



## Riding the wave of change: Reflections on the evolution of freshwater management in New Zealand

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### KEY POINTS

As our understanding increases and context continues to change, new practices are displacing the current orthodoxy in freshwater management.

- Councils are now managing for attributes based on values, though perhaps still too focussed on individual parameters.
- Councils are out-sourcing many functions, including to collaborative committees. Staff roles are changing as they try to break down silos and act as integrators of information.
- There is growing recognition of Mātauranga Māori and social and economic analysis, and the potential for citizen science.
- The 'decide and defend' mentality is giving way to a collaborative paradigm. 'Agonistic planning' may be the next horizon – a counterpoint to the current focus on consensus-seeking models of collaboration.

### Introduction

When the Freshwater Values, Monitoring and Outcomes (VMO) research programme was planned in late 2009 and early 2010, freshwater management was in a very different place than it is today. In September 2016 a group of regional council staff, MfE staff and researchers involved in this programme reflected on how freshwater planning has changed over the last seven years. This policy brief provides insights into the changes this group has observed during this time and the further evolutions we can expect to see.

### Freshwater management in 2009 and 2010

In 2009, as the VMO programme was being developed, New Zealand was still looking at freshwater management through a largely technocratic lens. There was a proposed National Policy Statement (NPS) on freshwater management and a proposed National Environmental Standard (NES) on ecological flows and water levels. These policy documents were expected to provide legal certainty to help address water management issues.

The Environment Court was seen as the place to resolve disputes based on legal and technical arguments. There was limited experience with collaborative processes – the Land and Water Forum had only just started and did not produce its first report until September 2010.

At the regional level, conflict over freshwater management was in the news in New Zealand's two most agriculturally dependent regions. In the Waikato, the long litigious process of Environment Waikato's Variation 5 for Lake Taupo was just coming to an end, with an interim decision from the Environment Court in November 2008. Environment Waikato's Variation 6 on water allocation had appeals on every aspect of the plan and would not be resolved in the Environment Court until 2011.

On the South Island, the Canterbury Water Management Strategy was released in September 2009 and Environment Canterbury (ECan) had just started the process of establishing zone committees in an attempt to resolve conflict over water allocation and water quality. In March 2010, central government, frustrated at the situation in Canterbury, appointed commissioners to replace ECan's elected councillors.

The release of the National Policy Statement on Freshwater Management in April 2011 (New Zealand Government 2011) and the Ministry for the Environment’s endorsement of the collaborative approach of the Land and Water Forum (Ministry for the Environment 2013) unleashed a wave of change in freshwater management practice.

## The wave of change exercise

Following a national symposium on freshwater management hosted by the VMO programme, a ‘wave of change’ exercise was used to elicit reflections on how freshwater management has changed. This exercise involved the participants of the Regional Council Forum and included staff from 10 regional councils, the Ministry for the Environment and VMO programme researchers. The Forum had met ten times over six years and was an integral part of the VMO programme, bringing researchers and policy makers together to examine, share, test, and interrogate emerging practices and research findings.

To stimulate the reflections, the following questions were posed: Over the past six years, what new standards of practice have become established? What is fading away? What are the new and radical ideas? In groups, participants identified freshwater management practices and classified each practice as one of the following:

- Dying Practice—no longer seen as relevant ways of doing things

- Established Norm—current now, standard, accepted ways of doing things
- Emerging Trend—Ideas that are gaining momentum
- New Horizon—Leading edge, prospective ideas.

These four types of practices form the ‘wave of change’ (see Fig. 1).

The classification of these practices into the different ‘positions on the wave’ were not always definitive. For instance, one participant expressed surprise that staff working in “silos” was described as a dying practice; another said that it was still common in many places. In any case, it was increasingly recognised as something that needed to change. This sentiment was explicit for one practice relating to attitudes towards freshwater management tools where “Focus on single attribute limits” was listed as an established norm, but “hopefully dying”.

