Freshwater Scarcity and the RMA: Developing Legal Tools to Achieve Efficient Outcomes

Ben Methven

A dissertation submitted in partial fulfilment of the degree of Bachelor of Laws (with Honours) at the University of Otago

October 2019

Acknowledgements

To Ceri, for all your wisdom and guidance this year. Thank you for constantly challenging my way of thinking and for always trying to get the best out of me. Your unending passion has been truly inspiring, and without you this would not have been possible;

To my wonderful parents, I can't even begin to describe how grateful I am for everything you have done for me, and for all the opportunities you have gifted me;

To the law boys, Jack, Sam, George, Patrick, David (and Jackson for good measure) – thank you for the wild ride that has been the past five years. I look forward to many more good times in the future;

And lastly, to Bridget – thank you for putting up with me this year. You're an absolute gem, and I can only hope to replicate all the support you have given me as you tackle your dissertation next year.

Contents

"What is common to the greatest number gets the least amount of care. Men pay most attention to what is their own: they care less for what is common; or, at any rate, they care for it only to the extent to which each is individually concerned. Even where there is no other cause for inattention, men are more prone to neglect their duty when they think that another is attending to it."

- Aristotle

Introduction

Fresh water is unequivocally an essential natural resource in New Zealand. It is essential for human welfare, plants, livestock, farming activities, industry, power generation, and is of particular cultural significance to Maori.[1] This distinguishes fresh water from other natural resources. Its essentiality means that all New Zealanders have an interest in how it is managed.[2]

Clearly though, some uses for fresh water are more essential than others. On the one hand, fresh water plays a critical role in maintaining in-stream ecosystem values and satisfying basic human needs. These uses are truly "essential", given that they relate to ecological and human survival. On the other hand, fresh water is an important economic input for both farmers and hydro-electric power generators. These uses can be regarded as "non-essential"; while they remain important, they do not involve a question of life or death. This highlights two paradigms of freshwater use; paradigms which any given management approach must reconcile. As Sax puts it:[3]

> The fundamental question water presents is how we can accommodate the need for stability and exclusivity … to a resource with the physical characteristics of water, and to the legitimate public demands on it.

This question is currently addressed through the Resource Management Act 1991 (RMA). The RMA forms the basis for freshwater management in New Zealand, and thus for reconciling the paradigms of essential and non-essential use. In recent times however, tensions between competing uses have spilled over into the political domain. Freshwater policy was a hotly contested issue at the 2017 general election, with several political parties including a royalty charge in their policy platform.[4] Since then, the issue of royalties has been reviewed by the Tax Working Group, who recommended that the government make greater use of taxation instruments to address water abstraction challenges.[5] This recommendation is significant for

---

[1] *Carter Holt Harvey Ltd v Waikato Regional Council* [2011] NZEnvC 380 at [2].
[2] Ministry for the Environment *National Policy Statement for Freshwater Management 2014: Updated August 2017 to incorporate amendments from the National Policy Statement for Freshwater Amendment Order* (issued by notice in the New Zealand Gazette on 9 August 2017 and taking effect on 7 September 2017) [NPS-FM 2014], preamble.
[3] Joseph L Sax "Our Precious Water Resources: Learning from the Past, Securing the Future" (paper presented to the Resource Management Law Association Conference, 26 September 2008).
[4] These include the Green Party "Protecting drinking water" (13 September 2017) <https://www.greens.org.nz/policy/environment-policies/protecting-drinking-water>; Labour "Clean rivers for future generations" (2017) <https://www.labour.org.nz/water>; and The Opportunities Party "Clear Water Action" (2017) <https://www.top.org.nz/top9>.
[5] Tax Working Group *Future of Tax: Final Report Volume I – Recommendations* (21 February 2019) at 16.

two inter-related reasons. Whilst it acknowledges the complexities of freshwater decision-making, it also implies that the current decision-making regime is not fit for purpose. In particular, the Tax Working Group emphasised that an abstraction tax could "improve the efficiency of water use … ensuring that water is allocated to its highest use value, including ecological and social uses".[6]

Against that background, this dissertation critically examines New Zealand's freshwater management regime, with particular emphasis on efficiency in both freshwater allocation and use. Chapter one explores the characteristics of fresh water, explaining why these characteristics make it necessary to structure a management regime. Chapter two then examines New Zealand's freshwater management regimes both past and present. Examining the RMA reveals a layered structure of management tools, whereby fresh water's essential uses are provided for first, followed by non-essential uses. Interestingly, this structure says nothing about allocating water between competing uses, particularly different non-essential uses, an issue which has arisen due to freshwater scarcity. This has forced the development of a "first in first served" (FIFS) priority rule,[7] while certain property-like entitlements have also emerged. As revealed in chapter three though, the courts have subsequently expressed doubt as to whether FIFS produces efficient outcomes.

This sets up chapter four, which exposes widespread inefficiencies within the current allocation regime. Although FIFS is partially to blame, the most significant issue lies in the system of property-like entitlements. This provides a clear rationale for moving towards private property in freshwater allocation, through the use of market-based management tools. The transfer of water permits should be encouraged, while a freshwater charge should be adopted, as ways of reaching efficient outcomes. However, it is not merely that simple. Chapter five exposes several barriers to implementing transfer and charging mechanisms, most prominently RMA's sustainable management purpose. This ultimately reveals that a freshwater charge is the more viable of the two management tools.

[6] At 47.
[7] *Fleetwing Farms Ltd v Marlborough District Council* [1997] 3 NZLR 257 (CA) [*Fleetwing*].

I. Characteristics of Fresh Water

Apart from its essentiality, fresh water has several characteristics that distinguish it from other natural resources. Exploring these characteristics is hugely important; not only do they make it necessary to deliberately manage and allocate fresh water, but they also make those tasks incredibly challenging.

A. Fresh water as a Common-pool Resource

By its very nature, fresh water can be regarded as a "common-pool" resource. This term refers to a resource which is:[8]

> ... sufficiently large that it is difficult, but not impossible, to define recognised users and exclude others altogether. Further, each person's use of such resources subtracts benefits that others might enjoy.

New Zealand's freshwater resources are no exception. Fresh water is rightly regarded as a common-pool resource, because of its importance to both ecological and human survival. All New Zealanders share an interest in these essential uses, which means that fresh water cannot simply be privatised.[9] Instead, decision-makers are met with difficulty in excluding potential users, due to the widespread perception that water should be free.[10] In any event, the government has long claimed that "no one owns water", which in essence reflects the common-pool position.[11]

However, in the absence of pricing or private ownership, there is no mechanism for controlling access to water resources. Of itself, this implies a need for regulatory control, a notion which is reinforced considering that many freshwater uses are "rivalrous" in nature.[12] Outside of power generation, the majority of New Zealand's allocated fresh water is used consumptively,

[8] Elinor Ostrom "The Challenge of Common-Pool Resources" (2008) 50(4) Environment: Science and Policy for Sustainable Development 8 at 11.
[9] See Richard Epstein "Property Rights in Water, Spectrum and Minerals" (2015) 86 U Colo L Rev 389 at 392.
[10] Andrew Hayward "Freshwater Management: Water Markets and Novel Pricing Regimes" (2006) 10 NZJEL 215 at 253; and Parliamentary Commissioner for the Environment *Beyond Aging Pipes: Urban Water Systems for the 21st Century* (April 2001) at 8.
[11] Audrey Young "Key on Waitangi Claim: 'No one owns water'" *The New Zealand Herald* (online ed, Auckland, 7 February 2012). See also Ministry for the Environment *Next steps for fresh water: Consultation document* (February 2016) at 27.
[12] Compare Tom Tietenberg and Lynne Lewis *Environmental and Natural Resource Economics* (9th ed, Addison-Wesley, Boston, 2012) at 29 where the authors refer to this characteristic as "divisibility".

for purposes such as irrigation (51 per cent) and domestic household use (14 per cent).[13] These uses preclude others from enjoying the benefits of that water, because it is not readily returned to its source.

Crucially, these characteristics make fresh water susceptible to "the tragedy of the commons". As Hardin argued in his seminal article, each user can maximise their own gain by exploiting a common-pool resource.[14] But if everyone behaves in this way, fulling pursuing their own self-interest, that will be detrimental to society as a whole. Essential uses and values will suffer, due to overharvesting and perhaps even destruction of the resource base.[15] This highlights the importance of managing access to freshwater resources. To avoid the tragedy of the commons, we need a legal regime that allows different freshwater uses to be pursued, limits the extent of that pursuit where appropriate, and excludes some uses altogether where necessary.

B. Fresh water as a Scarce Resource

New Zealand's freshwater resources are also becoming increasingly scarce. On the one hand, supply has always been relatively plentiful. Approximately 550 billion cubic metres of precipitation falls each year on average, which is roughly nine times the volume of Lake Taupo.[16] This serves to replenish New Zealand's rivers, lakes and groundwater systems. It must be noted though that this supply is somewhat variable, both in geographic and temporal terms. For example, the West Coast receives 26 per cent of national annual precipitation and possesses 30 per cent of the total freshwater flow.[17] Furthermore, the effects of climate change may increase future variability, as events such as drought and extreme rainfall begin to occur more frequently.[18]

On the other hand, demand-side pressure has rapidly increased in recent years, particularly from out-of-stream consumptive uses. New Zealand's agricultural sector has experienced a structural shift towards dairying, which has far greater water requirements than other types of farming. It is hardly surprising then to see that the area of irrigated agricultural land in New

[13] Ministry for the Environment and Stats NZ *New Zealand's Environmental Reporting Series: Environment Aotearoa 2019* (April 2019) at 75.
[14] Garrett Hardin "The Tragedy of the Commons" (1968) 162 Science 1243 at 1244.
[15] Ostrom, above n 8, at 11.
[16] Daniel Collins, Christian Zammit, Andrew Willsman and Roddy Henderson *Surface water components of New Zealand's National Water Accounts, 1995-2014* (Ministry for the Environment, May 2015) at 8.
[17] Collins, Zammit, Willsman and Henderson, above n 16, at 4.
[18] Peter Gluckman *New Zealand's fresh waters: Values, state, trends and human impacts* (Office of the Prime Minister's Chief Science Advisor, 12 April 2017) at 41–42.

Zealand almost doubled in size between 2002 and 2017.[19] Although but one example, this reflects a general trend of increased water use. Between 1999 and 2006, it was estimated that total water allocation increased by 50 per cent.[20]

Consequently, demand for fresh water may begin to exceed the biophysical confines of supply. This situation is not a mere hypothetical, or a question of when. Freshwater scarcity is a growing problem in New Zealand, with many freshwater catchments over-allocated, or approaching full allocation.[21] Increasingly, decision-makers are finding that they "no longer have sufficient water to meet all needs, in all places and at all times".[22] This is significant because it exacerbates the access problem. To avoid the tragedy of the commons, it is inevitable that some uses will have to be excluded. In turn, we need a legal regime for allocating freshwater resources between competing uses. Scarcity has made it necessary to structure a system of rights in fresh water, so that trade-offs can be made between them.

C. Fresh water as a Fugitive Resource

Finally, fresh water can be described as a fugitive resource.[23] It is constantly moving, whether percolating in an aquifer, flowing in a river, or moving between the two. This last point is particularly important to note. As groundwater and surface water are part of the same hydrologic cycle, taking water from an aquifer can reduce river flows and vice versa.[24] This makes it incredibly challenging to manage and allocate fresh water. In respect of managing access, the potential for impacts upon other water bodies makes it difficult to set appropriate limits.[25] In respect of allocating between competing uses, the fugitive nature of fresh water makes it difficult to define "units" to allocate.[26] Ultimately, this highlights some of the challenges of structuring a legal decision-making regime for freshwater resources.

---

[19] Ministry for the Environment and Stats NZ, above n 13, at 78.
[20] Ministry for the Environment *Environment New Zealand 2007* (December 2007) at 302.
[21] Land and Water Forum *Report of the Land and Water Forum: A Fresh Start for Freshwater* (September 2010) [LAWF *First Report*] at [54].
[22] Water Programme of Action inter-departmental working group *Freshwater for a sustainable future: issues and options – A public discussion paper on the management of New Zealand's freshwater resources* (Ministry for the Environment, December 2004) at 3.
[23] William Blackstone *Commentaries on the Laws of England* (Clarendon Press, Oxford, 1765–1769) vol 2 at 395.
[24] Ministry for the Environment and Stats NZ, above n 13, at 78.
[25] See Land and Water Forum *Second Report of the Land and Water Forum: Setting Limits for Water Quality and Quantity, Freshwater Policy and Plan-Making Through Collaboration* (April 2012) [LAWF *Second Report*] at [4].
[26] Urs Luterbacher and Ellen Wiegandt "Cooperation or Confrontation: Sustainable Water Use in an International context" in Edith Brown Weiss, Laurence Boisson de Chazournes and Nathalie Bernasconi-

II. Legal Regime for Freshwater Management

The characteristics described above highlight the need for a legal regime to manage and allocate fresh water. Accordingly, this chapter considers the tools which carry out these tasks, both past and present.

