING

The National Policy Statement on Freshwater Management (NPSFM), released by the New Zealand Government in 2011, directs local government to manage water in an integrated and sustainable way. Councils are required to set objectives and limits, for both water quality and quantity, for all bodies of freshwater in their regions. In future, councils may choose to prepare or review freshwater policy statements and plans using collaborative planning processes, if the Government's proposed amendments to the Resource Management Act 1991 (RMA) are enacted.

According to International Association of Public Participation (IAP2), to engage in a collaborative process means to partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution. Collaboration is not the same as consultation, which is defined by IAP2 as to obtain public feedback on analysis, alternatives and/or decisions (IAP2, 2013). In New Zealand most resource management practitioners are familiar with consultative processes (because they are required under the RMA and the Local Government Act 2002) but are less familiar (or not familiar at all) with collaborative processes.

Not all planning problems lend themselves to successful collaborative outcomes, and some may be better suited to the existing RMA Schedule 1 process. However, if a council chooses a collaborative process, a key to achieving successful outcomes is identifying at the design stage the different roles council staff play in such processes.

Literature on public administration, bureaucratic behaviour and regulatory theory identifies four broad roles agency personnel might play in a collaborative process: leader, facilitator, stakeholder and expert/analyst (see Berkett & Sinner, 2013, for a summary of this literature). Different roles will require different skill sets and are likely to involve a number of people across the organisation. More importantly, if a person has multiple roles, both the person and the other participants may become confused as to which role is being performed at any given time.

Figure 1: Collaborative stakeholder group members discuss values attributed to the Ngaruroro River in Hawke's Bay.

As members of a research team, we have been observing and documenting the roles council staff have played in a collaborative process underway in Hawke's Bay. The process (known locally as 'TANK') was initiated in 2012 by Hawke's Bay Regional Council (HBRC) to recommend allocation and water quality limits to be included in a plan change for the Greater Heretaunga and Ahuriri catchments. In the TANK process, HBRC has at various times played each of the roles described above, although at times the lines have been blurred. We discuss each of the roles in turn and make a number of recommendations for how the role of councils can be clarified in the design of collaborative processes.

THE ROLE OF LEADER

Leadership in a collaborative process includes sponsoring and legitimising the process and establishing the boundaries for dialogue. Certain aspects of leadership are essential at the outset, while others are more important during moments of deliberation or conflict and when championing the collaborative process through to implementation.

An effective leader is committed to the process and to supporting its outcomes. As leader of the TANK process, HBRC initiated the plan change and provided the mandate for the CSG, including a council resolution to give effect to any consensus recommendations agreed by the CSG. The mandate is documented in the TANK terms of reference (TOR), which was drafted by Council staff before being reviewed, amended, and agreed by the CSG participants during the first two meetings.

Another aspect of leadership is identifying and recruiting stakeholders for a CSG. In the TANK process HBRC staff recruited most of the CSG participants directly, although some "snowballing", whereby participants suggested other people, did occur. In Canterbury and Greater Wellington, the council advertised for community members for its zone committees, but the council still decided who would be appointed.

HBRC staff have also been responsible for engaging a facilitator, organising the CSG meetings, recording the meeting outcomes and processing information generated from the meetings.

The person who fulfils the leader role should be sufficiently senior to champion the process with both the regional council and the CSG participants. In Canterbury this role has been performed by a commissioner. In other processes this role has been undertaken by a councillor or senior staff member.

The leader of a process is likely to experience an inherent tension between getting an outcome that suits the council's needs and supporting a neutral process. The tension can perhaps be managed by the council stating its boundaries and positions clearly at the outset and acknowledging it has a role as a stakeholder and cannot be entirely neutral.

THE ROLE OF FACILITATOR

The facilitator role requires a person or persons with sufficient trust and respect from the participants to keep the process moving forward (i.e. process facilitation) and to ensure the diversity of views is heard (i.e. meeting facilitation). The lack of trained, well-resourced facilitators can be a significant barrier to effective stakeholder participation. Good facilitators must be able to create an environment where participants can feel comfortable enough to explore differences respectfully.

Figure 2: Facilitation of small group sessions during the TANK process

Confusion of roles, especially that of the facilitator, can lead to misunderstandings and conflict among CSG participants. Whilst a facilitator needs to be neutral on the issues under discussion and have no substantial stake in the proceedings, a council does have a stake and should be actively advocating its interests. For example, where a council is tasked with environmental protection, the council cannot play the role of a neutral facilitator for decision making in a project with potentially negative impacts on the environment. A facilitator should not be the same person who is representing the interests of the council at the table. Facilitators must also recognise that their own views and biases can impact on the process. They need to refrain from debating the substance of an issue and stay focussed on good process.

In the TANK process, the meeting facilitator is contracted but not employed by HBRC, and is a resident of Hawke's Bay with good knowledge of local issues. The meeting facilitator has had an active part in organising each meeting and has input into the next steps at each stage of the process. The meetings have benefited from having an impartial facilitator who ensures there is equal air time for everyone and a fair hearing for all.

Like the role of leader, the role of an independent facilitator is also not without tension. A facilitator requires an ability to tread the line between the needs of the group and the needs of the council who is, effectively, their employer. In managing this tension we consider it important to clearly define the expectations for the facilitation role at the design stage and to identify 'who does what' – particularly with regard to the interaction between the process leader and the facilitator, if different people are in these roles. Details, such as whether the facilitator can make unplanned changes to a meeting agenda in response to group needs, should be ironed out before meetings.

THE ROLES OF EXPERT/ANALYST

The appropriate use of data and technical knowledge and how it might affect planning outcomes is an issue council staff will need to consider as part of the design of a collaborative process. Technical expertise is needed in collaborative processes to identify and explain the social, environmental, cultural and economic effects of different policy options. However, too much data and analysis can overwhelm the collaborative dialogue and may come at the expense of the process itself.

As in a RMA Schedule 1 process, collaborative outcomes should be underpinned by a sound base of scientific and technical information. Failure to do this could result in outcomes where scientific and legal realities have been ignored. It is also important to introduce information at the right time and in a format that addresses a question or an information need. An information 'dump' early in the process is not likely to be very helpful for participants.

Council staff have been involved in the TANK process as technical experts and have been brought in to inform the process at key times. The Council holds a number of reports that contain data that are, or will be, useful to the TANK participants during the collaborative process. Staff have collected and displayed these reports on the Council website, have presented findings from the reports and have identified gaps in information that will be addressed, if possible, in their future work programmes.

One learning from the TANK process is that it would be helpful to have a technical person at each meeting who is familiar with the range of science knowledge the council collects and can be part of the discussion, explaining technical matters and challenging ideas that are not supported by evidence. This person could also serve as a liaison with other council staff asked to provide expert advice. Involving a technical person for the entire process may also help to build trust between council science staff and the CSG participants. Trust is important to enable science staff to speak openly of the consequences of potential policy options and to consider alternative analysis provided by CSG members, which should be encouraged.

THE ROLE OF STAKEHOLDER

Councils, as statutory agencies, are stakeholders in collaborative processes in that they are one of many participants with a specific set of interests to advocate. The council's main interests are to ensure that the process stays within scope, budget, legal and time boundaries. It may also wish to maintain control over planning, monitoring and reporting procedures and outcomes. Councils also have a responsibility to represent community interests not present in the CSG.

In the TANK process HBRC appointed three councillors to the CSG "so that the group does not recommend a solution that the Council finds unacceptable and so expectations are managed".[1] The Council's role as a stakeholder has also been represented by a staff member who is the project manager for the process. A senior manager has attended at critical junctures, e.g. when the TOR was being finalised and when an interim report was being negotiated.

During TANK meetings, the councillors have advocated for the Council's statutory responsibilities and the interests of the Hawke's Bay community at large. They have also contributed their understanding of policy and local government legislation, and have offered valuable comment from a ratepayer's perspective. The councillors' role is an interesting one, as councillors are not employees of the Regional Council but are elected by the community to represent community interests. Are they there to represent the Council as an organisation or to represent the interests of their constituents in the wider community, or a combination of both? This is an example of the blurring of role boundaries and an inherent tension that councillors sitting on a CSG face.

The HBRC councillors were asked to do three things:

- Advocate for the council's statutory responsibilities, e.g. meet its obligations under the NPSFM
- Ensure the group did not recommend HBRC spending that the council would not accept
- Represent wider community interests not present in the TANK membership.

These three roles can be in conflict at times, as well as potentially being at odds with a desire to promote politically popular positions. Perhaps because of the blurring of the role boundaries for councillors, the HBRC staff member who is managing the process has realised that at times he also has to advocate for the council's responsibilities, and in that sense is a member of the group (i.e. a stakeholder on behalf of the council) and not just a neutral project manager.

> *"…if the group reached an outcome which impacted on staff resources and I knew, say, our science team couldn't deliver, I would have to intervene"*
>
> (pers. comm. 10 September 2013).

Indeed, because the council is a stakeholder, its other roles as the leader of the process, the employer of a facilitator and a provider of science are all potentially compromised or made vulnerable to perceptions of bias or hidden agendas. This tension cannot be completely avoided, so it must be managed.

SUMMARY

The tasks of being a leader, possibly a facilitator, and certainly a stakeholder, a representative of wider public interests and provider of technical expertise imply an array of skill-sets for councils that wish to undertake collaborative processes. It is apparent that these roles are rich, complex and difficult to fulfil. Councils must clearly identify the roles their staff and councillors will be expected to play and must build personal and institutional capacity to enable collaborative processes to reach successful outcomes. More importantly, it should be clear, at any given time, who is performing what role to avoid confusion for the other CSG participants.

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ACKNOWLEDGEMENTS

Prepared for the Freshwater Values, Monitoring and Outcomes Programme C09X1003, funded by the Ministry of Business Innovation and Employment's Science and Innovation Group

The authors would like to acknowledge Tim Sharp and Helen Codlin of HBRC and Robyn Wynne-Lewis of Core Consulting for their thoughtful contributions to this paper.

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Appendix 7: Policy Brief Maori involvement in Collaborative Freshwater Planning – Insights from Hawke's Bay

See next page.

Landcare Research
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Māori Involvement in Collaborative Freshwater Planning – Insights from Hawke's Bay

Jim Sinner, Cawthron Institute; Garth Harmsworth, Landcare Research

KEY POINTS

The Treaty of Waitangi of 1840 underpins expectations among iwi and hapū that they will be equal partners with regional councils in collaborative planning and decision-making for freshwater management.

We recommend that, at the initiation of a collaborative planning process, Māori be invited to exercise the co-governance role of Treaty partner by joining the council as a co-sponsor of the process. In this role, they would be involved in the selection of members, setting the terms of reference, ensuring opportunities for those not in the room, and empowering others by implementing robust outcomes reached through consensus.