A practice might be an established norm in one region but still an emerging trend in another. For example, “Outsourcing of regional council roles to others (e.g. Zone committees...)” was cited as an emerging trend in one case, while “Recalibration of roles in councils—what can be outsourced” was cited as a new horizon in another. This could reflect actual regional differences in the pace of change, different uses of the term outsourcing, or simply different interpretations of “emerging trend” and “new horizon” by different participants.

## The wave of change

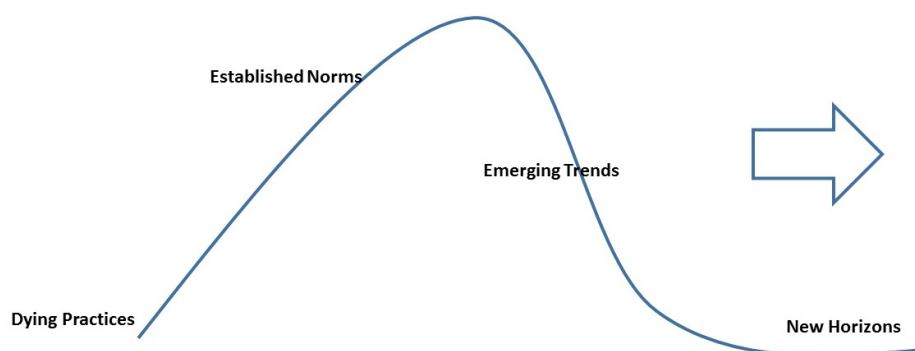


Figure 1: The wave of change

Finally, a practice that is an established norm or an emerging trend is not necessarily appropriate for every situation. Rather, it is part of the current or emerging orthodoxy. The wave of change serves to highlight that as society’s understanding increases and context continues to change, new practices will displace the current orthodoxy. These new practices will themselves eventually die out and be replaced, though some will survive longer than others, sometimes for lack of something better rather than theoretical suitability or rigour.

## Discussion

To highlight the changing nature of freshwater management, we grouped the practices identified by participants into four themes:

1. Approaches to freshwater management
2. Changing roles of regional councils
3. Changing science needs
4. Changing ways of involving the community

Each of these is described below.

First, the focus of freshwater management is changing. Councils are moving away from thinking primarily about point sources and are now focusing on managing for attributes based on values, though concern was expressed that this is still too focussed on individual parameters rather than more tangible attention to values and outcomes. For example, it was suggested that councils should be more holistic in integrating various goals, e.g. looking downstream to lakes and estuaries and managing habitat as well as contaminants. Two rather different visions of the future were offered. In one, councils engage in more pro-active land use planning, considering future food supplies while adapting to climate change. Alternatively, the future could look more like the past if councils return to managing land use according to land suitability, which will remind some practitioners of New Zealand’s Town and Country Planning Act. Some might suggest these two visions are not mutually exclusive. See Figure 2.