A. Common Law System

New Zealand's earliest freshwater management regime was based upon English common law principles.[27] At common law, private property was never applied to fresh water in its natural state. The key features of private property, including rights of possession, use and disposition,[28] were seen as a poor fit for the complex and variable nature of fresh water.[29] Therefore, no proprietary rights were said to exist *in situ*. It was only once fresh water had been captured, and taken into possession, that exclusive rights arose.[30]

Instead, water in its natural state was viewed as a common-pool resource. It was regarded as *publici juris*, or public to those who had a right of access to it.[31] In turn, access was linked to owning riparian land; land which was adjacent to the relevant water body.[32] This is interesting because it demonstrates that private property was not completely discarded. Although no property existed in water bodies, access to those water bodies was principally determined by property, in the form of riparian land ownership.

The scope of each riparian landowner's rights then depended on the type of water. Surface water could be taken in any quantities, but only for domestic purposes. If the purpose was "extraordinary", such as irrigation or industrial use, the use had to be reasonable, and the water had to be returned to its source.[33] Additionally, landowners could not impede the flow of stream water to lower riparian users.[34] With respect to groundwater flowing in "known and defined

---

Osterwalder (eds) *Fresh Water and International Economic Law* (Oxford University Press, Oxford, 2005) 11 at 14.

[27] Ali Memon and Peter Skelton "Institutional Arrangements and Planning Practices to Allocate Freshwater Resources in New Zealand: A Way Forward" (2007) 11 NZJEL 241 at 248.

[28] See AM Honoré "Ownership" in AG Guest (ed) *Oxford Essays in Jurisprudence* (Oxford University Press, London, 1961) 108 at 113; and Jeremy Waldron *The Rule of Law and the Measure of Property* (Cambridge University Press, Cambridge, 2012) at 66.

[29] Epstein, above n 9, at 399–400.

[30] *Embrey v Owen* (1851) 6 Exch 353 at 369; 155 ER 579 at 585.

[31] *Embrey*, above n 30, at 369. See also FM Brookfield *Laws of New Zealand* Water (Online ed) at [39]; and *Halsbury's Laws of England* (5th ed, 2018, online ed) vol 100 Water and Waterways at [110].

[32] FM Brookfield "The Conveyancer, Water Rights and the Environment" [1975] NZLJ 645 at 645.

[33] Brookfield, above n 32, at 645.

[34] At 645.

channels", the same basic rules applied as for surface water.[35] By contrast, groundwater flowing through undefined channels could be taken in any quantities, without liability for diminishing a neighbour's water supply.[36]

B. Water and Soil Conservation Act 1967

The 1960s were a time of environmental revolution. Rachel Carson's Silent Spring was released, detailing the indiscriminate effects of pesticide use,[37] while Hardin's seminal article was published.[38] Around the same time, deficiencies in the common law system were becoming more apparent. The uses for fresh water had significantly grown, yet the common law system gave primacy to riparian landowners.

Against this background, the Water and Soil Conservation Act 1967 (WSCA) was enacted, giving New Zealand its first legislative regime for freshwater management. At the centre of this regime was s 21, which vested the sole right to dam, divert, take, discharge or use natural water in the Crown. This had the effect of extinguishing those rights at common law, as confirmed in *Glenmark Homestead Ltd v North Canterbury Catchment Board.*[39] However, it is unclear whether s 21 also altered the position regarding property in fresh water. While the mainstream view is that s 21 fell short of claiming property,[40] it may have made such a claim in substance. This is because rights to manage and use fresh water, which were explicitly claimed, are often viewed as incidents of private property.[41]

In any event, the vesting of use rights in the Crown necessitated a regime for granting those rights back to water users. A system of statutory water rights was established, with primary management responsibility devolved to catchment boards at a regional level.[42] This meant that prospective users needed catchment board approval to lawfully dam, divert, take, use or discharge natural water.[43] It should be noted that there were some limited exceptions; water

[35] Trevor Daya-Winterbottom "Water Management" in Peter Salmon and David Grinlinton (eds) *Environmental Law in New Zealand* (Thomson Reuters, Wellington, 2015) 641 at 648.
[36] *Acton v Blundell* (1843) 12 M & W 324 at 353–354, 152 ER 1223 (Exch) at 1235.
[37] Rachel Carson *Silent Spring* (Houghton Mifflin, Boston, 1962).
[38] Hardin, above n 14.
[39] *Glenmark Homestead Ltd v North Canterbury Catchment Board* [1978] 1 NZLR 407 (CA) at 412–413 per Woodhouse J.
[40] See *Hampton v Canterbury Regional Council* [2015] NZCA 509, [2016] NZRMA 369 [*Hampton* (CA)] at [103]; and Philip Milne "Allocation of Public Resources under the RMA: Implications of *Aoraki Water Trust v Meridian*" [2005] RM Theory & Practice 146 at 159.
[41] See Honoré, above n 28, at 116.
[42] Water and Soil Conservation Act 1967 [WSCA], s 23.
[43] WSCA, s 21(3).

could be taken or used without a water right if reasonably required for domestic needs, the needs of animals, or for fire-fighting purposes.[44] Ultimately, this regime was a significant improvement on the common law. Rather than regulating access through land ownership, the WSCA focussed on the proposed activity, with the overall aim of promoting a wide range of multiple and beneficial uses.[45]

C. Resource Management Act 1991

The WSCA has since been replaced by the RMA. This signalled an important shift in focus, from planning for activities to regulating their effects.[46] Under the RMA, choices are constrained by environmental bottom lines, with individuals otherwise left to pursue their own well-being.[47] Nevertheless, the RMA preserves some aspects of the WSCA. In particular, s 354(1)(b) provides that rights to manage and use water continue to vest in the Crown. Again, it not entirely clear whether this alters the common law position regarding property in fresh water. What remains clear though is that the vesting of rights in the Crown necessitates a regime for granting those rights back to water users.

At the centre of this regime is the RMA's purpose: promoting "the sustainable management of natural and physical resources".[48] This is defined in s 5(2) as:

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

[44] WSCA, s 21(1).
[45] WSCA, Long Title.
[46] SD Upton "Purpose and Principle in the Resource Management Act" (1995) 3 Wai L Rev 17 at 25.
[47] Upton, above n 46, at 26. See also the decision in *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593 [*King Salmon*] at [149] which provides that plans may give priority to environmental preservation or protection, thereby setting environmental bottom lines.
[48] Section 5(1).

Sustainable management serves as the touchstone for the RMA's comprehensive, interrelated system of rules, plans, policy statements and procedures.[49] Basically, all decision-making under the RMA must conform with its overarching sustainable management purpose. In this regard, decision-makers are guided by the remaining pt 2 provisions. These provisions inform the meaning of sustainable management in different contexts, requiring decision-makers to recognise and provide for nationally important matters (s 6), have particular regard to a list of other matters (s 7), and take into account the principles of the Treaty of Waitangi (s 8).

Under s 7(b) of the RMA, decision-makers must have particular regard to "the efficient use and development of natural resources". This is hugely important in the context of freshwater allocation, which will be discussed later in this dissertation. As will be explained, efficient use and development serves as an important guide to allocation decisions.

1 National direction

At the top of the planning hierarchy, central government can provide national direction to the freshwater management regime in a number of ways. Any person may apply for a water conservation order (WCO) under pt 9 of the RMA, to recognise and sustain outstanding amenity or intrinsic values in a water body.[50] This is achieved by restricting regional councils' water management powers in relation to that water body, through mechanisms such as minimum flows,[51] or maximum contaminant loadings.[52] Currently, there are 15 such orders in force,[53] all of which were made by the Governor-General on the recommendation of the Environment Court.[54] Otherwise though, the central government planning powers have gone relatively unused. It is only recently that a national policy statement has been introduced in relation to fresh water, first in 2011,[55] followed by a replacement in 2014.[56]

[49] *Falkner v Gisborne District Council* [1995] 3 NZLR 622 (HC) at 632.
[50] Section 199(1).
[51] Section 200(b).
[52] Section 200(c).
[53] Ministry for the Environment "Table of Water Conservation Orders" (5 September 2018) <www.mfe.govt.nz/fresh-water/water-conservation-orders/existing-water-conservation-orders/table-water-conservation>.
[54] Eight of these orders were made under the RMA (s 214), while the remaining seven were made under the WSCA (s 20D).
[55] Ministry for the Environment *National Policy Statement for Freshwater Management 2011* (issued by notice in the New Zealand Gazette on 12 May 2011 and taking effect on 1 July 2011).
[56] NPS-FM 2014, above n 2.

The more recent national policy statement – the National Policy Statement for Freshwater Management 2014 (NPS-FM 2014) – establishes objectives and policies for the integrated and sustainable management of fresh water.[57] It principally contains a national objectives framework,[58] as well as quality and quantity limits for freshwater bodies. The quality limits are in the form of objective bottom lines for contaminant attributes such as E. coli and nitrogen.[59] By contrast, the quantity limits are in the form of subjective principles and standards, to be used by regional councils in setting minimum flows and phasing out over-allocation.[60] In either case, the limits must be incorporated into regional planning instruments no later than 31 December 2025.[61]

2 Regional decision-making

Beyond the central government steering functions, primary responsibility for freshwater management is devolved to regional councils. A key provision in this respect is s 14 of the RMA. Section 14 largely mirrors s 21 of the WSCA, containing a default statutory prohibition on the taking, use, damming and diversion of water. It also contains similar exceptions. Section 14(3) provides that water may be taken or used for a person's reasonable domestic needs, the reasonable drinking needs of one's animals or, in the case of geothermal water, where it is taken or used in accordance with Maori custom.[62] In each of these cases, the taking or use must not have adverse environmental effects. This does not apply to the final exception however; where water is taken or used for firefighting purposes.[63]

Outside of these limited exceptions, the taking and use of water must be expressly authorised. In this regard, s 14(3)(a) sets out three key authorisation mechanisms, two of which – regional planning rules and the resource consent process – are supervised by regional councils. This supervisory role is strengthened by s 30(1)(e), which prescribes control over the taking, use, damming and diversion of water to be a function of each regional council. In this way, significant management control is transferred to regional councils, reflecting the view that freshwater decision-making best takes place at the regional level. Regional councils could even

[57] Preamble.
[58] Objective CA1 and policies CA1–CA4 require regional councils to identify and set freshwater objectives in accordance with the attributes listed in appendix 2.
[59] Objectives A1–A4 and policies A1–A7.
[60] Objectives B1–B5 and policies B1–B8.
[61] Policy E1.
[62] Sections 14(3)(b), 14(3)(c) and 14(3)(d).
[63] Section 14(3)(e).

be regarded as solely responsible for s 14(3)(a), as no national environmental standard (the third key authorisation mechanism) has been introduced for fresh water.[64]

Looking specifically at the first authorisation mechanism, regional planning rules can be said to reflect the effects-based focus of the RMA.[65] Through such rules, regional councils may set environmental bottom lines, classifying water-related activities according to their effects. At one end of the spectrum, the most desirable activities may be permitted without a water permit.[66] This effectively discards the s 14 default prohibition. By contrast, the least desirable activities may be prohibited, and thus not allowed without a plan change.[67] In between these two extremes are controlled, restricted discretionary, discretionary and non-complying activities.[68] These activities all require a water permit to take place, as do activities which the plan does not classify (due to the default prohibition).

A water permit is a type of resource consent,[69] which forms the second and more prominent authorisation mechanism. In terms of decision-making on water permits, the RMA contains three different types of provisions. Firstly, the main substantive considerations are found in s 104. Subject to pt 2, regional councils must have regard to any actual and potential environmental effects, any relevant planning document, and any other matter considered to be relevant and reasonably necessary to determine the application.[70] Secondly, the RMA contains powers relating to the content of water permits. Regional councils may specify the length of a water permit, up to a maximum period of 35 years,[71] and impose conditions on its exercise.[72] Finally, the RMA contains powers which may be exercised during the term of a water permit. The conditions attached to a water permit (if any) may be reviewed in limited circumstances,[73] while regional councils may allow for permits to be transferred between users.[74]

At this point, it is important to set out the key transfer provisions. Section 136 expressly allows for the transfer of water permits, but only in limited circumstances; where the transfer involves

[64] Daya-Winterbottom, above n 35, at 655–656.
[65] Raewyn Peart "Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches" (2001) 5 NZJEL 127 at 130.
[66] Section 87A(1).
[67] Section 87A(6).
[68] Sections 87A(2), 87A(3), 87A(4) and 87A(5) respectively.
[69] Section 87(d).
[70] Section 104(1).
[71] Section 123(d).
[72] Section 108.
[73] Section 128(1).
[74] Section 136(2)(b).

successive owners of the same site.[75] By contrast, transfers between different sites may only take place within the same catchment or aquifer,[76] and only in relation to take and use permits.[77] Additionally, transfers between different sites must be approved by the relevant regional council. The default requirement for applicants is obtaining a resource consent,[78] unless the proposed transfer is expressly allowed by a regional plan.[79] This further illustrates that significant management responsibility is devolved to the regional level. More importantly though, this shows that a key feature of private property rights – disposition – has not been fully embraced by the freshwater management regime.