Māori interests are not limited to "cultural values". Māori have unique rights and interests arising from the Treaty relationship that can be identified as the basis for outcomes sought in a collaborative process.

Collaborative processes will not always be the best way to take into account the Treaty's principles. In some cases, tangata whenua may prefer to deal directly with the council through traditional decision-making processes.

INTRODUCTION

Following the recommendations of the Land and Water Forum, recent freshwater policy reforms in New Zealand provide specifically for Māori involvement. The government is also promoting collaborative planning to encourage communities to work towards agreed freshwater outcomes.

We draw on learnings to date from Hawke's Bay to identify how councils and iwi and hapū might meet their respective responsibilities within a collaborative planning framework.

A NEW ERA OF GOVERNANCE AND DECISIONMAKING

Section 8 of the Resource Management Act 1991 (RMA) requires that regional councils take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). More recently, the National Policy Statement on Freshwater Management 2014 directs councils to "involve iwi and hapū in the management of fresh water and freshwater ecosystems in the region" (Ministry for the Environment 2014, p. 18).

Iwi and hapū Māori see themselves as equal partners for all collaborative planning and decision-making, guided by the principles of the Treaty (Harmsworth et al. 2013). Māori and government representatives will therefore need to resolve how freshwater management will be governed, including in the context of collaborative planning. This involves issues within and between Māori entities, i.e. who will speak for whom, and between Māori and regional councils.

There is an emerging body of practice for Māori involvement in collaborative governance and co-management of freshwater in many regions in New Zealand, summarised in Sinner and Harmsworth (2015). This policy brief outlines some of the learnings that are emerging from a collaborative planning process in Hawke's Bay. We make some recommendations about membership and representation, values of tangata whenua, the pressure to compromise, and how to reconcile the apparent tension between co-governance and collaborative freshwater planning.

FRESHWATER GOVERNANCE IN HAWKE'S BAY

In April 2011, the Hawke's Bay Regional Council (HBRC) established a Regional Planning Committee (RPC) as the preferred model for co-governance of the region's natural and physical resources. The RPC consists of all nine elected councillors and tangata whenua representatives from nine Treaty claimant groups within the region. The Committee's role includes overseeing the development and review of the regional policy statement and regional plans under the RMA. The Committee is required to make best endeavours to achieve decisions on a consensus basis or, failing consensus, by agreement of 80% of committee members in attendance.[1] The RPC met for the first time in April 2012.

Also in 2012, HBRC convened a separate collaborative stakeholder-community group specifically to recommend policy settings for freshwater management for a plan change for the Greater Heretaunga and Ahuriri zone.

[1] http://www.hbrc.govt.nz/About-your-Council/Plans-Strategies/Pages/regional-planning-committee.aspx

The collaborative stakeholder group is referred to locally as the TANK group, after the Tūtaekurī, Ahuriri, Ngaruroro and Karamū catchments within the Greater Heretaunga and Ahuriri area. A Council resolution has given a good faith undertaking to implement any consensus recommendations from the group provided they are consistent with the RMA and certain council policies. As of March 2015 the group had met 15 times and issued a first report that identified values and other factors the group will use to assess policy options. More meetings are planned for 2015, with the goal of making recommendations for the plan change in 2016.

MEMBERSHIP AND REPRESENTATION

One of the first questions to consider when establishing a collaborative group is its membership. Some literature (Innes & Booher 2010, p. 92ff) suggests that participation should be open to all those who have a strong interest in the outcome, but in a large and diverse geographic area with a wide range of stakeholders this is not always practical.

Decisions about who should represent Māori within such collaborative groups require an understanding of the complex hierarchical nature of Māori society (Table 1).

When considering who should be on the TANK Group, HBRC staff spoke to various iwi, hapū, and marae members and HBRC's Māori Standing Committee. HBRC invited Ngāti Kahungunu Iwi Incorporated (NKII) to participate and provide an iwi perspective, and sought NKII's advice on how to engage more broadly with Māori groups.

Table 1. Māori society, governance and decision-making

Level of Māori society	Areas of activity and interest	Scale (e.g. for decision-making, co-management)	Main representation (constituents)
Iwi	Highest level governance (political, Treaty claims, tribal assets, regional entities, iwi authorities)	Regional–national (large geographic areas, tribal boundaries)	Representation by iwi, hapū, marae, and whānau
Hapū	District–hapū development, local politics & decision-making, hapū and whānau values	District (small geographic territorial areas/river- lake catchment areas (e.g. based on local geography, hapū boundaries)	Strong representation by whānau and marae
Marae	Social and cultural development	Generally specific sites but also wider districts and catchments	Strong representation by local hapū and whānau (e.g. ahi kaa*)
Whānau	Human, social, cultural and economic capital within families	Both local and dispersed throughout NZ and overseas (e.g. Australia)	Extended families, individuals

***** *Ahi kaa* refers to the home people – the ones who live on their whenua (land) and keep the home fires burning. They keep their place, particularly the marae, alive.

HBRC invited a number of other regional and district Māori representatives, including a Taiwhenua group (a sub-group of NKII) representing hapū in the Heretaunga area; representatives from three local marae; a Treaty claimant group; a tangata kaitiaki group; and a wider group formed to advocate for Māori interests in water in Hawke's Bay, Tē Roopu Kaitiaki o tē Wai Māori. The Council's Regional Planning Committee was later briefed on Māori membership of the TANK Group, as part of the Council's co-governance arrangements.

In 2014, two more tangata whenua groups asked to join the TANK Group, one an umbrella group for many marae, the other representing four hapū of the Tūtaekurī catchment. Existing members welcomed the new members, provided they accepted the Terms of Reference. With membership of the TANK Group then at 30, HBRC recommended, and the TANK Group agreed, that further requests to join the group would not be accepted, due to the size of the group and the difficulties for newcomers to catch up.

There can be good reasons for including representatives from multiple levels of Māori society, even if these sometimes overlap. For example, if there are particularly significant water management issues at one or two marae, i.e. more so than at other marae, it might be appropriate for those two marae to be represented in a collaborative process covering the wider catchment. Representatives from hapū or iwi, or possibly other Māori entities or structures, can represent tangata whenua on the wider issues while deferring to the two marae representatives on their local issues.

COMMUNICATION WITH OTHER MĀORI GROUPS

In the TANK process, no one group has been specifically mandated to speak on behalf of all hapū and marae regarding water management issues. Ensuring a ready two-way flow of information between those in the TANK Group and wider tangata whenua is therefore critical – and can be a significant exercise. One option for TANK tāngata whenua would be to run associated hui for marae, hapū, trust boards, and other tangata whenua organisations who wish to be involved. This is under consideration as part of a hapū/iwi engagement plan for the TANK plan change.

Within the TANK Group, the Māori participants formed a "tangata whenua/mana whenua" group so they could discuss upcoming TANK topics together in their own space, before discussion in the wider forum. Five meetings were held but because of conflicting schedules and competing demands it became progressively more difficult to keep this group together. For such an arrangement to be successful, it will need to have a specific mandate and dedicated resources.

OVERLAPPING ISSUES AND PROCESSES

Within every region in New Zealand, iwi and hapū are contending with overlapping issues ranging from biodiversity strategies and freshwater management plans to coastal development and management of Māori commercial enterprises. Meanwhile, there are Treaty claims being negotiated that directly overlap with many of these same issues. This will affect group dynamics within Māori society and how Māori view planning activities led by councils. There will be times when iwi and hapū are not ready to engage with councils or participate in collaborative planning because of these other conflicting issues. Capacity and capability issues also arise for iwi and hapū – there is a limit to how many issues and processes to which they can contribute at any one time.

In the TANK process, the management of the Ahuriri Estuary was included in the TANK Group's terms of reference. Later, through a separate Treaty claims process, Crown agencies and HBRC agreed to work with Mana Ahuriri[2] to develop a management plan for the estuary. This created ambiguity over which process was tasked with making recommendations on the management of the estuary. Mana Ahuriri has since withdrawn from the TANK Group, citing their representation in other groups and fora at present. This could become a source of tension if the TANK Group proposes policy measures with which Mana Ahuriri does not agree or vice versa.

[2] Mana Ahuriri Incorporated represents a collective of Ngāti Kahungunu hapū that have a Treaty of Waitangi claim and mana whenua interests in and around the Ahuriri estuary.

As collaborative processes evolve around New Zealand, it is likely to become clearer how well outcomes for Māori (and also for communities and industry) are being achieved, and in what circumstances tangata whenua may prefer to deal directly with the council.

THE 'CULTURAL VALUES' CATEGORY

Decision methodologies, such as "structured decision making" (SDM) used by the TANK Group (Gregory et al. 2012; Sinner et al. 2014), often involve identifying values and objectives concerning the issues under consideration. In the TANK process, the group originally sought to identify values and objectives in five themes: Social, Ecological, Economic, Cultural, and Assets & Rates. It became evident, however, that Māori values were relevant across all themes and could not be confined to a cultural values category.

The TANK Group therefore defined a mana whenua/tangata whenua theme that covered "matters reflecting more formal rights and interests of Māori in access to resources, governance and management". This distinction between rights and interests unique to Māori, e.g. arising from the Treaty relationship, and other more general cultural values resulted in greater clarity when these were included as objectives in the SDM framework.

For example, for the value "habitat/Indigenous biodiversity", the TANK Group has adopted the objective of "safeguard the life-supporting capacity and enhance the mauri of waterways". The performance measures include mauri and mahinga kai availability but also area and condition of wetlands – these are ecological as much as cultural matters and of interest to many stakeholders, not just Māori. However, for the objective "recognise and provide for tangata whenua values and interests in freshwater and improve opportunities for Māori to access and use freshwater resources" the performance measures are quite specific to Māori, e.g. tangata whenua involvement in governance and Māori water allocations (see Table 2).

THE PRESSURE TO COMPROMISE

A TANK Group member said that tangata whenua values are still not well understood and acknowledged, and this causes them to feel pressure to compromise. This is compounded because Māori aspirations can be more difficult to translate into catchment plans than, e.g., requests for a lower minimum flow. However, given these factors, Māori are likely to have difficulty in traditional plan-making processes as well because the strength of one's position inside a collaborative process depends in large part on what one could achieve through other means in the absence of consensus. Those who are able to achieve most of their ends without consensus are in a stronger position than those who cannot. Hence, for any stakeholder, an inability to secure outcomes in a traditional process will mean a weaker position in a collaborative process.

