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Changing Freshwater Management in New Zealand

looking to the future we must look back

Abstract

Freshwater management policy in New Zealand is currently undergoing major upheaval. It is abundantly clear that the existing policy failed its stated goal, to protect freshwaters for future generations. Therefore, this is a crucial time to look back and see where policy failed so we can avoid repeating the same mistakes. The implementation failures included setting inadequate objectives, failing to monitor outcomes, and failing to adequately enforce even those compromised objectives. Furthermore, there were policy shortcomings, revealed by an almost total failure to deal with the diffuse nature of the biggest environmental impacts.

Keywords RMA, freshwater, future generations, compliance monitoring and enforcement

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The management of freshwater in New Zealand is currently undergoing major upheaval. It is crucial that any new policy development should involve looking back to see what worked and what didn't in the prior legislation. In this article I look back over the last three decades of the Resource Management Act 1991 (RMA) in respect of freshwater management, in an attempt to ascertain what can be learned.

I discuss issues with RMA implementation in the context of three fundamental aspects of freshwater management: a) the setting of objectives for freshwater ecosystem health; b) the monitoring of achievement against those objectives; and c) the setting of resource consent conditions and their monitoring and enforcement. The latter are particularly important because consents are a critical mechanism by which plan objectives are achieved.

In hindsight the processes that failed and the drivers of those failures are clear. My experience at the coalface included being involved in regional plan formation and changes, resource consent hearings, and Environment Court and Environmental Protection Authority boards of inquiry. While

the aims of the RMA were bold and well-intentioned, they were interfered with to the point of almost complete failure by the influence of vested interests – mostly industries dependent on freshwater exploitation. Thus, any new legislation must remove all opportunity for such interference. New independent monitoring and enforcement bodies must be established with transparent processes, isolated as much as possible from the influence of vested interests.

The intent of the RMA is unequivocal: that freshwater environments are to be protected for future generations. As the Act clearly states, its aim is 'safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and avoiding, remedying, or mitigating any adverse effects of activities on the environment'. The stated purpose of the Act was to allow sustainable management, defined in terms of use and development of resources, but with the crucial qualifier, the requirement to 'meet the reasonably foreseeable needs of future generations' (s5(2)). Specifically, in relation to freshwater contamination the Act appears explicit: 'No person may discharge any – contaminant or water into water' that 'changes or is likely to change the physical, chemical, or biological condition' of water (ss15(1), 2(1)). To my reading the Act does not define a particular contamination pathway, so 'diffuse' or otherwise should have been included. Thus, it is hard to imagine how the objective of the legislation to safeguard freshwaters for future generations could be better defined.

Looking back

Given that the RMA is clear that freshwater must be protected for future generations, we should expect that a review of the data would reveal that the state of freshwater has improved, and certainly not declined, in the three decades of its existence. What does the data reveal?

The picture is bleak, notwithstanding the fact that the agencies monitoring freshwaters are politically influenced and self-report their environmental achievement, both of which lead to downplaying the severity of the true state and trends (Joy and Canning, 2020). Independent analysis of data on freshwater starkly reveals that, contrary to expectations, over the last three decades freshwaters have significantly deteriorated (Julian et al., 2017).

The most comprehensive indicator of the state of freshwaters, the aquatic lifeforms that inhabit them,[1] reveal the harm done and deteriorating trends. Nationally, aquatic biodiversity is in severe decline, especially our native fish (Weeks et al., 2016; Joy et al., 2019). Three-quarters of New Zealand's mostly endemic native fish species are listed as threatened or at risk of extinction. This is up from a fifth when the RMA was enacted (Joy et al., 2019). This proportion of threatened fish species ranks among the worst in the developed world (Weeks et al., 2016).