3 Applying sustainable management at the regional level

As outlined above, New Zealand's freshwater management regime is highly decentralised; most of the decision-making takes place at the regional level. This makes it pertinent to ask what the decision-making process involves. Part 2 of the RMA is obviously critical, but it must be noted that sustainable management has several broad elements. On the one hand, decision-makers must focus on enabling people and communities to provide for their social, cultural and economic well-being. Yet, s 5(2) also directs decision-makers to address matters of inter-generational equity, ecological sustainability and the management of environmental effects.[80] Crucially, the RMA does not elaborate on how to reconcile these elements. It provides no guidance in the event they come into conflict. This has left the courts to develop an "overall broad judgment" approach to sustainable management. The language used in pt 2 of the Act is deliberately open, and therefore should not be subjected to strict rules of statutory construction, aiming to extract a precise meaning.[81] Instead, the provisions allow for a comparison of conflicting considerations, and their relative significance or proportion, in the final outcome.[82] In short, decision-makers need to balance all the relevant matters and interests, to ultimately determine what sustainable management requires in the context.

At first instance, this approach appears to reserve a wide discretion to decision-makers. However, the decision in *Environmental Defence Society Inc v The New Zealand King Salmon*

[75] Sections 136(1) and 136(2)(a).
[76] Section 136(2)(b).
[77] Section 136(2).
[78] Sections 136(2)(b)(ii) and 136(4).
[79] Section 136(2)(b)(i).
[80] Ezekiel Hudspith "Freshwater Management in New Zealand: a Challenge for Ecology, Equity and Economic Efficiency" (2012) 16 NZJEL 277 at 282.
[81] *New Zealand Rail Ltd v Marlborough District Council* [1994] NZRMA 70 (HC) at 86.
[82] *North Shore City Council v Auckland Regional Council* (1996) 2 ELRNZ 305 (EnvC) at 347.

Co Ltd (*King Salmon*) confines this discretion in relation to regional planning.[83] *King Salmon* concerned a plan change application that was inconsistent with the New Zealand Coastal Policy Statement 2010 (NZCPS 2010),[84] yet was granted on the overall broad judgment approach.[85] In the Supreme Court, the majority took a different approach, one which focussed on the content of the NZCPS 2010, and the statutory wording of "give effect to" in s 67(3) of the RMA. The NZCPS 2010 contains policies to sustainably manage the coastal environment, thereby giving substance to the pt 2 provisions.[86] As such, when lower order plans "give effect to" the NZCPS 2010, those plans will necessarily accord with pt 2. This dispels much of the need for an overall broad judgment. Absent invalidity, incomplete coverage or uncertainty of meaning in the higher order document, decision-makers need not refer back to pt 2 in determining a plan change.[87] This shows that the requirement to "give effect to" higher order planning instruments is a strong mandate, intended to constrain decision-makers.[88] Invariably though, the extent of the constraint will depend on the language used in the higher order plan. The more precise and directive, the more constraining the plan will be.

The question then becomes how far this reasoning extends. Clearly it would not preclude an overall broad judgment in establishing higher order plans to begin with.[89] Furthermore, it would not appear to apply to decision-making on resource consents. Unlike the strong mandate of "give effect to" in s 67(3), the language of "have regard to" in s 104 implies that plans do not have statutory pre-eminence. Basically, relevant plans need only be given appropriate weight in the final decision; they do not prevent consent authorities from resorting to pt 2. This position is confirmed by the Court of Appeal in *RJ Davidson Family Trust v Marlborough District Council*.[90] In some cases, a consent authority may feel assured in not referring to pt 2, because the plan is competently prepared and covers the situation at hand. Absent such assurance, or if in doubt, it will be appropriate and necessary to do so.[91]

[83] *King Salmon*, above n 47.
[84] Department of Conservation *New Zealand Coastal Policy Statement 2010* (issued by notice in the New Zealand Gazette on 4 November 2010 and taking effect on 3 December 2010).
[85] Board of Inquiry *New Zealand King Salmon Requests for Plan Changes and Applications for Resource Consents* (22 February 2013) at [80] and [1341].
[86] *King Salmon*, above n 47, at [85] and [90].
[87] At [88] and [90].
[88] At [91].
[89] Derek Nolan (ed) *Environmental and Resource Management Law* (online ed, LexisNexis) at [3.24].
[90] *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316, [2018] 3 NZLR 283.
[91] At [75]–[77].

D. Freshwater Allocation under the RMA

The freshwater management regime described above appears to be premised on a "two-stage" model,[92] which can alternatively be described as a "layered structure" of management tools. In the first layer (or stage), the NPS-FM 2014 and WCOs set ecological bottom lines, while s 14(3) makes allowances for certain domestic and cultural uses.[93] This is critical because it reflects the underlying common-pool nature of fresh water. The management regime prioritises environmental and human welfare values, ensuring that fresh water's essential uses are provided for first. This leaves the second layer, where regional councils are tasked with allocating the remaining fresh water to non-essential uses, such as irrigation and power generation.[94]

Despite the second layer referring to allocation, it was for a time unclear whether the freshwater management regime involved allocation at all.[95] The RMA itself "says nothing specific about the priority of competing claims to take from a natural resource",[96] and does not "contain a stand-alone regime for the allocation of water resources".[97] This is not problematic under conditions of abundance; prioritisation is unnecessary when there are sufficient resources to meet everyone's needs.[98] However, with the growing problem that is freshwater scarcity, trade-offs between different uses have become inevitable. This is especially so in the management regime's second layer; non-essential uses are the lowest down the pecking order, and thus the first affected by scarcity. Hence, questions have arisen about the extent to which the RMA, especially regional plans and the resource consent process, is competent to deal with allocation.[99]

On the one hand, the power to allocate through regional planning rules could be regarded as implicit in the s 30(1)(e) water management functions.[100] By contrast, the resource consent process invariably results in allocations. Each water permit distributes a set amount of water

[92] Cabinet Office Circular "New Start for Fresh Water" (2008) at [38].
[93] Cabinet Office Circular, above n 92, at [37]–[38].
[94] Cabinet Office Circular, above n 92, at [38].
[95] Milne, above n 40, at 154.
[96] *Central Plains Water Trust v Ngai Tahu Properties Ltd* [2008] NZCA 71, [2008] NZRMA 200 [*Ngai Tahu* (CA)] at [1].
[97] *Central Plains Water Trust v Synlait Ltd* [2009] NZCA 609, [2010] 2 NZLR 363 [*Synlait* (CA)] at [3].
[98] Bryan Jenkins "The Development of Sustainable Alternatives to Applicant's Proposals using Collaborative Approaches" (paper presented to New Zealand Planning Institute Conference, Hamilton, April 2013).
[99] See Milne, above n 40, at 154.
[100] Peart, above n 65, at 133.

resources, creating a priority to use that resource in favour of the successful applicant.[101] Nevertheless, some commentators in the early 2000s warned against overstating the importance of the consenting provisions. They argued that resource allocation was at best a "by-product" of the resource consent process, rather than the overall objective.[102] Ultimately, this demonstrates some initial uncertainty regarding whether the RMA involved allocation between competing uses.

1 First in first served

As one might expect, this uncertainty resulted in considerable litigation.[103] In *Fleetwing Farms Ltd v Marlborough District Council* (*Fleetwing*), the Court of Appeal was faced with two applications for coastal permits, both of which sought to establish a marine farm in the same area.[104] The question of priority between the two had significant implications; if a coastal permit was granted to the first applicant, that would necessarily exclude the second.[105] Ultimately, the Court of Appeal held that the RMA does not warrant refusing an application that meets the sustainable management criterion on the grounds that a later applicant would or might meet a higher standard.[106] In other words, the RMA operates on a FIFS basis. The Act requires regional councils to judge each application on its own merits, while recognising that the first in time has priority.[107]

This approach has since been specifically endorsed in a freshwater allocation context. In *Aoraki Water Trust v Meridian Energy Ltd* (*Aoraki*), Aoraki sought a declaration that it could be granted consents to take and divert water from Lake Tekapo.[108] Meridian opposed this declaration, claiming that the full flow of the lake had been allocated under its consent.[109] In the end, the High Court agreed with Meridian, drawing on a combination of property and public law doctrine to underpin its reasoning.

---

[101] *Aoraki Water Trust v Meridian Energy Ltd* [2005] 2 NZLR 268 (HC) [*Aoraki*] at [28], [32] and [46(a)].
[102] Milne, above n 40, at 155; and Peter Skelton "Project Aqua reveals flaws in regional planning" *The National Business Review* (online ed, Auckland, 19 September 2003).
[103] Daya-Winterbottom, above n 35, at 667.
[104] *Fleetwing*, above n 7, at 257.
[105] At 261.
[106] At 264.
[107] At 267.
[108] *Aoraki*, above n 101, at [3].
[109] At [2].

Foremost, the High Court highlighted four provisions of the RMA as being especially important. These were sustainable management (s 5), the obligation on regional councils to have particular regard to the efficient use of resources (s 7(b)), each regional council's water management functions (s 30(1)), and the default statutory prohibition on water-related activities (s 14).[110] In respect of these provisions, the Court opined that they "introduced a comprehensive statutory management regime for water allocation and use".[111] This is significant because it addresses the uncertainty identified earlier. In the Court's view, the RMA is competent to deal with freshwater allocation.

However, the High Court's subsequent approach demonstrates that the statutory management regime is by no means "comprehensive". In various places, the Court filled in the gaps, most prominently by adopting the FIFS principle. Although this dispute did not concern competing consent applicants, the High Court reasoned that FIFS would be pointless unless it also applied to existing consent holders.[112] In short, Meridian's existing consent had to be recognised as having priority. The Court then described the rights pursuant to Meridian's consent as analogous to a licence, coupled with a right to use the subject resource, similar to a profit à prendre.[113] Meridian's consent allowed it to take and remove property, being the surface water in the lake.[114] The connection to property was critical; it allowed the Court to say that granting further consents would violate the principle of non-derogation from the grant.[115] In essence, Aoraki's proposal was "inconsistent" with the existing grant to Meridian. It would have reduced the amount of available water, thereby devaluing Meridian's consent.[116] Finally, the Court found its analysis to be supported by the public law doctrine of legitimate expectation. Meridian had been allocated a certain volume of water, and thus could reasonably expect the Council to honour that allocation for the term of the consent.[117]

For these reasons, the High Court declined to make the declaration sought by Aoraki. The resource had been fully allocated to Meridian, which made it unlawful for the Council to grant further permits.[118]

---

[110] At [28].
[111] At [28].
[112] At [32].
[113] At [34].
[114] At [35].
[115] At [38].
[116] At [35]–[36] citing *Tram Lease Ltd v Croad* [2003] 2 NZLR 461 (CA) at [24].
[117] At [39] and [41]–[42].
[118] At [46] and [55].

2 Subsequent legislative and planning developments

In the wake of *Aoraki*, the RMA was amended to clarify the basis for freshwater allocation decisions.[119] The Resource Management Amendment Act 2005 (RMAA) inserted a new s 30(1)(fa),[120] which states that regional councils may establish regional planning rules to allocate the taking or use of water. This confirms what was said in *Aoraki*; the RMA is competent to deal with matters of allocation. However, it also gives credence to the view that allocation is not the overall objective. The RMAA merely provides the discretion to adopt allocative rules, rather than compelling regional councils to do so.

Generally speaking, this view has won out among regional councils. Most have relied on FIFS,[121] which the RMAA leaves intact as the default priority rule.[122] The key reason for this reliance is that FIFS simplifies decision-making; it does not force regional councils to pick "winners" and "losers".[123] Importantly though, the NPS-FM 2014 could be set to alter this position, with its requirement that regional councils "provide for the efficient allocation of fresh water to activities".[124] In giving effect to this policy,[125] regional councils may find that the best approach is to develop allocative planning rules. However, the language of this policy is not overly directive; it does not set out how an efficient allocation should be achieved. This leaves room for regional councils to fall back on FIFS, thereby continuing to avoid the hard and politically contentious decisions. Thus, it remains to be seen whether the NPS-FM 2014 will lead to greater use of the allocative rule-making powers.