Table 2. Māori society, governance and decision-making

Values	Objectives	Performance Measures
• Life-Supporting Capacity • Mauri and Taonga • Habitat /Indigenous biodiversity	Safeguard the life-supporting capacity and enhance the mauri of waterways	• Macroinvertebrate assemblage including community index score • Mauri • Richness and abundance of native fish • Area of wetlands • Condition of wetlands • Mahinga kai quality and availability • Richness and abundance of native birds
• Kaitiakitanga • Mana • Mauri and Taonga	Recognise and provide for tangata whenua values and interests in freshwater and improve opportunities for Māori to access and use freshwater resources	• Tangata whenua involvement in governance • Use of Mātauranga Māori in environmental monitoring and reporting • Māori water allocations

In terms of how this plays out in a collaborative planning process, the theory of collaboration is clear. Participating in a collaborative group does not mean that any party should agree to something that would make them worse off. "Giving in" is actually in no one's interest, because it leads to resentment and lack of on-going support for the agreed outcome:

> *… since durable agreements are deeply rooted in people's interests, both hard bargaining (insisting on one's way) and soft bargaining (giving in to avoid conflict) are equally destructive. The soft bargainer resents the other player afterwards, and the hard bargainer may not get true agreement. Thus for collaborative dialogue to produce durable conclusions, every participant must both know his or her interests and explain and stand up for them. Finally… if you win at the expense of the other party, you create an enemy, but if you can find a mutual gain solution, you create an ally. This insight carries over to collaborative dialogues, which build social and political capital that lasts into the future (Innes & Booher 2010, p. 28).*

Participating in a collaborative group requires engaging in good faith by explaining positions and disagreements so the full group can try to resolve them and meet everyone's aspirations. Parties should only agree to a proposed consensus if they feel it is better than pursuing a non-collaborative course of action.

While Māori might feel pressure to compromise, collaborative processes offer the opportunity for Māori (and other parties) to get a better outcome than they would have achieved without it. Through collaborative dialogue, the non-Māori members will gain a greater understanding of Māori interests and perspectives. In addition, the focus on overall outcomes rather than positions (e.g. a river being good for fishing rather than a specific minimum flow) encourages discovery of innovative ways of achieving desired outcomes, e.g. including ways to translate Māori aspirations into planning language.

In a collaborative process, it is in everyone's interest to find a way to make everyone else happy, because achieving consensus greatly increases the likelihood of all parties securing gains without the cost of an adversarial process.

COLLABORATION, CO-MANAGEMENT AND CO-GOVERNANCE

Freshwater reforms are promoting collaborative planning just as Treaty settlements are granting some iwi co-management and co-governance arrangements. This raises the question of how iwi and hapū can exercise a co-governance role and at the same time be part of a multistakeholder collaborative process.

In early 2014 the Regional Planning Committee was asked to endorse the TANK process and give the same undertaking as the full Council had done 18 months earlier. The RPC said it would "have particular regard" to TANK recommendations, thus reserving its right to vary the decision (Hawke's Bay Regional Council 2014, p. 5). In practice, this may not be very different from the Council's undertaking, since legally the Council cannot waive its responsibility to reach its own judgment. For the RPC, however, having only recently established the co-governance relationship, the wording was important to make clear that it was not giving away its newly aquired authority.

Collaborative planning presents councils with a dilemma in terms of their own role – how can a council endorse collaborative planning and give a decision-making role to others when the council is the duly elected decision-making body for the regional community? Why would any elected body willingly share power with another unelected group?

Iwi and hapū face the same dilemma – why, just as they are gaining a share of power through a co-governance arrangement, would they diminish that power by delegation to a wider collaborative stakeholder group?

One way to address these concerns would be for a council, when it is considering establishing a collaborative stakeholder group, to work with its Māori partners to develop the terms of reference, determine the membership of the group, and decide how the group will be facilitated and managed. Tangata whenua can then have greater confidence that any consensus recommendations that emerge will appropriately reflect the range of Māori rights, interests, and concerns.

Both councils and their tangata whenua partners are also stakeholders in their own right with interests in the outcome of the collaborative process, and need to engage with the other stakeholders in good faith in an attempt to reach consensus. Both retain the right to block consensus within the stakeholder group and refer the matter back to the council for a decision. In Hawke's Bay, that would give the elected councillors and Māori, through the RPC, an equal say in the final decision.

Empowering others to make decisions is also a form of governance, and is consistent with both Māori and western democratic values that encourage reasoned debate by all concerned as the preferred means of resolving difficult issues. The sponsors of the process, e.g. a council together with the Māori Treaty partner, do not need to control the outcome but rather to ensure the integrity of the process by convening a group with diverse interests and perspectives to find an outcome acceptable to all (Berkett & Sinner 2013). Such an approach shares power but it also shares the responsibility.

CONCLUSIONS

Councils will need to build capability in running collaborative processes with stakeholders, communities and Māori. One of the greatest challenges will be clarifying and enhancing the role of iwi and hapū in decision-making processes under both a Treaty relationship and a collaborative planning framework.

This can be achieved if Māori and councils work together as partners and joint sponsors of collaborative processes. In this role, they protect the integrity of the process, ensure opportunities for those not in the room, and empower others by implementing the outcomes reached through consensus.

ACKNOWLEDGEMENTS

The authors would like to acknowledge Tim Sharp (Hawke's Bay Regional Council) and Ngaio Tiuka (Ngāti Kahungunu Iwi Incorporated) for their insights during the development of this policy brief. We would also like to acknowledge the Ministry of Business Innovation and Employment's Science and Innovation Group whose funding of the Freshwater Values, Monitoring and Outcomes Programme (C09X1003) enabled this research and brief to be prepared.

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Appendix 8: Policy Brief: Evaluating a collaborative process

See next page.

Landcare Research
Manaaki Whenua
POLICY BRIEF
Insights for government, councils and industry

Evaluating a collaborative process

Nick Cradock-Henry

SUMMARY

Collaborative processes are being promoted as an alternative decision-making process for managing freshwater resources in New Zealand. This is a relatively recent phenomenon, and, given its growing popularity, it is important to develop and apply methods and criteria for evaluation, to determine strengths and weaknesses, and to identify best practices for effective use of the collaborative model.

Evaluation based on multiple criteria and at several points in time can assist those involved in designing and organizing collaborative processes to ensure the process is responsive to stakeholders' and achieves its objectives. The success of both the process and the outcome of collaborative processes can be effectively appraised using participant surveys.

Efforts at setting water quality and quantity limits in catchments throughout the country have become contentious and often litigious processes, in which polarizing and 'positions-based' bargaining is the norm. In keeping with the recommendations of the Land and Water Forum (2012) and as part a wider suite of freshwater reforms, collaboration in decision-making processes is now being widely promoted as a promising and constructive alternative to resolving conflict over the management of water resources in New Zealand (MfE 2013).

THE TANK COLLABORATIVE PROCESS

In 2012 the Hawke's Bay Regional Council convened a collaborative stakeholder group to recommend water quantity limits and water quality targets for the Greater Heretaunga and Ahuriri catchment plan change. The process, referred to locally as the TANK group (an acronym for the Tutaekuri, Ahuriri, Ngaruroro and Karamu river catchments) is made up of approximately 30 individuals from agricultural and horticultural sectors, environmental and community interest groups, and tangata whenua. In addition to working towards consensus recommendations for freshwater quality and quantity in the catchments, the TANK process has provided an opportunity to develop, in real-time, a case-study example of how to prepare for, conduct, and evaluate a collaborative process.

This paper describes the criteria and methods being used to evaluate the collaborative process and outcome, in the Hawke's Bay.

WHY EVALUATE?

Collaborative approaches to decision-making and planning processes have been widely adopted in other countries, and there is now a growing body of empirical examples and evaluative literature (Leach et al. 2002, Gunton 2003, Frame et al. 2004, Sabatier et al. 2005, Ansell and Gash 2008, Innes and Booher 2010, Morton et al. 2012). Evidence from case studies of collaborative approaches show these processes can generate higher quality, and more creative and durable agreements that are more successfully implemented due to increased public buy-in and reduced conflict. Collaboration can generate social capital, by facilitating improved relationships between stakeholders, generating new stakeholder networks, enhancing communication skills, and co-producing new knowledge with stakeholders (Morton et al. 2011, Podestá et al. 2013). However, collaborative processes are a relatively recent phenomenon, particularly when compared with historical planning and decision-making processes. In New Zealand, collaborative approaches are becoming increasingly popular, and processes have been used, are currently underway or are being considered in almost every region in the country. Given the expected growth in the use of collaborative processes for freshwater management in New Zealand, it is important to develop, apply, and extend approaches to evaluating collaboration to assess strengths and weaknesses, and to identify best practices for effective use of the collaborative framework.

WHAT TO EVALUATE?

There are many criteria for evaluating the success of collaborative processes, including the degree of inclusiveness, adequate resources and facilitation, or responsiveness to the existing context. However, no collaborative process can be designed for all eventualities at the outset and collaborative processes are often large-scale, long-term projects that evolve through different cycles of goal setting and key political relationships. Therefore, the ultimate success factor is building in both the capacity to generate feedback on the collaborative process and the flexibility to re-design the process based on the feedback from stakeholders.

The conveners of processes should consider both built-in formative and summative evaluations, i.e. assessments of the on-going *process* of collaboration as well as the *outcomes*. An evaluation of outcomes includes analysis of all desirable outcomes, and not simply whether or not consensus was reached

(Frame et al. 2004, Cullen et al. 2010, Bryson et al. 2013). Considering in advance what the evaluation criteria might be, can also assist with planning the collaborative process and need not be resource intensive.

WHEN TO EVALUATE?

There is a significant literature on evaluation of collaborative processes; however, with few exceptions, they are all *ex post* assessments, and often limited in scope. Longitudinal formal evaluations are relatively uncommon, but they can be an important tool in the early stages of the process, to refine the process, help identify stakeholders that should be represented, or anticipate any potential sticking points.

The evaluation of the TANK process is longitudinal, i.e. assessments have been conducted near the beginning of the process (soon after the group was convened), and near the middle of the formal series of meetings. A comprehensive evaluation will be undertaken at the end of the process, to gauge the success of the outcome criteria.

HOW TO EVALUATE?

Evaluations conducted elsewhere have used a combination of methods, including orders of outcomes and logic models, surveys, questionnaires, and interviews.

For the evaluation of the TANK process, an online-survey is being used as the main evaluation tool. This is supplemented by the use of feedback forms (with which participants are provided following each meeting), informal feedback from stakeholders (via email, or personal communication/in conversation), and interviews with key stakeholders and convenors.

A link inviting stakeholders to complete the survey is emailed, and printed copies are also provided on request. Response rates for the first two surveys have been over 80%.

The surveys are based primarily on an integrated assessment framework, bringing together evaluation criteria from a number of other studies (Moote et al. 1997, Gunton et al. 1998, Innes and Booher 1999, Frame et al. 2004, Morton et al. 2012). The evaluation criteria from each of these previous studies have been identified and compiled into a full list of 14 criteria related to the success of the collaborative process itself (i.e. desirable features of process design) and 11 outcome criteria, which define objectives related to a successful outcome to collaboration (Frame et al. 2004, Morton et al. 2011).