## Integration and the future of freshwater management

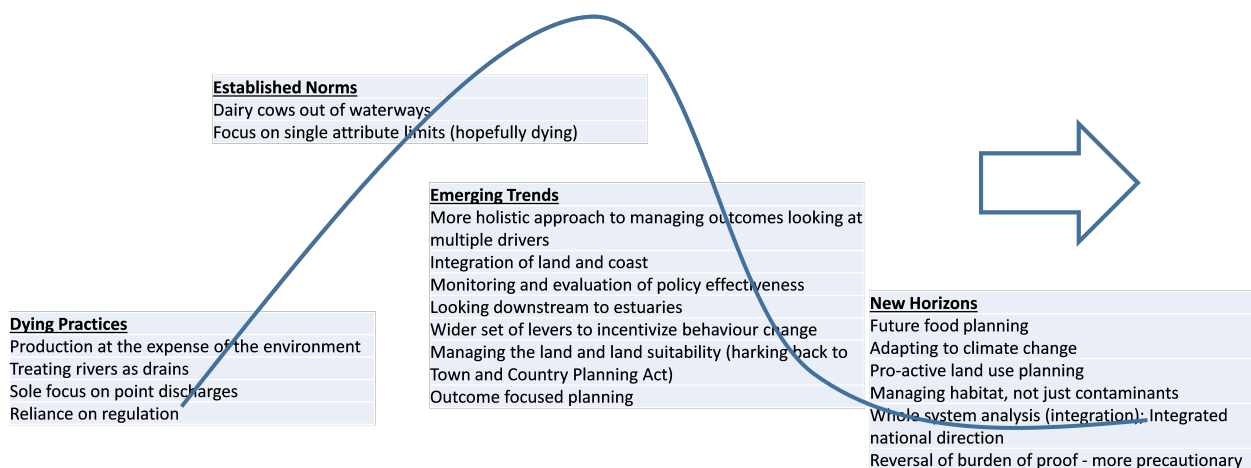


Figure 2: Changing practice: Integration and the future of freshwater management

Second, the role of regional councils and how their staff work is also changing. Councils were seen as previously working as “fiefdoms” in organisational “silos” engaged in single issue planning, and often dominated by river engineers. Now, councils are out-sourcing many of their functions, with council staff emerging as integrators of information and needing to assemble cross-disciplinary teams to address complex issues in freshwater management. See Figure 3.

Third, science and information needs are changing. Compared to several years ago, different types of knowledge are now considered relevant for freshwater management. Incorporation of social, economic and Mātauranga Māori knowledge alongside biophysical science is an emerging trend, as is citizen science and communication of uncertainty through tools such as Bayesian modelling. Trans-disciplinary science and the use of community monitoring in state of the environment reporting may be on the horizon. See Figure 4.