As a further important point, the rule-making powers are not absolute. Section 30(1)(fa) is qualified by s 30(4)(a), which states that regional councils may not allocate water which has already been distributed under a consent. This protects consent holders from re-allocation, a protection which is strengthened by ss 124A to 124C. These provisions establish priority for existing consent holders, over any new applicants, when they come to renew their consents.[126] As with FIFS, this priority is a default position, one which regional councils may depart from

[119] Laura Fraser "Property Rights in Environmental Management: The Nature of Resource Consents in the Resource Management Act 1991" (2008) 12 NZJEL 145 at 175.
[120] Resource Management Amendment Act 2005, s 11(2).
[121] See Ministry for the Environment *Report of the Sustainable Development Water Programme of Action Local Government Workshops* (July 2005) at 23.
[122] Daya-Winterbottom, above n 35, at 668.
[123] Hayward, above n 10, at 230; Ministry for the Environment, above n 121, at 23; and Olivia Nyce "Water Markets Under the Resource Management Act 1991: Do They Hold Water?" (2008) 14 Canta LR 123 at 130.
[124] Policy B2.
[125] RMA, s 67(3); and *King Salmon*, above n 47.
[126] RMA, ss 124B(2) and 124B(3).

in a regional plan.[127] Ultimately, these amendments appear to endorse *Aoraki*, and the use of property concepts in freshwater allocation. The RMAA provides significant certainty for existing consent holders, barring regional councils from interfering with their consents, and providing the opportunity for renewal.

E. Comments

Several important points can be elicited from the above discussion. Foremost, the prevailing management tools are arranged in a layered structure. Fresh water's essential uses are provided for first, through regulatory and planning-based tools. Then, regional councils are left to provide for non-essential uses, through regional plans and the resource consent process. This is guided by a set of broad principles, most prominently the sustainable management criterion. Consequently, enormous power is reserved to regional councils, who exercise a "pivotal decision-making role".[128] The success of the management regime depends "almost entirely on the steps taken by regional councils and the preparation of regional plans".[129]

One issue which threatens that success is freshwater scarcity. To avoid the tragedy of the commons, it is becoming imperative for regional councils to prioritise different non-essential uses, and determine which to exclude. In this regard, the lack of legislative guidance has forced judicial intervention, with FIFS adopted as the default priority rule. This has subsequently been supplanted by amendments to the RMA, which provide regional councils with the discretion to adopt their own allocative rules.

Despite the common-pool nature of fresh water, the management regime has incrementally developed to provide property-like entitlements.[130] A certain degree of rights have always existed in water permits, which create entitlements to take and use water. The most significant developments though have stemmed from the uncertainty posed by freshwater scarcity. In *Aoraki*, the High Court obviously felt that that it was appropriate to protect existing consent holders from the threat of increased competition for water resources. This is implicitly endorsed

[127] RMA, s 124A(3).
[128] Pyar Ali Memon "Freshwater management policies in New Zealand" (1997) 7 Aquatic Conservation: Marine and Freshwater Ecosystems 305 at 320.
[129] Helle Tegner Anker "The Resource Management Act and Protection of Water Quality – A Comparison with European Initiatives" (2003) 7 NZJEL 1 at 26.
[130] Trevor Daya-Winterbottom "New Zealand Sustainability Laws and Freshwater Management" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 27 at 48.

by the RMAA, which prevents regional councils from interfering with existing consents. However, these developments have been extremely piecemeal. Whilst necessary to respond to scarcity, the emergence of property-like entitlements has been rushed and reactive, rather than a response properly thought out. This can be seen in the lack of consideration for other recognised property rights, such as transfer. In turn, we have been left with a system of entitlements falling short of private property, which has emerged by default rather than by design.

III. Subsequent Judicial Developments in Freshwater Allocation

As the preceding discussion demonstrates, freshwater scarcity has prompted the development of further management tools. The FIFS principle and strong property-like entitlements have created a degree of certainty for consent holders, in an area which was otherwise uncertain. However, these tools have emerged in rather piecemeal fashion, stemming principally from one High Court case. This makes it intriguing to look at subsequent case law. Have the courts endorsed *Aoraki*, or have they been critical of the High Court's reasoning?

A. Central Plains Water Trust v Ngai Tahu Properties Ltd

In 2001, the predecessors of Central Plains Water Trust lodged a joint application to take water from the Waimakariri and Rakaia Rivers.[131] This application was initially deferred under s 91 of the RMA, pending further use applications. In the meantime though, Ngai Tahu Properties Ltd lodged an application to take water from the Waimakariri River.[132] This gave rise to the question of priority, as the River's remaining allocable flow could only satisfy one of the two applicants.[133]

Before the Court of Appeal in *Central Plains Water Trust v Ngai Tahu Properties Ltd* (*Ngai Tahu*), both parties accepted that FIFS was to be applied, but disputed the time at which priority was established.[134] In this respect, the majority held that the first person to file a complete application has priority.[135] By contrast, the minority preferred the approach taken in *Geotherm Group Ltd v Waikato Regional Council*,[136] where the application first ready for notification has priority.[137] This approach accounts for s 91; the possibility that one or both of the applications are deferred. Ultimately though, the contrasting views highlight a degree of uncertainty around the operation of FIFS. Again, the RMA provides very little guidance, which was something all three judges lamented.[138] Hammond J is most notable in this regard. He remarked that the

[131] *Ngai Tahu* (CA), above n 96, at [2].
[132] *Ngai Tahu* (CA), above n 96, at [4].
[133] *Ngai Tahu* (CA), above n 96, at [12].
[134] At [7].
[135] At [80] per Baragwanath J and [87] per Hammond J.
[136] *Geotherm Group Ltd v Waikato Regional Council* [2004] NZRMA 1 (HC).
[137] *Ngai Tahu* (CA), above n 96, at [137] per Robertson J.
[138] At [8] per Baragwanath J, [91]–[92] and [97] per Hammond J and [126] per Robertson J.

priority issue "is one which it may be thought will unlikely be solved by a simplistic bureaucratic yardstick such as 'first in, first served'".[139]

This statement is intriguing because it indicates an underlying dissatisfaction with FIFS. Whilst simple and certain, FIFS may be ill-equipped to tackle complex allocative matters. In Hammond J's view, the issue "is one which may be thought to require rethinking, in a more fundamental way".[140]

This "rethinking" is echoed in the ground upon which leave to appeal was granted:[141]

> Is priority as between competing resource consent applications determined by which application is lodged first with the consent authority, or by which is first ready for notification, or by some other test?

Subsequently, the Supreme Court issued an interim judgment in which it called for:[142]

> ... argument on the prior question of whether priority should be decided by a rule or through the exercise by consent authorities of a discretion and, if the latter, on what principles should the discretion be exercised.

The significance of this judgment cannot be understated. The Supreme Court may have identified the key issue: that a substantive rule is required to assist allocation decision-making.[143] Such a rule could entail comparative assessments between proposals, with water going to its highest-valued use. However, this remains speculative, because the parties settled their dispute before the substantive hearing. As a result, the Supreme Court was unable to hear argument on possible discretionary criteria.

B. Central Plains Water Trust v Synlait Ltd

The settlement in *Ngai Tahu* did not bring matters to an end. A further consent application, this time from Synlait Ltd, had been lodged in respect of the Rakaia River. As such, the Court of Appeal was required to return to the same priority issue in *Central Plains Water Trust v Synlait Ltd* (*Synlait*).[144] Crucially, this allowed the Court to expand on the approaches identified in the

[139] At [97].
[140] At [91].
[141] *Ngai Tahu Property Ltd v Central Plains Water Trust* [2008] NZSC 49.
[142] *Ngai Tahu Property Ltd v Central Plains Water Trust* [2009] NZSC 24 at [1].
[143] Daya-Winterbottom, above n 130, at 45.
[144] *Synlait* (CA), above n 97.

earlier litigation. That is, the dichotomy between the *Fleetwing* FIFS principle, based on the theme of efficiency, and a discretionary approach, based on the theme of sustainable management.[145]

At this point, some comment on the first approach is warranted. In both *Aoraki* and now *Synlait*, the Courts have recognised a link between freshwater allocation and efficiency. Yet, the *Synlait* decision raises serious questions about s 7(b) of the RMA, given that the Court of Appeal referred to "the efficient use and deployment [sic] of natural and physical resources".[146] At first instance, this might appear to be a simple misquote, but the discussion that follows suggests it was intended. In particular, the Court referred to various RMA provisions requiring decision-makers to render prompt decisions.[147] This suggests that s 7(b) only requires "procedural efficiency", in the sense that decision-makers should avoid unnecessary expense and delay.[148]

From this point of view, the FIFS principle can readily be regarded as efficient. It establishes a clear "priority of hearing", avoiding the time and expense involved in making complex judgements.[149] Hence, the Court of Appeal felt justified in emphasising FIFS as a starting point. Irrespective of the merits of competing uses, the first to file a complete application is presumptively entitled to be heard first.[150]

However, such a strict reading of s 7(b) is troubling for two reasons. Not only does it appear to contradict clear statutory language, but prior case authority as well. The words "use" and "development" suggest that the main concern of s 7(b) is the end use of resources, rather than the decision-making process. This is reinforced by *Marlborough Ridge Ltd v Marlborough District Council* (*Marlborough Ridge*), where it was said that "all aspects of efficiency are economic by definition".[151] This strongly suggests that "efficiency" under the RMA means a lot more than procedural efficiency. Put simply, s 7(b) extends to substantive considerations, such as the merits of individual uses, and the merits of competing uses.

Importantly, the Court of Appeal was not completely oblivious to this, as its discussion of the discretionary approach illustrates. Although the date of first filing is a valuable presumptive

[145] At [74]–[83].
[146] At [75].
[147] At [75], citing *Ngai Tahu* (CA), above n 96, at [24]–[25].
[148] At [92(b)].
[149] At [84].
[150] At [85].
[151] *Marlborough Ridge Ltd v Marlborough District Council* (1997) 3 ELRNZ 483 (EnvC) [*Marlborough Ridge*] at 499.

factor, that presumption acknowledges certain merit-based exceptions.[152] In particular, later applicants may put "competing concepts" to the consent authority when the first application is heard. These concepts may justify the authority in rejecting the first application, allowing it in part, reserving judgment until the later application has been heard, or adjourning the first application part heard.[153] This is intriguing because it moves away from the *Fleetwing* conception of FIFS, where applications are judged solely on their own merits.[154] The discretionary approach may entitle later applicants to argue that their proposal is more efficient in substance, with regional councils able to take that into account when applying pt 2.[155] As a result, priority of hearing could be displaced, with greater consideration given to substantive efficiency.

However, the Court was quick to point out that the discretionary approach also has its limitations. The reference to "competing concepts" does not completely depart from *Fleetwing*. On the contrary, FIFS remains the "dominant consideration".[156] This inevitably limits the ability of decision-makers to consider substantive efficiency. In most cases, meeting the sustainable management criterion will lead to the first application being granted, even if the later proposal is more sustainable or more efficient.[157] The Court of Appeal was clearly troubled by this result, but its ultimate approach suggests that it felt bound by the statutory text.

In almost a carbon copy of *Ngai Tahu*, leave to appeal was granted,[158] but the parties settled before the substantive hearing. Consequently, the Supreme Court was again unable to consider the issue of priority between competing applications. Since then, the Supreme Court has continued to hint at its desire to review FIFS,[159] but that enthusiasm has not been matched elsewhere. Neither commercial interests nor the government have shown any interest in departing from FIFS.[160]

[152] At [85].
[153] At [89].
[154] *Fleetwing*, above n 7, at 267.
[155] *Synlait* (CA), above n 97, at [90].
[156] At [91].
[157] See Philip Milne and Matt Conway "Implementing the law on consent application priority – powers and potential pitfalls" [April 2010] RMJ 1 at 6.
[158] *Synlait Ltd v Central Plains Water Trust* [2010] NZSC 32.
[159] See *Hampton v Canterbury Regional Council (Environment Canterbury)* [2016] NZSC 50, [2016] NZRMA 398 [*Hampton* (SC)] at [9].
[160] Daya-Winterbottom, above n 35, at 667, n 148.

C. Hampton v Canterbury Regional Council

Outside of FIFS, the Court of Appeal has also had occasion to review the property law doctrine used in *Aoraki*. In *Hampton v Canterbury Regional Council* (*Hampton*), Simon Hampton obtained a water permit which could only be used to irrigate his cousin Robert's land.[161] The men could not reach agreement over its use though, which led Robert to apply for a separate permit.[162] Problematically, an additional permit could not simply be granted, because water in the area was already over-allocated. This forced the Council to develop an elegant solution; it granted Robert a permit to take water, to the extent that Simon's permit was not being exercised.[163]

Simon however was unhappy with this solution. He complained that the Council's decision interfered with his property rights, specifically the right to sell his water permit.[164] In this respect, Simon relied on the principles of non-derogation from the grant and legitimate expectation, as articulated in *Aoraki*.[165] That is, his rights would be adversely affected by the exercise of Robert's permit.[166] Nevertheless, the Court of Appeal rejected Simon's contentions. He could not legitimately expect to sell his water permit because it could only be used to irrigate Robert's land.[167] Hence, no adverse effect arose from granting Robert a permit. This was sufficient to distinguish from *Aoraki*,[168] but the Court of Appeal went on to discuss the case and the High Court's reasoning.