The process and outcome criteria and a short definition for each are shown in Tables 1 and 2. There are multiple questions used to test for each criterion. The questions are designed as statements that require respondents to indicate their agreement using a 5-point scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). For example, the following three statements are being used to test the 'perceived as successful' outcome criterion.

Outcome Criterion: Perceived as successful.

1. The TANK process was a positive experience.
2. The TANK process was a success.
3. I am satisfied with the outcome of the TANK process.

The first two surveys conducted to date are testing only for the process criteria, and the final survey will evaluate both process and outcome, using the same method.

Table 1: Criteria used to evaluate success of the process of collaboration

Criterion	Definition
Voluntary participation and commitment	Affected or interested stakeholders participate voluntarily and are committed to the process.
Self-design	The parties involved work together to design the process to suit the needs of the stakeholders.
Clear ground rules	As the process is initiated, a comprehensive procedural framework is established that includes clear terms of reference, operating procedures, schedule, and protocols.
Equal opportunity and resources	The process provides for equal and balanced opportunity for effective participation of all interested/affected stakeholders.
Principled negotiation and respect	The process operates according to the conditions of principled negotiation including mutual respect, trust, and understanding.
Accountability	The process and its participants are accountable to the broader public and their own constituencies.
Flexible, adaptive, creative	Flexibility is designed into the process to allow for adaptation and creativity in problem solving.
High-quality information	The process incorporates high-quality information into decision making.
Time limits	Realistic deadlines and milestones are established and managed throughout the process.
Commitment to implementation and monitoring	The process and final agreement include commitments to implementation and monitoring.
Effective process management	The collaborative process is managed and coordinated effectively and in a neutral manner.
Independent facilitation	The process uses an independent facilitator throughout the process.

Table 2: Criteria used to evaluate success of the ***outcomes*** of collaboration

Criterion	Definition
Agreement	The process reaches an agreement accepted by all stakeholders.
Perceived as successful	The process and outcomes are perceived as successful by stakeholders.
Conflict reduced	The process reduces conflict.
Superior to alternative	The process is perceived by stakeholders as being superior to the alternative.
Innovation and creativity	The process produces innovative ideas and outcomes.
Knowledge, understanding and skills	Stakeholders gained knowledge, understanding, and skills by participating in the collaborative process.
Relationships and social capital	The process created new personal and working relationships, and raised social capital among participants.
Second-order effects	The process had second-order effects, including changes in behaviours, spin-off partnerships, umbrella groups, collaborative activities, new practices, and/or new institutions. Participants worked together on issues or projects outside the collaborative process.
Information	The process produced improved data, information and analyses through joint fact-finding that stakeholders understand and accept as accurate.
Public interest	The outcomes are regarded as meeting the common good or larger public interest, and not just the interests of stakeholders involved. Wider environmental, social, cultural, and economic objectives met.
Understanding and support of CPs	The process resulted in increased understanding of, and participants support for, collaborative processes/collaborative stakeholder groups.

A second section of the survey, presents a series of unordered statements related to collaborative process (Table 3). The statements, based on a review of the evaluative literature, require respondents to indicate which statements they feel are most important to achieving a successful collaborative decision-making process.

Table 3: Criteria for successful collaborative decision-making processes

Criteria
All affected stakeholder/interest groups are represented.
Clearly defined purpose and objectives.
Voluntary participation.
Consensus requirement.
Clearly defined alternative if consensus not reached.
Having an urgent issue to address, that provides an incentive to each agreement.
Decision-making process is designed in advance, but is flexible and can change if necessary.
All stakeholders are committed to collaborative decision-making process.
Clear terms of reference.
Having an independent facilitator or mediator.
Clear timetable, including a deadline.
Access to high quality information in a timely manner.
Equal representation of gender in the stakeholder group.
Equal opportunity and resources (skills, resources, money, support) among participants in the group.
Commitment to a plan for implementation and monitoring.
Participants have a clear understanding of the different interests represented.
Participants are formally accountable to a constituency or group, and not just there as individuals.
Participants have equal opportunity to speak about their values.
The decision-making process is transparent, and accessible to the public.
Mutual respect and trust during negotiation.

The final section of the TANK survey uses open-ended questions to assess stakeholder perceptions of the strengths and any weaknesses of the process.

SURVEY FINDINGS AND SUMMARY

Two surveys have been completed to date, and the results show a high level of support for the process. For example, when asked to record their level of agreement with the 'purpose and incentives' criterion statements, over 90% of respondents indicated they agreed/strongly agreed that "Collaborative decision-making is a step in the right direction for water management in the Hawke's Bay".

With each successive meeting, participants have been expressing greater confidence and higher degrees of satisfaction with the process. One of the advantages of administering a survey early in the process, is that it drew attention to the need for science information in a timely fashion. Subsequently, i.e. after the first

survey, presentations were made to the TANK group by scientists from the regional council, and a number of reports have now been made available.

A success factor for collaborative processes is continuous feedback and redesign. This is only possible if objectives and measurable criteria for achievement have been determined from the outset. The 25 process and outcome criteria presented here can provide useful guidance to those considering a collaborative process.

By evaluating the process relatively early on, an important baseline can be established that will help trace social learnings and track the formation of social capital, as well as identify any potential concerns. This need not be resource intensive, and a survey can be administered online at low cost. Evaluations then, ideally, should be longitudinal and consider both process and outcome criteria.

Finally, expertise in evaluation may be an important part of the skill set for a team preparing to undertake a collaborative process.

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ACKNOWLEDGEMENTS

I would like to acknowledge the Ministry for Business, Innovation and Employment for funding to support the Values, Monitoring and Outcomes Programme. I would also like to acknowledge the participants of the TANK process and their willingness to undertake these evaluative surveys of the TANK process.

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Appendix 9: Evaluative framework – process criteria and descriptions

1 *Purpose and Incentives:* The process is driven by a shared purpose and provides incentives to participate and to work towards consensus in the process.

2 *Inclusive Representation:* All parties with a significant interest in the issues and outcome are involved throughout the process.

3 *Voluntary Participation and Commitment:* Parties who are affected or interested participate voluntarily and are committed to the process.

4 *Self-design*: The parties involved work together to design the process to suit the individual needs of that process and its participants.

5 *Clear Ground Rules:* As the process is initiated, a comprehensive procedural framework is established including clear terms of reference and operating procedures.

6 *Equal Opportunity and Resources:* The process provides for equal and balanced opportunity for effective participation of all parties.

7 *Principled Negotiation and Respect:* The process operates according to the conditions of principled negotiation including mutual respect, trust and understanding.

8 *Accountability:* The process and its participants are accountable to the broader public, to their constituents, and to the process itself.

9 *Flexible, Adaptive and Creative:* Flexibility is designed into the process to allow for adaptation and creativity in problem solving.

10 *High-Quality* Information: The process incorporates high-quality information into decision-making.

11 *Time Limits:* Realistic milestones and deadlines are established and managed throughout the process.

12 *Commitment to Implementation and Monitoring:* The process and final agreement include clear commitments to implementation and monitoring.

13 *Effective Process Management:* The process is co-ordinated and managed effectively and in a neutral manner.

14 *Independent Facilitation:* The process uses an independent trained facilitator throughout the process.

Quoted from Frame et al. (2004, p. 67)

Appendix 10: Evaluative framework – outcome criteria and descriptions

1 *Agreement*: process reaches an agreement accepted by the parties.

2 *Perceived as Successful*: the process and outcome are perceived as successful by stakeholders.

3 *Conflict Reduced*: The process reduces conflict.

4 *Superior to Other Methods*: The process is perceived as superior to alternative approaches

5 *Innovation and Creativity*: The process produced creative and innovative ideas and outcomes.

6 *Knowledge, Understanding and Skills*: Stakeholders gained knowledge, understanding, and skills by participating in the process.

7 *Relationships and Social Capital*: The process created new personal and working relationships, and social capital among participants.

8 *Information*: The process produced improved data, information, and analyses through joint fact-finding that stakeholders understand and accept as accurate

9 *Second-order Effects*: The process had second-order effects including changes in behaviours and actions, spin-off partnerships, umbrella groups, collaborative activities, new practices or new institutions. Participants work together on issues or projects outside the process.

10 *Public Interest*: The outcomes are regarded as just and serve the common good or public interest, not just those of participants in the process.

11 *Understanding and Support of CP* [collaborative planning]: The process resulted in increased understanding of, and participants support the future use of CP approaches.

Quoted from Frame et al. (2004, p. 67)

Appendix 11: An example of Bay of Plenty Regional Council pre-workshop notes

See next page.

BRIEFING NOTE

To: Freshwater Futures: Community Groups – Rangitāiki, Kaituna and Pongakawa-Waitahanui

From: Water Policy Team **Date:** 07 September 2017

Subject: **Workshop 6: Catchment modelling scenarios and use values**

1 Introduction

A key focus for the project team for Rangitāiki and Kaituna-Pongakawa-Waitahanui Water Management Areas ("us/we") at the moment is on developing **catchment models and scenarios to help us to explore water quality and quantity issues now and in the future**.

In workshop 5 (refer to workshop presentation slides), community group members ("you") were introduced to the catchment model and the purpose of scenarios within it.

Workshop 6 will focus in more detail on land and water use, and the catchment model Baseline and Development scenarios in particular. Modelling of the real world involves using a mix of science/data AND educated estimates/assumptions, which will always have a level of uncertainty. To lessen this uncertainty we would like to check some assumptions with you (sections 2-4)**.**

In workshops 4 and 5, you focussed on in-river freshwater values and your preferred future states for these values, with a view to later **discussing the water quality and quantity needs of all current and likely future land use and freshwater use values** (e.g., extraction, HEP, commercial discharges). This will also be discussed in Workshop 6 (section 5).

We will also briefly introduce how management options, identified during the "walk on the wild side" exercise in workshop 5, will be narrowed down and assessed against criteria and principles.

Changes have now been made to the National Policy Statement for Freshwater Management (NPSFM). The government's factsheets about these changes are at this link: http://www.mfe.govt.nz/publications/fresh-water/fact-sheets-changes-freshwater-nps-2017. Implications for this project will be briefly discussed at workshop 6. However, they do not dramatically alter the work programme.

1.1 Workshop Purpose

To seek your understanding of, and input to:

- Reference State ("naturalised" land cover and flow),
- Baseline scenario (current land and water use); and
- Development scenario (future land and water use);

prior to using them in catchment modelling.

1.2 Key outcomes sought

You understand and provide feedback/agreement on the following key items:

1. Current land use practice and water use assumptions
2. Future land use maps
3. Reference state assumptions
4. How use values are being considered/factored in to the planning process.