## The role of regional councils and their staffs

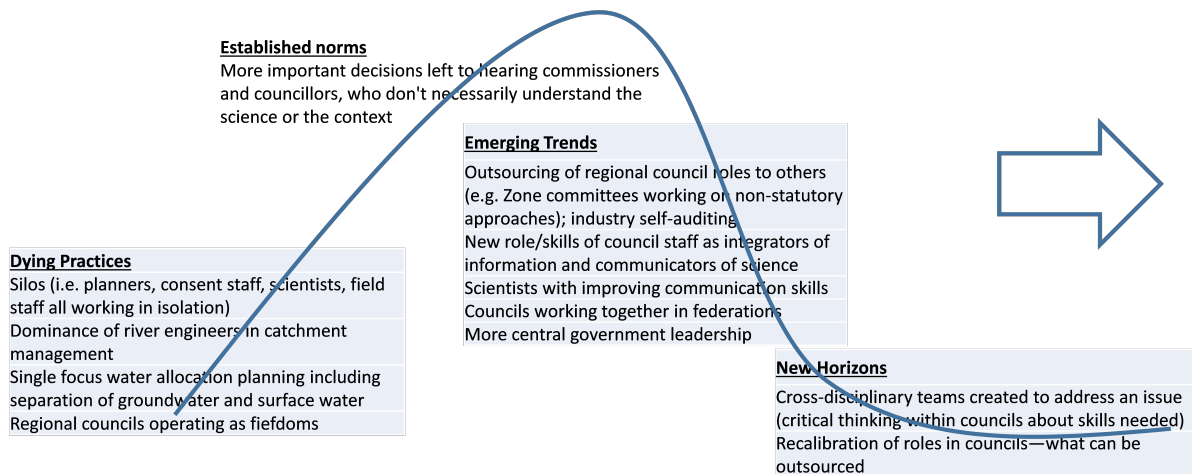


Figure 3: Changing practices: the role of regional councils and their staffs

## The nature of science and information

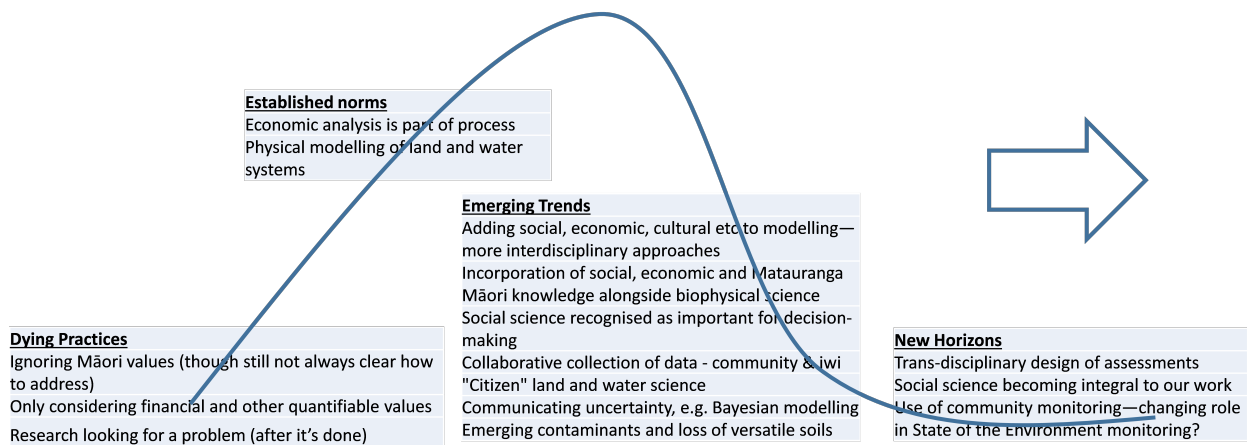


Figure 4: Changing practices: The nature of science and information for freshwater management

Finally, with respect to engagement with the wider community, the direction of travel is clear even though fewer practices were cited. The ‘decide and defend’ mentality, in which councils saw themselves as technical experts defending their role as resource management decision-makers, is giving way to a new paradigm. Now, councils are looking beyond traditional consultation practice to find ways to involve iwi and other community groups in planning, including some treating iwi as partners rather than stakeholders. Agonistic planning, i.e. accepting ideological or values-based conflict and seeking to channel this positively (Mouffe 1999; Mouat et al. 2013), was offered as a new horizon and a counterpoint to the current focus on consensus-seeking models of collaboration (Figure 5).

## Conclusions

Freshwater management in New Zealand has changed significantly in the past seven years and will continue to change as we learn from our experiences of addressing complex issues in dynamic environments (both policy and biophysical) where everything is connected to everything else.

The aim of this exercise was not to produce definitive results but to prompt freshwater management practitioners to reflect on what changing practices they see and what this means for regional and national agencies. We encourage planners, researchers and members of civil society engaged in freshwater management to continue to reflect on these questions and how they will respond to the challenges that lie ahead.

## Engagement with civil society

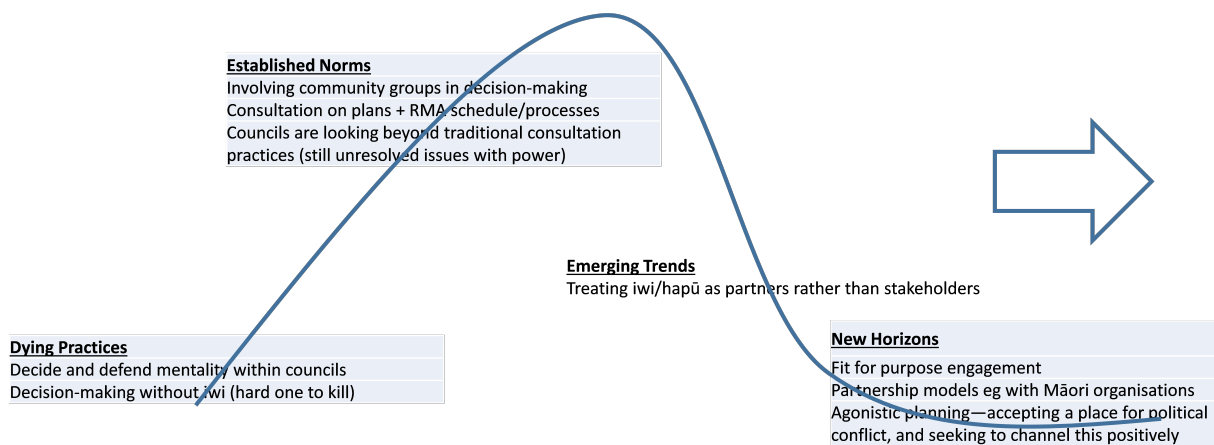


Figure 5: Changing practices: Engagement with civil society

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