Significantly, the Court of Appeal opined that "the analogy the Court [in *Aoraki*] drew to profits à prendre and its reliance on non-derogation from the grant are problematic".[169] These concepts both view water permits as creating a right to property, a proposition with which the Court of Appeal could not agree. Instead, a water permit merely confers the right to carry out the activity under the Act.[170] This was supported by s 354(1)(b) of the RMA which, in the Court's opinion, falls short of claiming property in water.[171] By corollary, the statement in *Aoraki* that a water permit allows its holder to remove "property" even though "owned by the Crown" could not

[161] *Hampton* (CA), above n 40.
[162] At [2].
[163] At [3].
[164] At [3].
[165] At [3] and [72].
[166] At [72].
[167] At [87].
[168] At [88].
[169] At [99].
[170] At [99].
[171] At [103].

be correct.[172] Finally, s 122 must be brought to account, with its rule that a resource consent is neither real nor personal property.[173] The Act does go on to confer certain property-like entitlements, notably a right to grant a charge over a consent, and to transfer it in certain circumstances.[174] But as a general proposition, no property or interest in property changes hands when a resource consent is granted.[175]

As can be seen, the Court of Appeal emphatically denied that the current legislative regime creates property in fresh water.[176] Importantly though, this denial was expressed as being "quite apart from … the special nature of the legal status of water".[177] This tends to suggest that the High Court in *Aoraki* went too far, straying into the nature of water resources, and the overall appropriateness of drawing upon property law doctrine. The High Court instead should have limited itself to the legislative regime, focussing on the rights which Parliament has expressly claimed (or disclaimed) in fresh water.

D. Comments

Exploring the subsequent case law reveals a significant degree of unease with the approach taken in *Aoraki*. Although the Supreme Court has not been able to consider the issue of priority between competing applications, its interim judgment in *Ngai Tahu* demonstrates a clear preference for a discretionary mechanism.[178] This implies that FIFS is deficient, with the relevant deficiency becoming apparent in *Synlait*. While FIFS is administratively efficient, the Court of Appeal was clearly concerned that it leaves little room for decision-makers to consider substantive efficiency.

Moreover, the Court of Appeal in *Hampton* was critical of the reliance on property law doctrine. The *Hampton* judgment suggests that the normative issue – whether private property should be applied to fresh water – is one best left to the legislature. Nevertheless, this leaves us in virtually the same position due to the RMAA; a system of property-like entitlements, falling short of private property rights.

---

[172] At [103].
[173] At [104].
[174] At [105] citing ss 122(3) and 136 respectively.
[175] *Hampton* (CA), above n 40, at [104].
[176] Thomas Gibbons "Are Resource Consents property? – Ongoing Issues" (2016) 6 Prop L Rev 127 at 130.
[177] At [104].
[178] Daya-Winterbottom, above n 35, at 667, n 148.

IV. Efficiency, Private Property and Freshwater Allocation

Two important points can be elicited from the preceding discussion. While the courts have implied that FIFS leaves little room for decision-makers to consider substantive efficiency, they have also refrained from developing the system of property-like entitlements. It is intriguing to consider these points further, because of the inherent link between them. Efficiency is intertwined with private property; it is best promoted when users have rights of possession, use and disposition.[179] Alternatively, "efficient property rights" can be specified in terms of:[180]

> … *universality*, where all resources are privately owned and entitlements are completed specified; *exclusivity* so that all benefits and costs only accrue to [the] owner; *transferability* so that all property rights are transferable from one owner to another in a voluntary exchange; and *enforceability* so that property rights are secure from involuntary seizure or encroachment by others.

Accordingly, this chapter explores the role of substantive or "economic" efficiency in freshwater decision-making, with particular emphasis on the management regime's second layer. The allocation of water between non-essential uses is where property-like entitlements have most prominently arisen, and thus where efficient outcomes are most readily achievable. Nevertheless, the allocation regime fails to reach efficient outcomes. As will be argued, this provides a clear rationale for adopting market-based management tools, as a means of moving towards private property in freshwater allocation.

A. Economic Efficiency in Practice

Before examining the current allocation regime, it is important to set out what is meant by the term "economic efficiency". In relation to natural resources, economic efficiency has variously been described as having three dimensions: allocative, technical, and dynamic efficiency.[181]

---

[179] See CW Maughan "Economics and the Law" [1994] NZLJ 110 at 111.

[180] Marilyn Bramley and Jeff McNeill "Up the Creek and Down the River: In-stream ecological values and property rights under the RMA" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 173 at 175. See also Tietenberg and Lewis, above n 12, at 23; and Thomas Gibbons "Property Rights in Resource Consents: Some Thoughts from Law and Economics" (2012) 25 NZULR 46 at 50.

[181] Marlborough *Ridge*, above n 151, at 501; *Telecom Corporation of New Zealand Ltd v Commerce Commission* (1991) 3 NZBLC 102,340 (HC) at 102,383; Philip Milne "Allocation of Water Between Productive Uses" [November 2003] RMJ 12 at 17; Kevin Counsell and Lewis Evans *Essays on Water Allocation in New*

1 Allocative efficiency

Allocative efficiency refers to the way in which scarce resources are distributed between competing uses. In this regard, the distribution is efficient if its total value is maximised.[182] This implies that New Zealand's increasingly scarce freshwater resources should go to the uses that society values the most.[183] Simply put, decision-makers should compare the merits of different uses, and distribute fresh water to the most meritorious among them.

Crucially, the FIFS principle does not allow for a comparative exercise.[184] It requires each proposal to be assessed on its own merits, without any real regard for competing or later uses.[185] This makes it extremely difficult for decision-makers to allocate fresh water to its highest-valued uses. Under conditions of scarcity, FIFS will only reach an allocatively efficient distribution when the best proposals are first in line.[186] Clearly this scenario is unrealistic. In all likelihood, relatively lower-value proposals will attain priority, and ultimately receive water permits, having passed the Act's sustainable management criterion.[187]

This hints at an underlying issue, one going to the heart of the legislative regime. While FIFS receives most of the criticism, it must be remembered that the RMA was originally found to operate on a FIFS basis.[188] In making this finding, the Court of Appeal in *Fleetwing* drew heavily upon the sustainable management criterion.[189] Examining this criterion reveals that it sets a minimum standard for individual applicants.[190] It is neither concerned with the merits of different uses, nor which uses are the most sustainable. This strongly implies that the RMA itself is not concerned with comparative assessments, of the kind that were expressly permitted by prior legislation.[191] Perhaps this is why regional councils feel so comfortable in resorting to FIFS; there are clear statutory signals to that effect. However, in the absence of a more

Zealand: The Way Forward (ISCR, Wellington, 2005) at 115; and Land and Water Forum *Third Report of the Land and Water Forum: Managing Water Quality and Allocating Fresh Water* (October 2012) [LAWF *Third Report*] at [36].

[182] Counsell and Evans, above n 181, at 115–116.

[183] Milne, above n 181, at 17.

[184] Milne, above n 181, at 12.

[185] *Fleetwing*, above n 7, at 264. Compare *Synlait* (CA), above n 96, at [91] where the Court of Appeal said that FIFS remains the "dominant consideration".

[186] Nyce, above n 123, at 131.

[187] Of course, each proposal must also pass the other statutory criteria infused in s 104.

[188] *Fleetwing*, above n 7, at 263–265.

[189] At 264.

[190] Fraser, above n 119, at 174.

[191] *Fleetwing*, above n 7, at 264–265. See s 8(2) of the Marine Farming Act 1971, which required controlling authorities, having received more than one application for a marine farm lease or licence relating to the same area, to determine which applicant should be preferred.

comparative approach, whether through regional planning rules or otherwise, allocative efficiency will continue to suffer.

One possible solution to these issues is market mechanisms, involving the transfer of water permits. Transferability is an important feature of efficient property rights, one which is critical to achieving allocative efficiency.[192] In theory, transfer can correct the inefficiencies likely to arise under FIFS, because it allows water resources to move to their highest-valued uses.[193] The corresponding users will be willing to pay the most, and thus can compensate current users for their foregone consumption.[194] Consequently, regional councils do not have to develop a comparative approach that picks winners and losers. So long as transaction costs are low, private transfers can reallocate fresh water to where it is most valued.[195]

The potential benefits of transfer did not go unnoticed at the time the RMA was proposed.[196] However, the final product falls well short of a full market regime. In enacting s 136, Parliament "did not seek to create a world in which consents could be freely traded".[197] Instead, trading is limited to individual catchments and aquifers, pursuant to regional council approval.[198] This last point is particularly important because the default method of obtaining approval – the resource consent process – will come at a cost for potential applicants.[199] These "transaction costs" could prove prohibitive for applicants, whereby transfers are not undertaken. As such, the ability of transfer to correct allocative inefficiencies is somewhat limited on the current approach.

2 Technical efficiency

Technical efficiency refers to the way in which resources are actually used. In this regard, a use is efficient if it maximises the beneficial use of water.[200] This implies that users should seek

[192] Christina Robb, Matthew Morgan and Simon Harris *Attitudes and Barriers to Water Transfer* (Ministry for the Environment, Report No 4464/1, December 2001) at 34.
[193] Tietenberg and Lewis, above n 12, at 23; Hudspith, above n 80, at 295; and Richard A Posner *Economic Analysis of Law* (4th ed, Little Brown, Boston, 1992) at 10–12.
[194] Gibbons, above n 180, at 48.
[195] Ronald Coase "The Problem of Social Cost" (1960) 3 Journal of Law and Economics 1 at 2–8.
[196] For example, see Ministry for the Environment *People, Environment and Decision Making: the Government's Proposals for Resource Management Law Reform* (December 1988) at 38–39.
[197] *Hampton* (CA), above n 40, at [106].
[198] Section 136(2)(b).
[199] Hudspith, above n 80, at 297. See also the discussion of s 136 above at II.C.2.
[200] Counsell and Evans, above n 181, at 116. See also LAWF *First Report*, above n 21, at 63.

productivity gains, using less water to produce the same or greater levels of output.[201] Alternatively, it implies that users should minimise waste, by utilising all water taken where possible.[202] The key takeaway though is the focus of technical efficiency; its concern is the productive and conservative aspects of individual uses, rather than maximising value across a distribution of uses.

At a theoretical level, technical efficiency is more easily reconciled with the RMA. If sustainable management sets a minimum standard for individual applicants, one would think that s 7(b) must relate to individual uses. This is significant because it may explain the reference to s 7(b) in *Aoraki*.[203] On the High Court's approach, Meridian's consent was *enforceable* against both the regional council and third parties (Aoraki). This is another important feature of efficient property rights, one which encourages investment in productive uses.[204]

Nevertheless, the current allocation regime fails to incentivise technical efficiency. The key issue in this regard is the exclusivity element of efficient property rights. While consent holders are able to reap the benefits of their use, they are not made exclusively responsible for any associated costs. As it stands, the environmental and opportunity costs (foregoing other productive uses) are borne by society at large, because fresh water is treated as a free resource.[205] Charges for water abstraction are minimal, covering the costs of the consent process only, rather than placing a value on water resources themselves.[206] By corollary, users neither gain by being more productive, nor lose by being wasteful. In "pursuing their well-being" users have no incentive to internalise any external costs.[207] This ultimately highlights the need for a mechanism which shifts those costs back onto users.[208]

As with allocative efficiency, a market-based transfer mechanism could serve as a solution. Buying and selling water permits could involve monetary exchanges, thereby signalling the value of water to users. This would encourage productive use and waste minimisation; users

[201] Compare *Marlborough Ridge*, above n 151, at 501 where this form of efficiency was referred to as "productive efficiency".
[202] Counsell and Evans, above n 181, at 116.
[203] At [28].
[204] Tietenberg and Lewis, above n 12, at 23; and Bramley and McNeill, above n 180, at 175.
[205] Hudspith, above n 80, at 296; and Ministry for the Environment *Water Programme of Action: Water Allocation and Use – Technical Working Paper* (June 2004) at 10.
[206] Organisation for Economic Co-operation and Development *Environmental Performance Reviews: New Zealand 2017* (2017) at 39–40.
[207] See Upton, above n 46, at 26.
[208] See Tietenberg and Lewis, above n 12, at 23; and Sharon Beder "Costing the Earth: Equity, Sustainable Development and Environmental Economics" (2000) 4 NZJEL 227 at 232.

would otherwise be better off selling their water permit. As such, transfer could provide the incentives necessary for technical efficiency.[209] However, this solution is again undermined by the cost of obtaining a resource consent. The transaction costs faced by applicants reduce the likelihood of transfers taking place, which in turn reduces the effectiveness of the ensuing price signal.[210]

3 Dynamic efficiency

Dynamic efficiency considers efficiency over time, in terms of maintaining both allocative and technical efficiency.[211] Its primary concern though is allocative efficiency.[212] Over time, new uses may arise which carry a higher value to society than existing uses. Consequently, the distribution of freshwater resources will have to adjust to maintain allocative efficiency.