If time allows, we hope to start discussing management options in more detail.

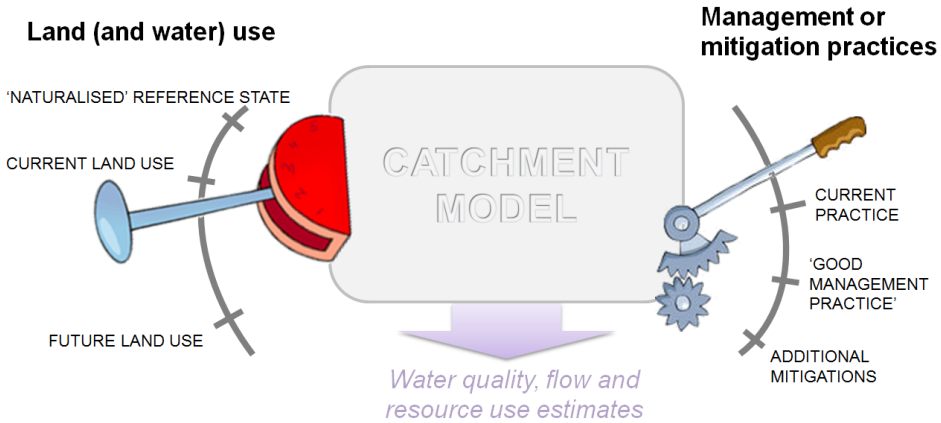
2 Catchment modelling and scenarios

The NPSFM requires us to set objectives and limits for freshwater quality and quantity to provide for freshwater values, and to implement methods in regional plans to meet those objectives and limits.[1] Bio-physical catchment modelling is used to test our ability to meet freshwater objectives given certain assumptions about future use and management of land and water (i.e. scenarios). This involves computer-generated estimates of in-river states, taking into account a range of inputs including land use and management scenarios, climate, soil type and monitoring data.

Catchment modelling will involve testing a range of exploratory scenarios (until early 2018). A more detailed solution-building stage may will also be needed to test a narrower range of scenarios (e.g. those that meet the desired objectives) in more detail (early 2018). During the solution building stage, the impact of climate change will be tested and staff will undertake more detailed analysis on the social, cultural and economic implications of management options.

The purpose of scenarios is to show how changes in land and water use and management may affect water quality and quantity. Informed by engagement with iwi, industry and community stakeholders, BOPRC staff will develop land and water use and management or mitigation practice scenario specifications for the initial stage of catchment modelling, as broadly represented in Figure 1 and Table 1.

Figure 1 – Catchment modelling: conceptual diagram



[1] Objectives are intended environmental outcomes (e.g. minimum flows or in-stream contaminant concentrations) and limits are the maximum amounts of resource use available for objectives to be met (e.g. water allocation limit or total contaminant load).

Table 1 – Conceptual definition of modelling scenarios and reference state (Workshop 6 will focus on A, B0 and C0 (and possibly D and E))

A. Reference state ('Naturalised' land use and flow)		**A**	
		Mitigation and management practices:	
	Current practice	***1.Good Management Practice (GMP)***	***2. Good Management Practice plus other mitigation (GMP+)***
B. Current land & water use	**B0 (status quo)**	B1	B2
Development **C. Land & water use (C)**	**C0**	C1	C2
D. Land & water use (D)	D0	D1	D2
E. Land & water use (E)	E0	E1	E2

2.1 Baseline scenario (B0) - current land and water use and management practice

The Baseline scenario is used to:

1. make sure the catchment model matches reality as closely as possible;
2. explore future water quality and quantity issues and effects on freshwater values if there are no changes to land use, land use practice and water use.

You have previously seen and commented on a map of current land use (workshops 4 and 5) and maps of all consented water takes and discharges. When we model the baseline scenario, we make many assumptions, including:

- Current "average" land use practice in the catchment including stocking rates, nutrient inputs and the like, so that we can estimate actual water use and contaminant generation;
- Current actual water use;
- What happens to nutrients (e.g., uptake to plants, immobilisation, or movement down into the semi- saturated zone and in to groundwater, and then in to streams, lakes and wetlands.

We will provide you with full technical reports on all of these estimates when they are finalised. For now, we would **like you to use your knowledge of land and water use in your catchments to advise us on current land use practice assumptions affecting nitrogen generation** (sediment, phosphorous, *E. coli* will follow)**, and estimates of current actual water use.**

These are included in Attachment 1 and 2. Please be ready to discuss these in the workshop and you are welcome to give feedback in writing.

QUESTIONS

- In your opinion, do they reflect what is going on in the catchment, on average?
- Is practice in one part of the catchment so different from another part that we should have two different sets of assumptions for the same land use?
- If you think the assumptions are wrong, are you able to point us to some information/evidence that will support your opinion?

2.2 Development scenarios (C, D, E) – future land and water use

A development scenario is a **credible prediction of how land and water use might change in the future in the WMA**, based on current and anticipated industry, climate and other trends, **assuming no changes to regulation or incentives from Council**. It is used to model and explore what might happen to freshwater water quality and quantity, and to freshwater values, if this prediction of future were to happen.

Community group members provided some thoughts on credible future changes and trends at workshops 1 and 4. We are also using documented growth projections (e.g. growth areas mapped in the Regional Policy Statement), and discussing projections with industry organisations and large landowners to prepare a development scenario. **A working draft land use map and assumptions will be presented at the workshop for your input and feedback.**

Work towards identifying significant likely/potential land use practice changes and significant planned changes to point source discharges (e.g., Fonterra) and takes (e.g., Tauranga City water supply take) is also ongoing.

2.3 Reference state (A) – no human land and water use, or discharges from human activities

The purpose of the Reference State (no human land and water use or discharges), is **to estimate what water quality and flow would be like in freshwater bodies if no human activities were contributing contaminants or using/taking water**.

This is used to:

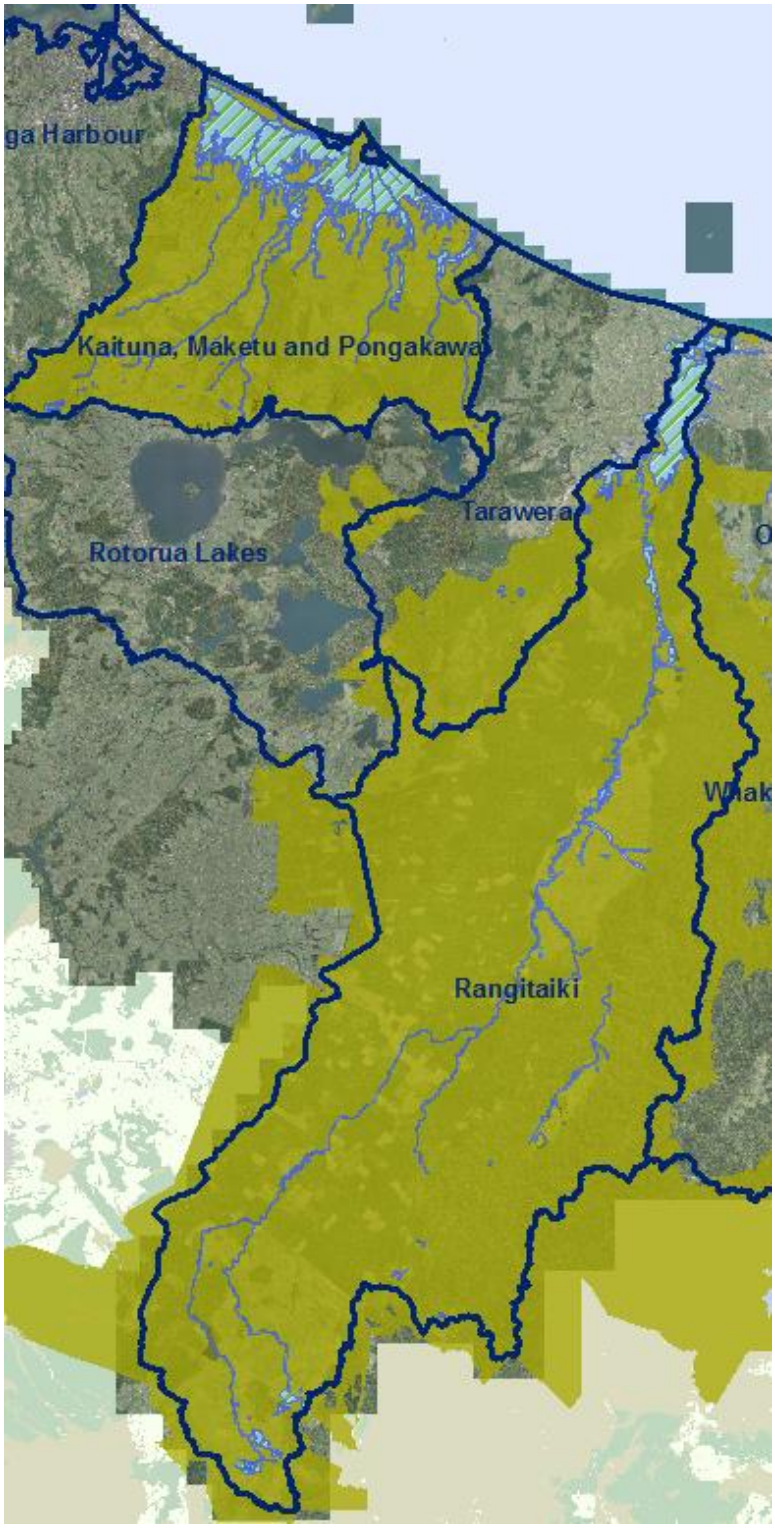
1. make sure we account for natural contaminant generation and flow, and use this when we then estimate all human-induced contaminants and changes in flow;
2. make sure any freshwater objectives we set for freshwater bodies are at least within the bounds of what could occur if there were no human induced contaminant generation or takes.

This reference state is <u>not</u> intended to be a plausible potential future scenario.

For the Reference State, we have:

- Removed all “human” made land uses and replaced them with “natural” land cover of native bush and wetlands, where these are believed to have existed historically (see Figure 2);
- Removed all water takes and point source discharges;
- Retained any existing/committed major modifications to the *structure* of the water bodies (but assumed no hydro-electric power scheme or pumping station operations) because we are only estimating contaminant generation and flow, e.g., the Rangitāiki River cut to the sea, Kaituna Diversion and Te Tumu cut, drains and canals, and dam structures remain in place.

Figure 2: Reference state land use layer - no human land use.