The data on impacts on aquatic life reveals a comprehensive failure to protect freshwaters. Likewise, the physico-chemical measures of water quality show poor state and worsening trends. In the first three decades of the RMA river water quality significantly declined, especially at pasture and urban catchment sites (Ministry for the Environment and Statistics New Zealand, 2020). Eighty-five per cent of waterways in pasture catchments (which make up almost half of the country's waterways by length) now exceed Australasian nitrate guideline thresholds (ibid.). While urban waterways are the worst, they comprise less than 1% of the total length of waterways. In pasture catchments the major impacts on water quality are diffuse (run-off and through land). Urban water quality declines are mainly due to point sources, such as waste water discharges to freshwaters, the degradation of waste water infrastructure and lack of storm water treatment (Chakravarthy, Charters and Cochrane, 2019).

Groundwater quality is also deteriorating: in 2019, 62% of monitored bores showed significant increases in nitrate, 59% had faecal bacterial indicator (*E. coli*) concentrations that did not meet drinking water standards, and 64% had increasing trends in *E. coli* (Ministry for the Environment and Statistics New Zealand, 2019).

Like aquatic life and water quality, freshwater recreational opportunities are also in decline, with swimming in most rivers in farmed areas in New Zealand now posing a risk to human health from the ingestion of pathogens (ibid.). Farming intensification has also led to declines in recreational fisheries (Stewart et al., 2019). As well as the environmental impacts of land use intensification, increasing risks to human health are now emerging. Evidence is growing that links exposure to nitrate in groundwater-sourced drinking water, largely derived from intensive farming, to multiple negative health outcomes, including colorectal cancer, thyroid disease and neural tube defects (Chambers et al., 2020; Richards et al., 2022).

As if all that weren't bad enough, there are other emerging contaminants, such as pesticides and emerging organic contaminants (EOCs), increasingly showing up in waterways and aquifers (Close, Humphries and Northcott, 2021).

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Crucially, all of the factors leading to deteriorating water quality in our waterways will be exacerbated by climate change, adding further risk through changes to water temperature (Ling, 2010) and shrinking glaciers (Milner et al., 2017).

The summary above reveals a comprehensive failure to protect freshwaters. In retrospect, it seems that the best intentions of environmental policymakers count for nothing if the policies allow organisations charged with implementing them to be diverted from meaningful implementation. Outlined below are the key areas where implementation has failed.

Limit setting

A core problem has been the use of so-called 'limits' and 'environmental bottom lines', which, without a mechanism to prevent the decline of ecosystems to that bottom line, are fatally flawed. Limits have become a de facto tool to mediate between the dichotomous objectives of facilitating economic development and environmental preservation. This inherently faulty concept of attempting to balance these antagonistic goals was doomed to fail in New

Zealand, as it has globally (Bradshaw et al., 2021).

During the limit-setting process vested interests have exploited multiple opportunities to weaken limits to the point where they no longer limit harm. These vested interests, often aided and abetted by regional councils, used their superior resourcing to ensure that the process weakened limits in their favour (Joy, 2021; Joy and Canning, 2020). There has been a lack of any will to implement limits when they are likely to force change. Brown has highlighted the notion of 'regulatory capture', a process by which 'regulation ... is consistently or repeatedly directed away from the public interest and toward the interests of the regulated industry by the intent and action of the industry itself' (Brown, 2017, p.6). In this instance the problem of the capture of officials occurs because under the RMA process 'someone' must set the limits. The process is one where there are huge incentives and opportunities for it to be captured, politicised and, as a result, watered down (Joy and Canning, 2020).

Thus, we ended up with objectives like limits and bottom lines not set at a sufficiently stringent level to protect the status quo, let alone lead to any improvement. They end up flawed in that they:

- are often narrow in their application and constrained by complex definitions;
- are flexible instead of limiting – this is when they allow for long transition times, with councils setting time frames for improvements to meet bottom lines that allow harm to continue for generations;
- like speed limits on roads, tend to become not limits but goals, with the potential to drive worse outcomes.