Significantly, the freshwater allocation regime inhibits adjustments of this kind. This is evident from the RMA powers relating to the content of water permits. On the one hand, the 35 year maximum timeframe is said to reflect the economic life of a developer's investment.[213] It provides certainty and security of tenure, of the kind generally associated with property rights, and desired by proponents of large scale projects. As such, water permits are often issued for long timeframes when significant investment is involved, such as Meridian's 25 year permit in *Aoraki*.[214] However, when coupled with the strong protections for consent holders, these sorts of timeframes prevent the redistribution necessary to maintain allocative efficiency. As s 30(4)(a) makes clear, regional councils cannot simply reallocate water to where it is most valued.[215] This is reinforced by the default priority for renewal applications. Sections 124A to 124C have been said to "entrench" the FIFS principle, because they eliminate a key opportunity – expiry of a current consent – for regional councils to redistribute freshwater resources.[216] In the absence of planning guidance to the contrary,[217] a current user who meets the Act's minimum requirements will have their permit renewed. Consequently, new users may be

[209] LAWF *Third Report*, above n 181, at [302].
[210] LAWF *Third Report*, above n 181, at [303].
[211] Counsell and Evans, above n 181, at 116.
[212] See LAWF *First Report*, above n 21, at 63.
[213] (28 August 1991) 510 NZPD 3952.
[214] *Aoraki*, above n 101, at [1].
[215] See also *Aoraki*, above n 101, at [36]–[38].
[216] Barry Brunette "Freshwater Management and Allocation Under the Resource Management Act 1991: Does First-in First-served Achieve Sustainable Management Principles?" (2006) 10 NZJEL 169 at 202.
[217] Of course, s 124A(3) allows regional councils to alter the default priority through a regional plan. See the discussion at II.D.2 above.

"locked out" at full allocation for significant periods of time, regardless of the increased value they bring.[218] The overall downside of promoting investment certainty is the possibility for pervasive inefficiency.

Regarding possible solutions, the most plausible lie in the RMA powers exercisable during the term of a water permit. As stated earlier, regional councils may review any conditions attached to a permit.[219] However, this relies on a condition having been specified, a purpose for review arising, and the regional council being prepared to undertake the review. In that unlikely set of circumstances, and provided the condition relates to the quantity of water allocated, review could prove effective. Clearly though, it will not be able to correct every inefficiency. Similar concerns can be raised regarding water permit transfer. In theory, transfer provides the flexibility needed to accommodate high value uses as they arise, thereby maintaining allocative efficiency over time.[220] In practice though, this flexibility is greatly reduced by the cost of obtaining a resource consent; a cost which users may not be minded to bear.

B. Economic Efficiency in Theory

The preceding discussion illustrates two key points. Firstly, that the current freshwater allocation regime fails to reach efficient outcomes. And secondly, that the reasons for the present inefficiencies extend beyond FIFS, to the system of property-like entitlements. In terms of allocative and dynamic efficiency, the strong legislative protections for existing consent holders inhibits redistribution to high value uses. In terms of technical efficiency, the lack of a price signal means that users are not made exclusively responsible for any external costs of their use. Ultimately, these inefficiencies would not be problematic if brought into balance by a well-functioning transfer mechanism. However, there are obvious issues with s 136; the cost of obtaining a resource consent is likely to deter potential applicants.

Of itself, this suggests that "fundamental rethinking" is needed beyond just the FIFS principle.[221] No longer can we have an arbitrary system that provides for some property-like entitlements, yet fails to provide for others. The lack of exclusive and transferable property rights has clearly been detrimental from an efficiency perspective. This implies that we should

[218] Milne, above n 40, at 170; and Organisation for Economic Co-operation and Development, above n 206, at 40.
[219] Section 128.
[220] LAWF *Third Report*, above n 181, at [64].
[221] See *Ngai Tahu* (CA), above n 96, at [91] per Hammond J.

move towards private property in freshwater allocation, a sentiment which is reinforced in three key respects. As the remainder of this chapter will argue, this provides a strong basis for adopting market-based management tools, as a means of reaching efficient outcomes.

1 Normative and legal foundations for efficiency

The issue of how to allocate scarce resources underpins all economic theory. Making choices in a world of limited resources is the classic economic problem,[222] one to which economists typically respond to with efficiency criteria.[223] In short, decision-makers should choose whichever allocation is most efficient, or introduce incentives for private individuals to reach efficient outcomes themselves. At first instance, this normative position is a tough one to undermine. It seems readily justifiable for economic efficiency to guide decision-making around New Zealand's increasingly scarce freshwater resources, given the clear overlap between economics and the RMA. This overlap was recognised in *Marlborough Ridge*, where Jackson J remarked that if "economics is about the use of resources generally, then resource management can be seen as a subset of economics".[224] As such, economic efficiency appears to be an outcome which decision-makers should strive for.

This notion is reinforced by various references in the RMA to economic concepts.[225] One of the central tenets of sustainable management is "enabling people and communities to provide for their economic well-being".[226] In achieving this purpose, s 7(b) requires decision-makers to have particular regard to "the efficient use and development of natural and physical resources". The importance of this provision cannot be understated. Section 7(b) reflects the normative basis for allocating water resources efficiently, as does the reference to "the efficient allocation of water" in the NPS-FM 2014.[227] Finally, regional councils must prepare an evaluation report under s 32 each time a planning instrument is prepared or changed.[228] This report must assess the efficiency and effectiveness of the proposed provisions in achieving the plan's objectives,[229] which explicitly includes a cost-benefit analysis.[230]

---

[222] See Posner, above n 193, at 3.
[223] See Maughan, above n 179, at 110–111.
[224] At 499.
[225] JR Jackson "The Role of Economics in the RMA (or Vice Versa)" (1999) 3 NZJEL 19 at 21.
[226] Section 5(2).
[227] Objective B3 and policy B2.
[228] RMA, Sch 1 cl 5(1)(a).
[229] Section 32(1)(b)(ii).
[230] Section 32(2).

This demonstrates that economic efficiency has strong normative and legal foundations for informing allocation decisions, foundations which the current system of property-like entitlements fails to reflect. This provides a strong basis for embracing private property, such that efficient outcomes can be reached.

2 Sustainable management

The RMA provisions described above must however be read in their broader context. Although economic well-being is clearly important to sustainable management, it is not the only value contained in s 5(2). Decision-makers must also consider the broad goals of inter-generational equity, ecological sustainability and the management of environmental effects.[231] The same can be said in respect of s 7(b). Within pt 2 of the RMA, "economic efficiency is only a mandatory relevant consideration, not an outcome that must be achieved".[232] It cannot be substituted for sustainable management which, on an overall broad judgment, may require other values to take priority.[233] Finally, while a cost-benefit analysis is useful to evaluation reports, the other considerations in s 32 suggest that a "wider exercise of judgment" is required.[234] This demonstrates that in actual fact, the legal significance of efficiency is somewhat limited. It is just "one of the various threads discernible in the Act" contributing to the achievement of sustainable management.[235]

However, it is questionable whether sustainable management is currently being achieved.[236] Whilst simple and certain, FIFS is a rigid basis on which to allocate freshwater resources.[237] It means that future users may be locked out at full allocation, given the strong property-like protections and barriers to transfer which follow. Consequently, there appears to be very little prospect for inter-generational sharing, in terms of meeting the reasonably foreseeable needs of future generations.[238] Moreover, the focus on individual proposals makes it difficult to avoid, remedy and mitigate cumulative environmental effects.[239] This issue is particularly acute with a mobile resource such as water. The actions of one user could harm all others, especially at

[231] Hudspith, above n 80, at 282–283.
[232] Michael Pickford "Economic Efficiency and the Resource Management Act" (2014) 18 NZJEL 149 at 152.
[233] Pickford, above n 232, at 152. See generally *North Shore City Council*, above n 82, at 347.
[234] *Geotherm Group Ltd v Waikato Regional Council* EnvC Auckland A151/06, 19 November 2006 at [48].
[235] *Carter Holt Harvey Ltd*, above n 1, at [181]. See also *St Lukes Group Ltd v North Shore City Council* [2001] NZRMA 412 (EnvC) at [43].
[236] Nyce, above n 123, at 132.
[237] Milne, above n 40, at 169.
[238] RMA, s 5(2)(a); and Milne, above n 40, at 169–170.
[239] RMA, s 5(2)(c).

full allocation, where significant cumulative effects already exist.[240] Yet, those effects may not be appropriately weighed, given that the consent process is primarily concerned with individual applicants.[241] Perhaps this is why many of New Zealand's freshwater catchments are over-allocated. Individual applicants may not take enough to be detrimental of themselves, but sustainability limits may be exceeded in cumulative terms.[242]

This shows that even after accounting for the limited legal significance of efficiency, the same concerns arise. The decision-making regime may not serve sustainable management in all situations, which suggests that a new approach is needed.

3 The layered structure of freshwater management tools

Significantly, the above discussion only implies that the current decision-making regime is deficient. The issues with sustainable management suggest that we need a new approach, but they stop short of hinting at what that approach should be. In particular, it is unclear whether the broader goals of sustainable management would best be served by private property, or through other management tools.

This make it necessary to look elsewhere for the most appropriate alternative. Arguably, the best place to start is the paradigms of freshwater use. Providing for essential and non-essential uses forms the basis for freshwater management, and thus for the sustainable management criterion in different contexts. Therefore, it seems fitting to consider both paradigms, and the most appropriate management responses to them.

As stated at the outset, certain freshwater uses are truly essential, given their importance to all New Zealanders. A common interest exists in safeguarding in-stream environmental values, and the welfare-enhancing properties of fresh water. Importantly, the commonality of these values plainly conflicts with the logic of private property. Private property rights focus on the individual, whereby individual self-interest is typically prioritised over the needs of the

[240] Bryan Jenkins *Water Management in New Zealand's Canterbury Region: A Sustainability Framework* (Springer, Dordrecht, The Netherlands, 2018) at 23.
[241] Hudspith, above n 80, at 297; and Rod Oram "The Resource Management Act: Now and in the Future" (paper prepared for Beyond the RMA Conference, Auckland, May 2007).
[242] Hayward, above n 10, at 229.

community.[243] This renders private property remarkably ill-suited to protecting essential freshwater uses.[244]

This concern is best illustrated by exploring possible market-based responses to the current inefficiencies. As explained earlier, transferability is a key element of efficient property rights, one which could lead to all three forms of efficiency. It would allow water to move to where it is most valued, and provide a price signal for users. However, this could come at the expense of broader environmental and social interests. By encouraging users to innovate and seek out high value uses, transfer leaves little incentive for pursuing shared concerns, such as ecological and human welfare values. Similar concerns can be expressed about a freshwater charge or levy. Although a charge would reflect the exclusivity element of efficient property rights, thereby encouraging technical efficiency, it would also advantage those most able to pay.[245] This tends to detach fresh water from its core in-stream and human welfare values. The shared nature of these values implies that water should be accessible to everyone, regardless of income or ability to pay. As such, serious issues can be identified with transfer and charging mechanisms. It is doubtful that these tools can adequately provide for essential freshwater uses.

However, other management tools are already in place for this exact purpose. The NPS-FM 2014 and WCOs protect in-stream environmental values, while s 14(3) of the RMA preserves certain domestic and cultural uses. In this way, the management regime reflects the underlying common-pool nature of fresh water. Essential uses are provided for first, with priority given to the environmental, social and cultural aspects of sustainable management. This leaves non-essential uses, such as irrigation and power generation, to compete for the remaining fresh water. Crucially, the main non-essential uses tend to be economic in nature, a point best illustrated by the four cases cited. The parties in *Aoraki, Synlait, Ngai Tahu* and *Hampton* all saw water as an important economic input.[246] Hence, it seems entirely appropriate to adopt a corresponding approach, one which emphasises the "economic" aspects of sustainable management. In short, if users see water as an important input, there is a strong basis for

[243] Ben France-Hudson "Surprisingly Social: Private Property and Environmental Management" (2017) 29 JEL 101 at 106.
[244] Bramley and McNeill, above n 180, at 178.
[245] See Beder, above n 208, at 235.
[246] For example, in *Aoraki*, above n 101, at [35] it was conceded that Meridian's consents were of "considerable economic value".

maximising the value of that input.[247] This boils down to efficiency, which is best incentivised by transferable and exclusive private property rights.

For these reasons, market-based management tools can be regarded as appropriate within New Zealand's freshwater management regime. The regime's first layer makes set-asides to provide for essential uses, leaving non-essential "economic" uses to compete for the remaining water resources. Ultimately, this competition is best regulated through a market-based private property response.

C. Comments

The preceding discussion evidences what *Synlait* implies; that FIFS fails to reach efficient allocation outcomes. Critically though, the issues go far beyond the FIFS principle. Significant blame for the current inefficiencies can also be laid at the system of property-like entitlements. While some of these entitlements were clearly necessary to respond to freshwater scarcity, they have not been brought into balance by other recognised property rights.[248] The lack of a well-functioning transfer mechanism means that water resources cannot be redistributed to their highest-valued use. Moreover, the lack of a price signal means that users are not made exclusively responsible for any external costs. In turn, we are left with an allocation regime that fails to reach efficient outcomes.