3 Use values

To date, we have:

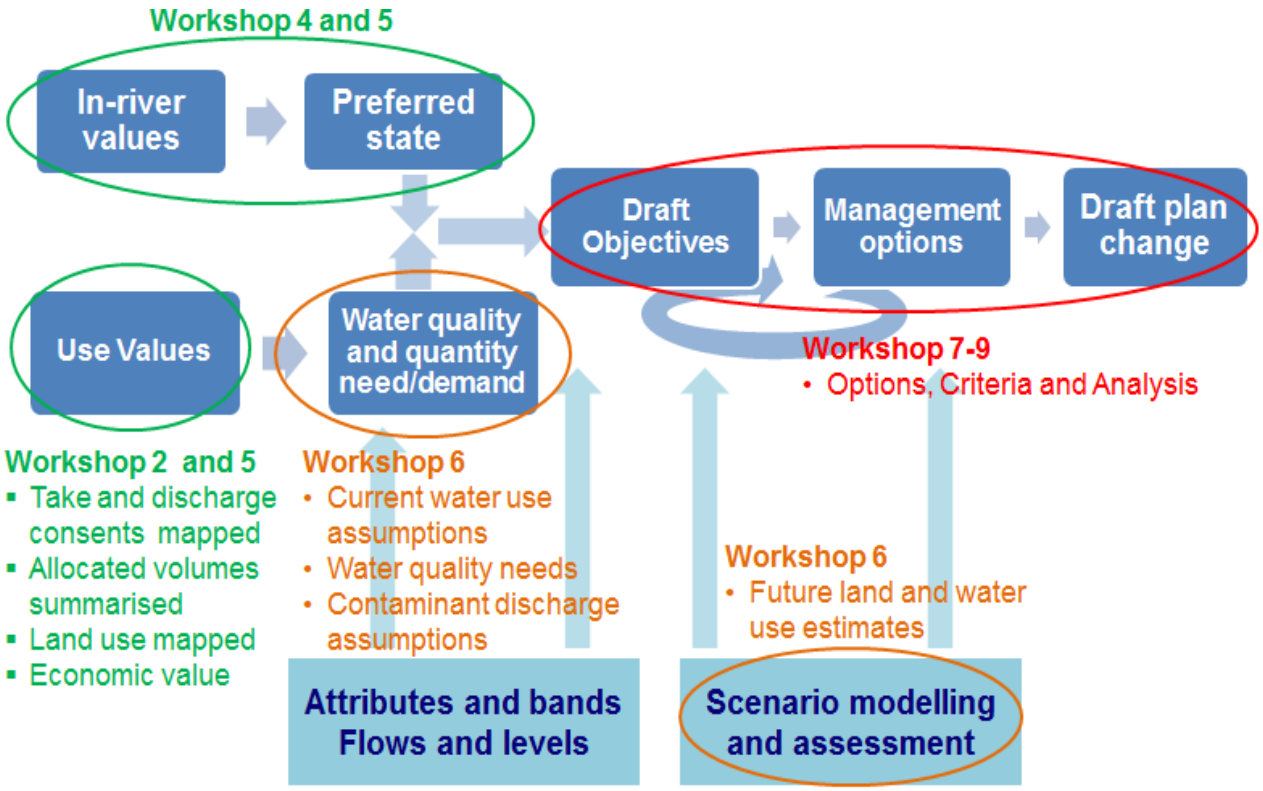
- named and listed types for freshwater uses and started to map these using land use maps, maps of consented discharges and takes, and the like.
- drafted an early, relatively high level summary of water allocation by industry and the contribution of industries to the economy and employment.

Initially, we are **assuming the preference is to provide for the reasonable water quality and quantity needs of all current and likely future use values.** We will discuss this during workshop 6.

When we work up Baseline and Development scenarios, we are essentially estimating a future where use values are provided for, so that we can estimate what this means for water quality and quantity, and other values (particularly in-river values). From this we start to explore the sort of change that would be required to support in-river and other values using mitigation scenarios.

When we work on mitigation scenarios and management options to address water quality and quantity issues, we will need to discuss "good" land, water and discharge management practices. Aside from the "walk on the wild side" exercise about possible management options (Workshop 5) we have not yet discussed that with you in any detail.

All management options will have costs and benefits for different freshwater values and different water users. We are developing criteria to help us to assess the pros and cons of management options, to support decision-making (you gave brief feedback during workshop 5). If timeframe allows, we will very briefly introduce and discuss these with you at Workshop 6.



Attachment 1: Land Use Practice assumptions for the Baseline scenario - current land and water use

The information below is largely drawn from an initial internal draft report 'Eco Logical Australia 2017. *APSIM Modelling of Farm System Nutrient Dynamics: Review of Modelling and Approach for the Bay of Plenty Region*. Prepared for Bay of Plenty Regional Council. Maize cropping assumptions are drawn from local consultant advice.

Dairy Farming

Modelled Farm and Herd - Landcorp Farming Limited (LFL), Upper Waikato catchment in the Wairākei-Lake Taupō area.

- Farm Size = 184 ha
- Herd Size = 456 (approximately 2.5 cows/ha across farm) *Note: feedback to date is that this should be 3.4-4 in KPW WMA. Further input is being sought from Dairy NZ*
- Average weight 450 kg
- Assumed feed requirements
  - Summer = 15 kg DM/cow/day
  - Spring = 14 kg DM/cow/day
- Pasture utilisation = 85%

Paddock and Feed Assessment

The paddock and feed assessment is used to:

1. Determine if the modelled farm is supported by APSIM modelled pasture growth
2. Determine the nitrogen return factors to account for seasonal pasture surplus and deficit and corresponding silage production or supplementary feed
3. Determine average rotation lengths to set grazing intervals in urine patch paddocks.

<u>Summer</u>

- Available pasture = 1200 kg DM/ha
- Average 4.2 rotations during summer (considered as Jan to April), based on test APSIM runs, model farm pasture growth rates and long term pasture growth rates (Dairy NZ).
- Requires 30 paddocks (120 days in season / 4.2 rotations = approx. 29 days per rotation + 1 paddock used to grow high energy forage crop for winter consumption)
- Each paddock would therefore be 184 ha /30 = 6.13 ha
- Total feed required per paddock on a grazing day = 456 cows x 15 kg DM/cow/day x (1/85% utilisation) = 8047 kg DM
- Feed available in paddock = 1200 kg DM/ha x 6.13 ha = 7356 kg DM
- Additional feed required = 691 kg DM/ha or 9% of available feed
- Assume that supplementary feed is maize or other lower protein feeds at 60% of pasture protein.
- Summer default N return factor = 0.72 x (1.09 x 0.6) = 0.75

<u>Spring</u>

- Paddock number and size assumed to be limited by summer availability – therefore 30 paddocks available at 6.13 ha (paddock withdrawn during summer for fodder crop growth available for pasture in spring)
- Feed available in paddock = 1200 kg DM/ha x 6.13 ha = 7356 kg DM
- Total feed required per paddock on a grazing day = 456 cows x 14 kg DM/cow/day x (1/85% utilisation) = 7510 kg DM
- Deficit considered negligible – no supplement required (to be modelled) on paddock
- Average 5 rotations during spring (considered September to December)

- Requires approximately 24/30 paddocks for herd grazing (122 days in season / 5 rotations)
- Therefore 6 paddocks used for silage production (no excreted nitrogen)
- Spring N return factor – 0.72 (default) x 24/31 = 0.58

Winter

- Requires 120 days feed overall
- Typically 1 grazing event per paddock during winter (considered May to August)
- Assume 50% intake (not milked)
- Therefore grazing event maintains the herd for 2 days. Therefore 60 days in winter supported by pasture
- Fodder crop yield of 6.13 x 10 tonnes/ha = 60000 kg. Equivalent to 15 days feed
- Silage produced during spring = 6 paddocks x 5 rotations x 7356 kg DM = 220680 kg DM
- Silage can support 60 days grazing (45 days needed).
- Total supplements fed = 225000 kg DM
- Nitrogen content of supplement = 3% = 6750 kg N consumed
- Nitrogen excreted from supplement = 6750 kg N consumed by 0.72 N return = 4860 kg N excreted
- Nitrogen returned by ha = 26 kg N/ha, which includes 16 kg N/ha urinary and 10 kg/ha
- faecal excretion

Urine Patches

On dairy farms urine excreted from cattle is the primary source of leached nitrogen, hence appropriate treatment of urine patches in the models is a primary objective of modelling of dairy farms. Several New Zealand studies have suggested that urine patches are deposited on approximately 3-5% of a paddock within a given grazing event (Chicota, et al., 2010). Over multiple grazing days throughout a year approximately 15-25% of the paddock can be affected by urine patches. The greatest leaching typically occurs from patches deposited during late summer and autumn. Leaching from overlapped urine patches is typically 40% greater than single urine patches (Romera et al 2012).

Our approach to account for the effects of urine patch nitrogen loads involves use of background' (i.e. no urine deposited) and 'urine patch' paddocks which are then spatially weighted. The following steps through issues considered in our approach and how these have been reconciled in the modelling.

1. Urine Patch coverage in a single grazing event - urine patches affect 3-5% paddock on a given grazing day (Chicota et al 2010); we model urine returned to 4% of the paddock. As pasture is consumed evenly over 100% of the paddock (as modelled) and returned to 4% of the paddock, the amount of N returned through urine is 25 x higher than what is consumed from that part of the paddock. This concentrated return can be modelled by adjusting the nitrogen return factor within the AgPasture management module.
2. Method to model concentrated urine return – we model the grazing of pasture over the entire paddock and the concentrated return of urine to patches covering 4% of the paddock (on that given grazing day) as follows:
    a) Multiply the 'default' nitrogen return (0.72 for dairy, 0.85 for sheep/beef) by any factors accounting for pasture harvested as silage across all paddocks (reduces default) or by additional supplement fed (increases default, assume lower protein feeds for supplement).
    b) Multiply (a) by the utilisation factor (0.85 for dairy, 0.7 for sheep and beef) to account for uneaten pasture (calculations as part of (a) account for incomplete utilisation of pasture)
    c) Multiply (b) by the proportion of urine – 60%
    d) Multiply (c) by 25 to account for concentration of urine in 4% of the paddock
    e) Set proportion of N returned through urine to 1 (100%). The additional amount that would also be deposited as manure is considered negligible.

f) For all other months set N return factor to background levels by multiplying (a) by 0.4 (40% manure). Set proportion of urine to 0 for these months.

g) Accounting for supplement fed during winter – we currently use a fertiliser application (urea) to represent the returns from supplements fed on the paddocks during winter (May-Aug). The amount applied accounts for the amount fed, excreted, and the proportion of urine vs manure. The contribution of this feed source within the urine patches is modelled by multiplying supplement returns for applicable months by 25. A separate manure application (to surface organic matter pool) is also applied to account for faecal returns from supplement.

3. Annual urine patch coverage - estimates of yearly urine patch coverage range from 14-35% (Chicota et al, 2010; Moir et al 2010; Dennis et al 2011, Romera et al 2012), with most studies reporting 20-25%. We have adopted a figure of 25% urine patch coverage. This represents the accumulation of urine patches within the paddock through multiple stock rotations during the year.