Monitoring and enforcement failure

Additionally, there has clearly been a failure to monitor the degree to which the environmental protection policies, plans and consent conditions were achieving their stated aims and being enforced. Councils are required under the RMA to monitor the efficiency and effectiveness of their plans and regional policies and their methods of implementation, and to monitor the state of the environment. National data (collected via the National Monitoring System)[2] indicates that regional councils have consistently failed to monitor their plans and policies for effectiveness, even when state of the environment reporting has shown degradation.

In the majority of cases authorities have a policy of 'working with' polluters, rather than taking a command-and-control stance.

Initially the objective-setting process failed, then the monitoring compliance with those, albeit flawed, limits was insufficient, and finally there was a failure to enforce compliance. In a comprehensive study of environmental policy outcomes, Brown concluded that environmental compliance-monitoring enforcement is given low priority and very limited resourcing, meaning that its implementation is uncertain, contestable, and therefore highly variable in practice. As with the limit-setting process, it is susceptible to regulatory capture (Brown, 2017).

Reviewing the progression of RMA implementation, it is evident that at every step of the process the Act's purpose and principles have been whittled away, almost always with business interests winning over environmental protection. Right from the regional plan-setting stage, and then at the consent hearing stage, the imbalance of resourcing has meant that the polluters have had disproportionate influence on the process (Joy, 2021). Finally, compliance and monitoring has been weighted in favour of exploiters (Brown, 2017).

My experience of environmental protection has been that across government there is a culture of adopting a 'compliance approach'. This results in the environmental regulatory authorities only acting on severe and repeated breaches. In the majority of cases authorities have a policy of 'working with' polluters, rather than taking a command-and-control stance. A 'compliance approach' is described in Wright as an approach whereby '[c]ompliance-minded regulators seek to build relationships with regulatees, the idea being that a co-operative approach will lead to better long-term results' (Wright, 2022, p.48). Because this approach is applied in a context where regulatory agencies deprioritise and under-resource compliance monitoring and enforcement (compared to consent processing), implementation and enforcement of council rules and policies has been ineffective. Compliance teams are necessarily risk-adverse, meaning that they require a high degree of certainty before acting on breaches. All of this plays into the hands of those with economic vested interests.

The findings above were backed up in the recent review of resource management in New Zealand by Judge Randerson (Resource Management Review Panel, 2020), who summed up the failings of the RMA as: a lack of clear environmental protections; a lack of recognition of the benefits of urban development; a focus on managing the effects of resource use rather than on planning to achieve outcomes; a bias towards the status quo; lack of effective integration across the resource management system; excessive complexity, uncertainty and cost across the resource management system; lack of adequate national direction; insufficient recognition of te Tiriti and lack of support for Māori participation; weak and slow policy and planning; weak compliance, monitoring and enforcement; capability and capacity challenges in central and local government; and weak accountability for outcomes and lack of effective monitoring and oversight.

There have been recent changes to freshwater policy, attempting to address some of the issues raised above, with the National Policy Statement for Freshwater Management 2020 and its previous iterations, commencing in 2011. This policy, almost two decades late in implementation, gives national guidance to councils, which up to that point were left to their own devices. It sets out a National Objectives Framework which the councils must use to set the parameters for freshwater use in their respective regions. Council freshwater planning (to be undertaken by 2025) must aim to achieve certain national values, and other values and aspirations agreed by the community. While these values are linked to national bottom lines for certain attributes, some of the pitfalls with the previous policy remain. For example, it is still too flexible: the pace of change towards achieving these values is only loosely prescribed (ambitious but reasonable, with the suggestion that this be within a generation) (New Zealand Government, 2020, p.12, 3.3(2) b, c). Words like 'ambitious' and 'reasonable'

in my experience just invite variable interpretation leading to litigation and once again failure to halt harm.

One of the key changes is the introduction of the concept and framework of Te Mana o te Wai. This is potentially a groundbreaking change as it puts the health of the water before all else. Specifically, 'it ensures the health and well-being of the water is protected and human health needs are provided for before enabling other uses of water' (Ministry for the Environment, 2021, p.1). The concept relies on mana whenua and community involvement to determine how it applies regionally.