This strongly implies that we should move further towards private property in freshwater allocation, a notion which is strengthened in three key respects. For one, a private property response would better reflect efficiency's normative foundations for informing allocation decisions. Moreover, questions can be raised as to whether the current allocation regime adequately serves sustainable management. Although this justifies a new approach, sustainable management stops short of hinting at what that approach should be. An appropriate alternative is however found in the paradigms of freshwater use. With essential uses provided for, competition between non-essential uses is best regulated through a private property response. In turn, market-based management tools such as transfer and charging mechanisms are entirely appropriate within the management regime's second layer.

[247] Cabinet Office Circular, above n 92, at [37]. See also Land and Water Forum *Fourth Report of the Land and Water Forum* (November 2015) at [243].
[248] See Daya-Winterbottom, above n 130, at 49.

V. *Moving Towards Private Property: Potential Barriers*

The preceding chapter provides a clear rationale for moving towards private property in freshwater allocation, through the use of market-based management tools. A strong case exists for a liberal transfer mechanism; a well-functioning tradeable permits regime would encourage all three forms of efficiency. In the alternative, introducing a freshwater charge or levy would provide a price signal to users, thereby encouraging technical efficiency.

Both of these management tools are nothing new, having previously been put forward by the Ministry for the Environment,[249] academics,[250] and stakeholder groups.[251] This makes it tempting to evaluate the various proposals, and the design principles upon which they are based. However, it is far more intriguing to consider why these proposals have failed to gain any traction. Generally speaking, the RMA's transfer provisions are rarely used, [252] while fresh water is essentially treated as a free resource.[253] As such, this chapter explicitly avoids a discussion of the proposals for reform. Intricacies such as the difference between a charge and a levy will not be considered. Instead, this chapter explores transfer and charging mechanisms more generally, with the aim of exposing some of the barriers to their implementation.

A. Consistency with the Freshwater Management Regime

As argued in the previous chapter, transfer and charging mechanisms are appropriate tools for regulating competition between non-essential economic uses, within the management regime's second layer. Crucially though, that leaves open the question of whether transfer and charging mechanisms satisfy the sustainable management criterion. Again, this criterion only implies that we should depart from the current regime, rather than hinting at the most appropriate alternative.

This is a hugely significant potential barrier; sustainable management oversees the freshwater management regime, within which all policy tools operate.[254] Whilst there may be some scope

[249] Ministry for the Environment, above n 205, at 25–27.
[250] Hayward, above n 10; and Nyce, above n 123.
[251] LAWF *First Report*, above n 21, at [132(c)] and [135]–[138]; New Zealand Institute of Economic Research *Water management in New Zealand: A road map for understanding water value* (Working Paper 2014/01, March 2014) at 40–41; and New Zealand Business Council for Sustainable Development *A Best Use Solution for New Zealand's Water Problems* (2008) at 21.
[252] See Robb, Morgan and Harris, above n 192, at 1; and Hudspith, above n 80, at 295.
[253] Hudspith, above n 80, at 296.
[254] See Memon and Skelton, above n 27, at 245–246; and New Zealand Institute of Economic Research, above n 251, at 6–7.

for change, overhauling the management regime's key features – or even its lesser features – is unlikely to have the necessary institutional support.[255] Instead, consistency of approach is valued for the certainty it provides, even if it results in negative outcomes. This makes it pertinent to examine whether transfer and charging mechanisms are consistent with the freshwater management regime, especially its overarching sustainable management criterion.

1 Transfer

At first instance, transfer can be regarded as consistent with the current regime; a limited market system is already accommodated under the RMA. However, s 136 poses clear issues from an efficiency perspective; the cost of obtaining regional council approval is likely to deter potential transfer applicants. This raises the question of whether transaction costs can be reduced, in a manner that remains consistent with the freshwater management regime.

In terms of obtaining a resource consent, which remains the default position under s 136,[256] it is difficult to identify any room for improvement. The consent process is applicant driven, so will always present a cost barrier.[257] As a related concern, the outcome of the consent process is seldom certain. This is because the overall broad judgment approach, which remains relevant to resource consents,[258] gives decision-makers a broad discretion to determine what sustainable management requires in the context. Consequently, decision-makers could overlook the potential efficiency gains, prioritising values which require a transfer proposal to be declined. This further reflects the limited legal significance of efficiency, but more importantly, the uncertainty of outcome could further deter potential applicants.

By contrast, regional plans carry more promise. In preparing or changing a regional plan, regional councils could classify transfer as a permitted activity.[259] This would eliminate the consent process, and the cost barrier it poses. Additionally, it must be remembered that decision-making of this kind is constrained; regional plans must "give effect to" higher order plans and policy statements.[260] This includes the NPS-FM 2014, which requires regional plans to state criteria for assessing proposed transfers of water take permits, including criteria "to

[255] New Zealand Institute of Economic Research, above n 251, at 30.
[256] See s 136(2)(b)(ii).
[257] Hudspith, above n 80, at 297.
[258] *RJ Davidson Family Trust*, above n 90, at [75]–[77].
[259] RMA, ss 87A(1) and 136(2)(b)(i).
[260] RMA, s 67(3)(a); and *King Salmon*, above n 47, at [91].

improve and maximise the efficient allocation of water".[261] This is significant not only because it requires regional councils to develop transfer rules, but also because it constrains their discretion in doing so.[262] At the very least, each regional council must consider the efficiency implications, which could potentially lead to permissive transfer rules.

To an extent, this potential has translated into practice, with Variation 6 to the Waikato Regional Plan serving as a good example.[263] Although this plan change was notified long before the NPS-FM 2014 became operative, rule 3.4.4.3 could be said to give effect to the policy outlined above.[264] Rule 3.4.4.3 classifies the transfer of surface water take permits as a permitted activity, subject to a range of limitations. Most prominently, the transfer must be to a current consent holder, or the intended use must be a permitted activity.[265] This is important because it suggests that we can improve upon the current approach to transfer. Permitted activity status eliminates the resource consent process, thereby reducing transaction costs. Critically though, this is achieved without denigrating from sustainable management, because permitted transfers are confined to activities already deemed to meet the Act's purpose. As such, it appears that transfer can be better encouraged, in a way that remains consistent with the freshwater management regime.

In many cases though, it will be impossible to avoid regional council oversight, and the associated transaction costs.[266] Sustainable management does not privilege efficiency-enhancing potential, such that most forms of transfer could be permitted by regional plans. Instead, the price of institutional consistency – consistency with the broader goals of sustainable management – is oversight via the resource consent process. In this respect, one need only think of the possible implications if transfer were permitted on a broad basis. Water permits could be sold to commercial water bottling companies, with the water removed from the catchment or aquifer and sold overseas.[267] This could have serious ecological effects, yet there would be no real oversight mechanism without the resource consent process.[268]

[261] Policy B3.
[262] See Bramley and McNeill, above n 180, at 179.
[263] Waikato Regional Council *Waikato Regional Plan: Variation No 6 – Water Allocation* (April 2012).
[264] Greg Severinsen "Variation 6: A fresh approach to water allocation" [April 2012] RMJ 17 at 21.
[265] Rule 3.4.4.3(2)(h).
[266] Hudspith, above n 80, at 314.
[267] A similar situation arose in *Aotearoa Water Action Inc v Canterbury Regional Council* [2018] NZHC 3240, [2019] NZRMA 316.
[268] It should be noted that in *Aotearoa Water Action Inc*, above n 267, the water bottling companies in question had purchased the land in respect of which the water permits were originally granted. This allowed the water bottling companies to circumvent the resource consent process, as successive owners of the same site, pursuant

Ultimately, this demonstrates the institutional limitations of transfer. The consent process is a necessary default requirement under s 136, one justified by the potential for negative environmental outcomes. In turn however, the associated transaction costs will only discourage transfer, undermining the efficiency rationale that makes transfer a useful tool in the first place.

2 Charging mechanisms

In consequence of the limitations described above, transfer may not be able to provide an effective price signal for users. This creates room for charging mechanisms, as an alternative means of encouraging technical efficiency.[269] At first instance though, a charging mechanism could be regarded as inconsistent with the freshwater management regime. The necessary institutional support may be lacking, because fresh water is currently treated as a free resource.

Three counter-arguments can be raised to this concern, the first of which relates to the Water and Soil Conservation Amendment Act 1983. This added two important subsections to s 21 of the WSCA.[270] Section 21(1A) stated that natural water obtained pursuant to the WSCA could not be exported without the prior written consent of the Minister for the Environment. This was followed by s 21(1B), which provided that the Minister's consent could be given on such terms as thought fit, including payment to the Crown for the water. Ultimately, this power was not carried over into the RMA, and it is unclear whether it was ever utilised.[271] But crucially, it demonstrates that charging mechanisms have not always been foreign to New Zealand's freshwater management regime.

Furthermore, charging mechanisms are not necessarily foreign to the RMA. Section 112(2) states that in every water permit relating to the taking or use of geothermal energy, a condition shall be implied that the holder pay any sum of money required to be paid by any regulation made under s 360(1)(c). Although this only applies to geothermal resources, it is difficult to see why the same could not be introduced for fresh water. Both geothermal water and fresh water are treated as "water" under the RMA,[272] while the Waitangi Tribunal has opined that

to s 136(2)(a). Obviously though, it would be much easier for similar companies to obtain water permits if transfer were broadly permitted.

[269] LAWF *Third Report*, above n 181, at [302]–[303].

[270] Water and Soil Conservation Amendment Act 1983, s 11.

[271] Hannah Watson "Putting a Price on Freshwater in New Zealand: Can We Afford Not To?" (2018) 22 NZJEL 245 at 270–271.

[272] Section 2 definition of "water", para (b).

introducing a freshwater levy is a "practicable option".[273] Therefore, it appears that a freshwater charge could be accommodated without too much difficulty.

The third counter-argument, and arguably the most important, is with respect to sustainable management. As noted in the previous chapter, the benefits of using fresh water currently accrue to individual consent holders. That would change however if a charging mechanism were introduced. A freshwater charge would recoup some of the exclusive benefits of water use,[274] thereby ensuring the well-being of the entire community.[275] Moreover, the revenue collected from a freshwater charge could be directed towards restoration projects,[276] thereby remedying the adverse environmental effects of water use.[277] This demonstrates that a charging mechanism could serve the broader aims of sustainable management. Charging for fresh water is not institutionally limited in this respect, in the same way that was seen for transfer.

B. The Layered Structure of Freshwater Management Tools

A further potential barrier lies in the layered structure of management tools itself. Examining this structure reveals some weaknesses, particularly around the protection of environmental values. The original National Policy Statement for Freshwater Management 2011 was heavily criticised for being "shorter and softer" than the version originally recommended.[278] Additionally, its broad objectives left "considerable latitude for interpretation", and thus for variation in the protective standards adopted by regional councils.[279] To some extent, these issues have been resolved by the NPS-FM 2014, which is considerably more detailed and directive. However, it too can be criticised, particularly around its timeframe for implementation. In the short term, the objectives and policies of the NPS-FM 2014 are unlikely to be effective in all regions. This is because the date for compliance – 31 December 2025 – remains in the distant future.[280] As such, it is questionable whether in-stream environmental

[273] Waitangi Tribunal *The Stage 1 Report on the National Freshwater and Geothermal Resources Claim* (Wai 2358, 2012) at 127.
[274] Memon and Skelton, above n 27, at 270; LAWF *Third Report*, above n 181, at [299] and [306]; and Watson, above n 271, at 278.
[275] RMA, s 5(2).
[276] LAWF *Third Report*, above n 181, at [299] and [309]; and Watson, above n 271, at 279.
[277] RMA, s 5(2)(c).
[278] Klaus Bosselmann and Vernon Tava "Introduction: Water in Context" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 1 at 19.
[279] LAWF *Second Report*, above n 25, at [55].
[280] Policy E1. See also Daya-Winterbottom, above n 35, at 658.

values are currently receiving adequate protection. Indeed, it has been said that "implementation [of the NPS-FM 2014] has been slow, variable and uncoordinated".[281]

This is significant because it gives rise to the same concerns identified in the previous chapter. If adequate provision is not being made for essential freshwater uses, market-based management tools could stand to worsen that situation. Again, these tools tend to privilege individual self-interest, leaving little incentive for pursuing shared concerns. This could have detrimental effects on the environment and elsewhere, effects which we may already be seeing. Over-allocation is a serious issue facing many of New Zealand's freshwater catchments, while others are fast approaching full allocation.[282] Given that this is occurring under the current system of property-like entitlements, it does not take much imagination to think what full-blown property rights might achieve. This strongly suggests that before any shift is made towards private property, environmental uses and values should be provided for more fully.