4. Urine Patch Overlap – relative proportions of urine patch overlap are based on Romera et al (2012), who found approximately 23% of urine affected area was affected by multiple urinations. As we assume that 25% of the paddock is affected by urine patches, then (0.23 x 25%) approximately 5% of the paddock area is affected by multiple urine depositions, and 20% of the paddock is affected by a single urination (25% minus 5%).

5. Spatial weighting of urine patch and background sub-models – From the total paddock area impacted by single and multiple deposition of urine patches over a year (see (#3) and (#4)) we have adopted the following spatially weighted sub-models for the dairy modelling:

    a) No urine patches (background)– 75% of paddock area

    b) Impacted by a single urine patch – 20% of paddock area

    c) Impacted by multiple urine patches over a year – 5% of paddock area

6. Impact of different timings of urine patch deposition – Vibart et al (2015) report that the greatest contribution to nitrogen leaching is from urine patches deposited during summer and early autumn. We tested this using a preliminary dairy model where urine was deposited in selected Preliminary Results – Based on median years/stations leaching rates have increased by approximately 25% compared to the uniform return model (with fodder crops also included as a spatially weighted sub-model) for the dryland dairy, and by approximately 40% for the irrigated dairy. Table 3-2, below, shows selected percentiles for yearly NO3 leaching. Based on this information we have modelled three sub-paddocks to account for the heterogeneity of urine patch deposition and leaching impact. These were spatially averaged based on typical coverage:

7. Based on the analysis in #4, deposition in February and Winter was selected to represent multiple urinations (median leaching of overlapping set) and January was selected to represent leaching of single urine patches. These periods, along with the background model are applied as spatially weighted sub-models as per #5.

8. Differences between background and urine patch pasture growth – The increased nitrogen return to urine patch models results in higher pasture growth and more frequent triggers to graze (and thus return N). To control for this the grazing interval for urine patch models were fixed based on typical recurrences seen in the background model (approximately 30 days for summer and 24 days for spring; winter allowed to run on the available pasture trigger). It is acknowledged that there will still be some variation between the number and timing of graze/return events between the background and urine patch models; however, this has been deemed to be within the bounds of our modelling precision.

Three sub-paddocks were modelled to account for the heterogeneity of urine patch deposition and leaching impact. These were spatially averaged based on typical coverage:

Sub-paddock 1 – Background (75% of paddock area)

- No urine deposition
- Manure deposited on each grazing event
- Fertiliser applied
- Used to ensure yearly harvest supports modelled herd.

Sub-paddock 2 – Single or Low-Leach Urine patch (20% of paddock area)

- Represented by urine patches deposited in January based on selection of ‘upper middle’ yearly

- leaching rate from test models of urine deposited in single alternating months
- Grazing during January results in urinary and faecal n returned to soil
- Grazing during other months only results in faecal n returned to soil
- Timing of gaze events and mass of pasture consumed on paddock based on typical intervals and harvest of background sub-paddock (i.e. fixed days between graze and fixed harvest amount).
- Fertiliser applied as per background paddock

Sub-paddock 3 – Multiple or High Leaching Urine Patch (5% of paddock area)

- Represented by urine patches deposited during February and in winter (i.e. June-August), based on the middle yearly leaching rate from selected trials of urine deposition on two months of the year
- Grazing during February, June or July results in urinary and faecal n returned to the soil
- Grazing during other months only results in faecal n returned to the soil
- Timing of gaze events and mass of pasture consumed on paddock based on typical intervals and harvest of background sub-paddock (i.e. fixed days between graze and fixed harvest amount).
- Fertiliser applied as per background paddock

Component/Variable	Value	Justification	References
Manager Folder			
Fertilise on Fixed Dates (for pasture blocks)			
FertiliseOnFixedDates – Application Dates	1-mar 1-apr 1-jul 1-aug 1-oct 1-nov	Avoid application during low plant response	
FertiliseOnFixedDates – Application Depth	10		
FertiliseOnFixedDates – Amount Applied (type)	200 kg N/ha/yr (urea_n)	DairyNZ FarmFact 7/11	Agribusiness OVERSEER model – pasture block reports
Fertilise on Fixed Dates (in lieu of effluent addition)			
FertiliseOnFixedDates – Application Dates	1-jan 1-feb 1-mar 1-apr 1-sep 1-oct 1-nov 1-dec	Regular stir and spray during spring and summer only	Agribusiness OVERSEER model – pasture block reports
FertiliseOnFixedDates – Application Depth	3	Surface application via spray	
FertiliseOnFixedDates – Amount Applied	19 (urea_n)	Agribusiness modelling assumed application of 64 kg N/ha over 57 ha of the farm. We assume the same quantitiy of effluent applied uniformly across paddocks, therefore: 64 kg/ha x 57 ha/190 ha of effluent application = 19 kg N/ha/yr	
Fertilise on Fixed Dates (in lieu of urinary-N from supplement consumption)			
FertiliseOnFixedDates – Application Dates	15-jun	Applied once during winter	
FertiliseOnFixedDates – Application Depth	90	Average of urine1 and urine2 application depths in AgPasture module (account for centre vs edge of patch, splash and direct stream)	
FertiliseOnFixedDates – Amount Applied	68 (urea_n)	17 kg N/ha urinary-N (from Paddock and Feed Assessment) x (1/4% paddock coverage during single grazing) = 68 kg N/ha/yr	
Manure on Fixed Dates (in lieu of faecal-N from supplement consumption)			

Component/Variable	Value	Justification	References
ManureOnFixedDates – Application Dates	May 15, June 15, July 15, August 15	Entered as day of year in block script	
Manure amount	60 kg/ha	Total manure set so that N returned from manure = 11 kg N/ha divided by 4 applications = approx. 3 kg N/ha per application i.e. Manure kg/ha = 3/(ratio of N to C) = 3/(1/20) = 60 kg manure/ha	
Manure CNR	20	default	
Rotational Grazing Between Two Limits *Time intervals added through following alterations to management module script:* • *Change 'Todays Date' parameter to a 'Day of Year' range* • *Replicate script block using if/elseif/else based on different time periods* • *Alter upper amount, lower amount, and dm_frac directly in script block*			
Herbage to Start Grazing [upper_amount]	(i) 2700 (Sep – Apr) (ii) 2200 (May - Aug)	(i) Approximately 2.5 leaf stage ryegrass height (Dairy NZ 2011) (ii) Slightly under mass representing 3-leaf stage of ryegrass development during winter (recommended benchmark) - Dairy Australia (2016).	
Herbage to End Grazing [lower_amount]	(i) 1500 (August – Apr) (ii) 1200 (May– July)	(i) Dairy NZ recommended residual (Dairy NZ 2008, 2011) (ii) Reduced residual ok in winter due to reduced carbohydrate usage (Dairy NZ 2011)	
Daily amount or remove once (-1) [amount]	(i) -1 (Sep – Apr) (ii) 600 (May – Aug)	(i) Assume optimal stocking rate for summer graze (12-24 hour stay) – paddocks assumed to be sized to enable feed demand to be met (ii) See Paddock and Feed Assessment for pasture demand calculations	
Fraction Returned as Excreta [dm_frac]	0.72 (default dairy return factor). This is multiplied by the following factors (i) Summer = 0.75 (ii) Spring (Sep – Dec) = 0.57	(i) Default + 7% additional feed required as supplement (i.e. 7% more excretion than is grazed from pasture). Feed assumed to be lower protein such as maize. Assume 60% of pasture crude protein. Therefore N return in summer = = 0.72 x (1+(0.07*0.6) =0.75	Powell and Rotz (2015) Castillo (2000) FAO (1996)

Component/Variable	Value	Justification	References
	(iii) Winter (May – Aug) – 0.72 (iv) Urine return month = multiply the above factors by 12.75	(ii) Default x # of paddocks required for spring regrowth interval. Remainder of paddocks to silage with no excrement return = 0.72 x 25/31 paddocks (based on average pasture regrowth for spring in trial APSIM runs) = 0.57 (iii) Default N return used as additional supplement is accounted for using an additional fertiliser and manure application (iv) Includes the following calculations: (a) Any factors considered in (i) to (iii) above (b) Multiply by 0.6 (60% of excreted N as urine) (c) Multiply by 85% pasture utilisation (uneaten pasture will not contribute to excreted N) (d) Multiply by 25 (urine deposited on 4% of paddock area so urine patches have 25 x the N excreted than was consumed from the corresponding area)	
Fraction of Returned N in Urine [urine_n_frac]	Default = 0.6 (i) Background paddocks = 0 (ii) Urine return month(s) = 1	AgPasture default/FAO (1996) (i) Manure assumed to be uniformly deposited (ii) N returned through manure considered negligible in comparison to urine patch	FAO (1996)
Urine Deposit Depth	200		

Sheep and Beef

Paddock and Feed Assessment

The sheep and beef model is designed to replicate available OVERSEER modelling (Agribusiness Group 2015) of the Ministry of Primary Industries Waikato – Bay of Plenty Sheep and beef Farm Monitoring Model. The approach described for the Dairy model has been adapted to account for different herd management and stocking within a sheep and beef farm. The main changes include:

- Sheep and Beef farm stocked at approximately 36% of dairy farm based on revised stock units and monthly pasture consumption within AgriBusiness OVERSEER modelling.
- Therefore, the same pasture target and residuals as for Dairy, however, pasture consumed over three days

Treatment of Urine Patches

- Urine patches from beef cattle assumed to be major source of leached N
- Urine patches from sheep more evenly spread and less volume than those from cattle. Bell et al (2012) suggest that the return of excrement within sheep grazing systems can be considered uniform for stocking rates up to 1200 sheep/ha. The modelled stocking rate (paddock maximum) is well below this density. Nitrate leaching at 60cm below sheep urine patches is less than 3% of that under cattle urine patches (Williams and Haynes 1994). Therefore we assume that sheep urine is largely taken up by pasture.
- Modelling of urine patches assumes deposition during January – corresponds with the peak of cattle stocking and period of higher leaching impact. Due to minimal cattle on farm during winter we do not model winter urine deposition.
- Assume reduced urine patch coverage over the year due to the lower cattle stocking rate. We use a figure of 15% of paddock coverage. Therefore, the following sub-paddocks are modelled:

Sub-paddock 1 – Background (85% of paddock area)

- No urine deposition
- Manure deposited on each grazing event
- Fertiliser applied
- Used to ensure yearly harvest supports modelled herd.