New national standards and regulations relating to freshwater also prescribe specific constraints that industry must work within now and by set dates in the future. While none of these will give effect to Te Mana o te Wai, they provide the absolute minimum standards, and many have a large degree of flexibility to allow exceptions of 'bottom lines':

- National environmental standards for plantation forestry, 2017. These include rules aimed at controlling effects of forestry on freshwater, which have been criticised as not being integrated with freshwater policy (Wright, Gepp and Hall, 2019).
- National environmental standards for freshwater, 2020. These are intended to provide immediate protection for wetlands, streams and fish, and interim controls while freshwater plans are developed. Controls on intensive winter grazing have been repeatedly delayed, and flexibility built in is such that no change in practice occurs.
- Resource Management (Stock Exclusion) Regulations 2020: regulations to increase fencing and setbacks to keep stock out of waterways.
- National environmental standards for sources of human drinking water (in draft).

The government is also progressing the Three Waters reform, which proposes changes to the way drinking water, waste water and storm water are managed throughout Aotearoa New Zealand, and the Water Services Act came into force in 2021. Unfortunately, this legislation largely deals with the supply of drinking water as, bizarrely, somehow separate from the source water.

New environmental policy to replace the RMA is now in the pipeline, with three acts proposed in its stead. The Natural and Built Environments Act is intended to be the main replacement for the Resource Management Act, providing for land use and environmental regulation. In addition, a Strategic Planning Act is proposed to introduce regional spatial strategies, and a Climate Change Adaptation Act will address issues associated with managed retreat and funding and financing adaptation to climate change.

An exposure draft of the Natural and Built Environments Bill was released for public feedback in 2021 through an inquiry process; this feedback was considered by the Environment Committee, as well as recommendations in a departmental report by the Ministry for the Environment. So far the exposure draft has only provided an 'early look into key aspects of the legislation'. The draft introduced the proposed purpose of the Act and some of the key components, which include environmental limits, environmental outcomes and a national planning framework, but remains without detail as to the mechanisms to be used to mediate the inherent tensions between the twin objectives of facilitating economic development and environmental preservation. Given my analysis of the current legislation, crucial questions remain:

- who will set the objectives/limits?
- what will objectives/limits achieve?
- how will the undue influence of vested interests be avoided?

Conclusion

In looking to the future for freshwater, we must look back. After three decades of the RMA, with its clearly stated intent to protect freshwater for future generations, it is now patently and sadly obvious that it has failed. Failure has occurred for multiple reasons, including the lack of an effective mechanism to deal with diffuse discharges, politicisation of the process around limit setting, and the failure of compliance monitoring and enforcement. This clearly raises the question: why would we expect new legislation to be any more effective when the problem isn't so much the intent of the policy and lack of clarity around bottom lines, but rather its implementation (or lack of it)?

To achieve the stated goal of all New Zealanders to have healthy freshwaters, given the failures to date, the solutions I suggest are:

- to depoliticise the environmental limits issue by setting up a more independent national limit-setting commission, perhaps along the lines of the Reserve Bank;
- the monitoring failings of the past could be dealt with by taking monitoring and reporting away from local and central government and placing it within an independent framework like the parliamentary commissioner for the environment;
- regulatory capture and subsequent failures to enforce could be ameliorated by having an independent national enforcement organisation, again such as the parliamentary commissioner for the environment;
- that the Ministry for the Environment's statement of intent 2020–25 be dramatically strengthened by incorporating mātauranga Māori concepts of whakapapa and reciprocity based on mutual obligation.

I hope that the policymakers involved in the current revamp of environmental policy remember the words of Winston Churchill: 'Those who fail to learn from history are doomed to repeat it.'

1 Note that unlike snapshot physico-chemical water quality assessments, these aquatic lifeforms integrate water, ecosystem and habitat quality in space and time.
2 The NMS is a spreadsheet that councils fill in annually and submit to the Ministry for the Environment.

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