Sub-paddock 2 – Single or Low-Leach Urine patch (15% of paddock area)

- Represented by urine patches deposited in January based on the peak of cattle stocking within the summer/autumn period (shown to be the time period associated with the greatest risk of leaching).
- Grazing during January results in urinary and faecal n returned to soil
- Grazing during other months only results in faecal n returned to soil
- Timing of gaze events and mass of pasture consumed on paddock based on typical intervals and harvest of background sub-paddock (i.e. fixed days between graze and fixed harvest amount).
- Fertiliser applied as per background paddock

Component/Variable	Value	Justification	References
Manager Folder			
Fertilise on Fixed Dates (for pasture blocks)			
FertiliseOnFixedDates – Application Dates	1-sep 1-nov 1-apr	From OVERSEER modelling	Agribusiness (2015)
FertiliseOnFixedDates – Application Depth	10		
FertiliseOnFixedDates – Amount Applied (type)	100 (urea_n)	Lower than dairy farm due to reduced pasture consumption, both from lower stocking rate and lower pasture utilisation. Corresponds with value used in Agribusiness OVERSEER modelling	Agribusiness (2015)
Manure on Fixed Dates (N excreted from consumption of feed supplements during winter)			
FertiliseOnFixedDates – Application Dates	15-may 15-jun 15-jul 15-aug		
Amount manure to apply (kg/ha)	50	From feed calculations	
Manure CNR	20	Module default	
Manure CPR	50	Module default	

Rotational Grazing Between Two Limits
Time intervals added through following alterations to management module script:
• *Change 'Todays Date' parameter to a 'Day of Year' range*
• *Replicate script block using if/elseif/else based on different time periods*
  ○ *Summer – Jan to Apr = (day >= 1) and (day <= 120)*
  ○ *Winter – May to Aug = (day >=121) and (day < 214)*
  ○ *Spring – Sep to Dec = (day >= 215) and (day <= 365)*
• *Alter upper amount, lower amount, and dm_frac directly in script block*			

Component/Variable	Value	Justification	References
Herbage to Start Grazing [upper_amount]	(i) 2800 (Sep – Apr) (ii) 2400 (May - Aug)	(i) 2800 represents approximately 2.5 leaf stage ryegrass height (Dairy NZ 2011) (ii) In winter 2400 kg DM/ha approximates the 3-leaf stage of ryegrass development (recommended benchmark) - Dairy Australia (2016)	Dairy Australia (2016) Dairy NZ (2011)
Herbage to End Grazing [lower_amount]	1500	Beef/lamb industry recommendations	
Daily amount or remove once (-1) [amount]	-1		
Fraction Returned as Excreta [dm_frac]	0.8 (default dairy) (i) Summer (Jan – Apr) – 0.8 (ii) Spring (Sep – Dec) – 0.72 (iii) Winter (May – Aug) – 0.8	(i) Default (ii) Default – 15% of pasture to silage = 0.8 x 85% = 0.72 (iii) default	AgPasture documentation
Urine Deposit Depth	200		

Kiwifruit

- Growth Nov-Apr. Dormant after leaf drop in winter
- Stems pruned in winter
- Soil N uptake flowering to harvest Dec – Apr
- 110-120kg N/ha x2 applications Oct and Nov
- Older vines can buffer for short term N shortage

Plant Physiology	Kiwifruit	*Management Implications and Impact on Soil Water/Soil N*
Evapotranspiration and water demand	Evapotranspiration • approx. 900mm/yr (Deurer et al) over growing season • agrees with daily evapotranspiration reported by Judd et al (1986) – 4.8 to 6.1 mm • Silva et al reported 2.5 to 5.5 mm per day Kiwifruit grows preferentially on well-drained soils. Drainage below root zone – approx. 300-400 mm/yr in BoP region (Deurer et al. 2011)	Although moderately high water use, only approx. 30% of BoP orchards are irrigated • Rainfall significantly higher than evapotranspiration • High soil water storage
Soil N demand, N partitioning and remobilisation	• Early season growth requirements met by N remobilised from senescing leaves of previous season. Uptake mainly from flowering to harvest. • Based on studies of fruit N content and also N tracer studies it is estimated that approximately 50-60% of N added to soil is recovered by plant (e.g. Tagliavani et al 1999, Ledgard et al 1992). This may be higher due to 'priming' and 'pool substitution' effects (Morton 2013, Jennkinson et al 1995). • Kiwifruit can take up N in excess of demand (supply driven uptake). Therefore older vines can buffer for short term N shortages	• Soil N uptake following flowering until harvest (Dec-April). • Fertiliser applied (110-120 kg N/ha) over two applications October/November to supplement/replace root N losses and increasing N concentration in leaves and fruit (Kotze and de Villiers 1989). • Much of the applied fertiliser N is expected to be utilised, however, significant high soil moisture after application could result in leaching of fertiliser N. • Organic orchards apply N requirements through composts, liquid fish products, and less frequently, foliar sprays (slow release).

Component/Variable	Value	Justification
Manager Folder		
Sow		
Sowing date	13-may	
Sowing density (plants/m2)	1	vine test simulation provided
Sowing depth (mm)	50	vine test simulation provided
Row spacing (mm)	3100	vine test simulation provided
Max crop cover	0.5	vine test simulation provided
Bud Number (/Plant)	92	vine test simulation provided
Harvest		
Trigger to harvest (from script)	Growth stage = senescent	
Harvest action (from script)	Prune	Trigger for plant to move to 'bare' and begin dormancy

Arable – Maize

- One crop per year - harvest window is approx. 135-140 days
- Planted from 25 September when soil temps >14 degrees
- Maize yield: 18 – 23 T dry matter/ha/yr in lowlands, and around 14 – 16 T up around Rotorua
- After harvest: fields sown with rye grass which is grazed once over winter, and then harvested for grass silage in spring
- Yield from the rye grass 2.5 – 3.0 T DM/ha for the grazing and another 2.5 – 3.0 T DM/ha for the grass silage
- Total yield from the cropped land is in the range of 23 – 32 T DM/ha in the lowlands
- The fertiliser regime:
  - 200 kg/ha DAP by mid-October (18% N)
  - 350kg/ha urea or Sustain N as a side dressing in late Nov or Dec (46% N)
  - 150kg/ha DAP in March when re-sowing in rye grass (18% N)
  - 100-125 kg/ha urea or sustain N in late May (46% N)
  - 100-125 kg/ha urea or Sustain N in late July or August (46% N)
  - In addition, potentially also use MOP, Kaeserite and Calmag fertiliser products

Vegetables

Seeking further info from Plant and Food Research. Current APSIM info based on sweetcorn/ broad bean rotation:

- Summer sweetcorn (sow Oct-Jan)
- Winter broad beans (sow May-July)
- Each fertilized with 50kg N/ha at planting
- Approx. yields
- 15t/ha sweet corn
- 4 t/ha beans
- Leaching (all soils/years) – approximately 31 kg N/ha

Component/Variable	Value
Manager Folder	
Sow using a variable rule – Sweet Corn	
Start sowing window	15-oct
End sowing window	1-jan
Cultivar	Dekalb_xl82
Must sow	yes
Sowing density (plants/m2)	100
Sowing depth (mm)	30
Row spacing (mm)	250
Fertilise at sowing – Sweet Corn	
Amount of starter fertiliser (kg/ha)	50

Component/Variable	Value
Manager Folder	
Sow using a variable rule – Fababean	
Start sowing window	15-May
End sowing window	10-jul
Cultivar	fjord
Must sow	yes
Sowing density (plants/m2)	25
Sowing depth (mm)	30
Row spacing (mm)	250
Fertilise at sowing – Fababean	
Amount of starter fertiliser (kg/ha)	50

Forestry

- Summer planting – January
- Sowing density – 1000

Component	Value
Soil Organic Matter	
Root C:N ratio	60
Root Weight	1000
Soil C:N ratio	14
OC Total %	0-10 = 5, 10-30 = 4, 30-60 = 4, 60-100 = 2, 100-120 = 1, 12-150 = 0, 150-180 =0
Surface Organic Matter	
Mass	3500
C:N ratio (cnr)	40

Manager Folder	
Planting Rule – Planting Date	01-jan
Planting Rule – Sowing Density	1000

Attachment 2: Actual *irrigation* water use assumptions for the Baseline scenario

Below is the Executive Summary of: Williamson Water Advisory (2017). *Kaituna and Rangitāiki SOURCE Catchment Models: Actual irrigation water use modelling.* Prepared for Bay of Plenty Regional Council. WWA0033 | Rev. 2. 13 July 2017. Further work will estimate animal drinking water (based on stocking rates), municipal and domestic drinking water use, and takes of water that are permitted without a resource consent by the Regional Water and Land Plan (Plan Change 9). Industrial and commercial takes are modelled base on consent monitoring records.

Bay of Plenty Regional Council (BOPRC) commissioned Williamson Water Advisory (WWA), Hydrology and Risk Consulting (HARC) and Eco Logical Australia (ELA) to develop integrated catchment models for the Kaituna and Rangitāiki Water Management Areas. The models are being developed using the eWater SOURCE modelling framework.

The development of the integrated catchment models requires data on actual water use within the catchments, as any significant water abstractions are likely to influence the catchments' water balance and flow regimes. As measured water use data was not available over the entire model period, a modelling approach was taken to estimate actual irrigation water use over time for each of the sub-catchments of the Kaituna and Rangitāiki Water Management Areas.

The modelling approach comprises the estimation of irrigation water demand from climatic conditions and the resulting soil moisture conditions. The Soil Moisture Water Balance Model (SMWBM) was used to simulate the climatic drivers and the soil moisture content, with the Irrigation Module of SMWBM used to calculate the soil moisture dynamics during the irrigation season based on specified irrigation application depths and rules governing when to start and stop irrigating.

The following assumptions have been made for the calculation of irrigation water use:

- Farmers irrigate efficiently, i.e. apply small amounts of irrigation water frequently. For kiwifruit, 10 mm of water are applied whenever the soil moisture falls below 50% of plant available water; for pasture, 3.5 to 4.5 mm of water (depending on the optimum for each area) are applied whenever the soil moisture falls below 50% of plant available water.
- Application efficiency is 80 percent; i.e. irrigators abstract 20 percent more water than required to maintain soil moisture at appropriate levels due to system losses.
- Actual irrigated area is 80 percent of consented irrigated area.
- A daily water cap on water use is applied based on annual consented volume and average number of irrigation days.

Telemetered water use data were compared with modelled water use for some individual users and showed reasonable agreement although some slight over-estimation. Error components include recorded irrigation area, soil type utilised, land of representative soil moisture calibration data, differences between actual and modelled application rate and frequency; differences in rainfall on a paddock scale compared to the catchment scale utilised in the model.

For each SOURCE sub-catchment that contains consented water takes, time series of daily irrigation water use were generated by aggregating individual water users. Separate time series were generated for water use from groundwater and surface water. These time series are then assigned to water user nodes in the SOURCE models of the Kaituna and Rangitāiki Water Management Areas (WMA).