It is important to note though that this barrier is more practical than theoretical. It implies that in-stream environmental values need greater protection within the layered management structure, rather than implying an overhaul of the structure itself. In other words, it remains the case that market-based tools are appropriate within the management regime's second layer, as a response to non-essential economic uses. Nevertheless, the dichotomy of essential and non-essential uses underpinning the layered structure is very stylised, and does not always hold true. Some uses may bridge the two paradigms of freshwater use, or they may not be reflected by either. In turn, market-based management tools, or perhaps even the layered structure in its entirety, may not be entirely appropriate.

This concern is best illustrated by Māori rights and interests in fresh water. The relationship between iwi and freshwater bodies is widely acknowledged, finding its way into pt 2 of the RMA.[283] However, the status of that relationship has not been resolved by the courts; it is

[281] Land and Water Forum *Better freshwater management: A Land and Water Forum Report to the Minister for the Environment and Minister for Agriculture* (December 2017) at 11.
[282] LAWF *First Report*, above n 21, at [54]. See also New Zealand Business Council for Sustainable Development, above n 251, at 4.
[283] Decision makers must recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga (s 6(e)); have particular regard to kaitiakitanga (s 7(a)); and take into account the principles of the Treaty of Waitangi (s 8).

unclear whether Māori have customary title to fresh water.[284] Ultimately, this issue is beyond the scope of this dissertation, but it is worth noting a few important points.

Historically, successive governments have refrained from addressing the issue of Māori rights and interests. The longstanding position at the government level is that no one "owns" fresh water, because it is common property.[285] Nevertheless, the issue came to a head in 2011 when the Fifth National Government proposed to partially privatise four water-dependent state-owned enterprises. This proposal upset various iwi, as did RMA reforms that were proposed around the same time. In each case, a Waitangi Tribunal claim was lodged, with iwi contending that the proposals were proceeding without first providing for Māori rights and interests in water resources.[286] These claims were ultimately heard together, as both required the Tribunal to address the status and extent of the rights and interests claimed.[287]

In its stage one report, the Tribunal found that the claimants had demonstrated the "customary 'indicia of ownership'", closely equivalent to "'full-blown' ownership of property".[288] This set the scene for various Crown reforms, with stage two focussing on the effectiveness of those reforms in addressing Māori rights and interests.[289] In the context of this dissertation, two of the recently released stage two findings are worth noting.[290] Firstly, the Waitangi Tribunal held that Māori customary rights were not plainly extinguished by s 21 of the WSCA.[291] This is important because it tends to confirm the mainstream view; that s 21 fell short of claiming property in fresh water. However, the report is best read as leaving this point open. The Tribunal primarily focussed on the lack of clear extinguishment, rather than the nature of the rights claimed by s 21.

Secondly, the Waitangi Tribunal recommended that the Crown recognise Māori customary rights, through the provision of "proprietary redress".[292] In the Tribunal's view, this redress would include phasing out FIFS, providing an iwi allocation that is "perpetually renewable and

---

[284] Jacinta Ruru "Māori legal rights to water: Ownership, management or just consultation?" [2011] RM Theory & Practice 119 at 120. See also and LAWF *Fourth Report*, above n 247, at [31].
[285] Ruru, above n 284, at 120. See also Young, above n 11.
[286] Waitangi Tribunal, above n 273, at 1.
[287] Waitangi Tribunal, above n 273, at 2–3.
[288] At 76 and 81.
[289] See Waitangi Tribunal "National Fresh Water and Geothermal Resources Inquiry" (19 September 2019) <https://www.waitangitribunal.govt.nz/inquiries/kaupapa-inquiries/national-fresh-water-and-geothermal-resources-inquiry/>.
[290] Waitangi Tribunal *The Stage 2 Report on the National Freshwater and Geothermal Resources Claims: Pre-Publication Version* (Wai 2358, 2019).
[291] At 38–39.
[292] At 563.

inalienable other than by lease or … temporary transfer", and investigating other mechanisms such as water royalties.[293] This is significant because it suggests that Māori rights and interests would be provided for best through private property rights. On the Tribunal's approach, Māori rights and interests appropriately fit within the management regime's second layer, with some level of priority afforded over other non-essential uses. This ultimately quells concerns about the suitability of the layered management approach.

C. User Attitudes

One final potential barrier is user attitudes.[294] This is critical to implementing transfer and charging mechanisms, let alone any management tool. Negative attitudes could derail transfer and charging mechanisms, making it difficult for these tools to gain traction at the government or regional council level.

1 Transfer

Historically, water users have raised several concerns regarding the transfer of water permits. Transfer often conflicts with the views of established consent holders, especially irrigation users. Farmers tend to be resistant to changes in water use, fearful that transfer will increase the number of corporations buying water permits.[295] Instead, they would rather see water go towards locals or other agricultural users, even when the possibility for adequate compensation exists.[296]

A further concern is a perception of water being linked to land.[297] With water and land viewed as one, many users balk at the idea of separating their land from its water supply.[298] On the one hand, this could be interpreted as a misapprehension of the legal position. Under the RMA, water permits do not run with the land, but rather they are personal to individual consent holders.[299] This suggests that to encourage transfer, policy-makers need to raise user awareness of transferability.[300] However, the perception is better interpreted as one of water value being

[293] At 563–564.
[294] See New Zealand Institute of Economic Research, above n 251, at 6–7 and 30.
[295] Robb, Morgan, and Harris, above n 192, at 28.
[296] Hayward, above n 10, at 248.
[297] Ministry for the Environment, above n 205, at 26.
[298] Hayward, above n 10, at 248; Robb, Morgan and Harris, above n 192, at 28.
[299] RMA, s 136; and Hayward, above n 10, at 261.
[300] See Ministry of Agriculture and Forestry *Economic Efficiency of Water Allocation* (Technical Paper No 2001/7, November 2001) at 8 where "lack of knowledge of transferability" was listed as a barrier to transfer.

linked to land value. Water permits not only grant access to valuable water resources, but they are also manifestly valuable of themselves.[301] This value could be reflected in higher land prices, which would explain negative attitudes towards transfer. If water value and land value are directly linked, then selling one's water permit could be viewed as selling part of the land itself.[302] This is critical because it undermines the efficiency justifications for transfer mechanisms. User attitudes suggest that transfer would not take place in some instances, even if transaction costs were reduced or eliminated.

At this point it is intriguing to delve deeper, and ask what these attitudes reflect. Are users fearful of institutional change, or do they fear that transfer would conflict with the paradigms of freshwater use? With respect to the former, transferring water permits is already consistent with the current institutional arrangements. Therefore, user attitudes are probably best interpreted as concerns regarding different freshwater uses. Again, transfer privileges efficiency considerations, which to many users may seem inappropriate for a resource shared by all. The concern may be that fresh water's essential uses will be compromised, especially given the problems with the NPS-FM 2014. This demonstrates strong attitudinal opposition to transfer; opposition which will inhibit the development of broader transfer mechanisms.

2 Charging mechanisms

In respect of charging for fresh water, users have expressed similar concerns to those outlined above. Many users strongly oppose the introduction of a water charge, fearing that it will amount to privatisation.[303] Again, this could be a product of broader concerns for the paradigms of freshwater use. Users may ultimately fear that a freshwater charge will result in negative environmental, social and cultural outcomes.

However, two important counter arguments can be raised to these concerns. Firstly, the fear of privatisation may not be well-founded, given the mainstream view that neither the WSCA nor the RMA assert ownership of water resources. This view is reinforced by s 122(1) of the RMA and the decision in *Hampton*, both of which affirm that water permits do not create property in fresh water.[304] For these reasons, it is difficult to see how introducing a water charge would amount to privatisation. Charging mechanisms are better regarded as just another management

[301] *Hampton* (CA), above n 40, at [106].
[302] Robb, Morgan and Harris, above n 192, at 28.
[303] Memon and Skelton, above n 27, at 271.
[304] *Hampton* (CA), above n 40, at [99] and [104].

tool, one which the Crown may utilise to ensure the sustainable management of freshwater resources.[305]

Furthermore, the negative outcomes so feared may not necessarily eventuate. As noted earlier in this chapter, a freshwater charge could serve several purposes beyond efficiency, such as providing a community return, and remedying adverse environmental effects. By in large, these purposes align with environmental, social and cultural values. This is significant because it exposes a fallacy of sorts. Private property discourse is most commonly associated with rights or entitlements, of the kind that privilege individual autonomy and self-interest. However, there is an important counter-tradition in private property, one which can avoid the negative outcomes with which property is typically associated. France-Hudson terms this counter-tradition "the social obligation norm of property".[306] He argues that individual autonomy and self-interest are intrinsically social goals.[307] If one values their own autonomy, then to avoid self-contradiction, one must value the autonomy of others as well.[308] Consequently, the collective interests of society may take priority over those of the individual, which empowers the state to articulate obligations held by property owners.[309] This shows that private property can be harmonised with broader societal goals. Not only would charging for fresh water reflect the core "exclusivity" element of private property, but it also has the potential to impose obligations which serve collective interests. As such, objections to charging mechanisms cannot justifiably be grounded in concerns for essential freshwater uses.

Where the objections can be grounded however is the prospect of institutional change. Since its inception, the RMA has treated water as a free resource, and users have operated on that basis. In many cases, users will have made significant upfront investments, all because fresh water is available at very low cost.[310] With users bearing all the risk, it seems inequitable to later penalise those users through a water charge. Hence, it is understandable to see some opposition to charging mechanisms. It would represent a big change for many, despite the small institutional adjustments needed to accommodate it. In turn, there may not be the political appetite to make those adjustments.

[305] Watson, above n 271, at 259.
[306] France-Hudson, above n 243, at 101–102.
[307] At 109.
[308] At 108.
[309] At 108–109.
[310] LAWF *Third Report*, above n 181, at [307]; and Watson, above n 271, at 279.

D. Comments

What becomes abundantly clear from the preceding discussion is that freshwater policy is a fraught area. While transfer and charging mechanisms have strong theoretical justifications, that does not necessarily mean they will translate into durable solutions. Several barriers can be identified; barriers which may prevent these tools from being implemented.

The most significant barrier is the sustainable management criterion. Examining this criterion reveals that it covers a broad range of environmental, social, cultural and economic values. This is hardly surprising, given that sustainable management oversees the provision of fresh water to an equally broad range of essential and non-essential uses. However, this breadth makes it difficult for management tools to prioritise one set of uses over another. Generally speaking, each tool must provide for a wide variety of uses to adequately serve sustainable management. At the very least, essential uses must be considered, given their inherent importance to us all. No management approach could justifiably denigrate from the core environmental, social and cultural values that fresh water serves. In turn, market-based management tools will always find it difficult to operate at their full potential. As was seen with transfer, efficiency considerations cannot be prioritised outright. Regional council oversight is both necessary and justified to ensure that that transfer provides for core collective values. By contrast, charging mechanisms show significantly more promise. Not only would a freshwater charge encourage technical efficiency, but it could also serve essential uses, thereby achieving the broader goals of sustainable management.

This shows that under certain conditions, market-based management tools can be adopted consistently with the overarching aims of freshwater management. By imposing obligations upon users, a freshwater charge fits neatly within a sustainable management framework. The concern this leaves is user attitudes, but that tends to be an issue for every new management tool. Again, institutional consistency is valued for the certainty it provides, which means that freshwater management approaches must develop incrementally. Introducing a freshwater charge will be no different. It will have to respect the time it takes for users to adapt, as those users have done for centuries.

Conclusion

Arguably the most significant issue facing New Zealand's freshwater management regime is freshwater scarcity. Scarcity has made it necessary to structure a system of rights in fresh water, particularly with respect to non-essential uses, such that trade-offs can be made between them. However, this system has developed in a piecemeal and reactive fashion. Whilst consent holders have been afforded various protections, other property rights have gone unrecognised. This has resulted in widespread inefficiencies, while it is questionable whether sustainable management is being achieved in all situations.

This provides a strong basis for moving towards private property in freshwater allocation, through the use of market-based management tools. Not only would transfer and charging mechanisms better reflect efficiency's normative foundations as an allocative criterion, but they would also fit within a layered management structure. With essential uses provided for, competition between non-essential economic uses is best regulated through a private property response.

However, implementing such a response is likely to run into significant difficulty. On a sustainable management approach, transfer will always be institutionally limited, and rightfully so in many respects. The potential for negative environmental outcomes means that transfer cannot simply go unchecked. By contrast, a freshwater charge is able to harmonise its underlying efficiency justifications with broader collective interests. This is because charging mechanisms start from the opposite position to most market-based management tools; a charge imposes obligations on users, rather than providing pure rights or entitlements. In this way, a freshwater charge is both a justified and viable management tool.

This leaves strong attitudinal opposition, which is no surprise given the recency with which charging for fresh water has become a mainstream political issue. Institutional change does not occur overnight, and it will be no different here. Irrigators and other consumptive users will continue to voice their opposition, either until a charge is introduced, or the government backs down. Such is the reality of the political and legislative process. The ongoing discussion surrounding Māori rights and interests provides a sound platform for investigating charging mechanisms further, but that platform is ultimately one that the government must build on.

Bibliography

A. Cases

1 New Zealand

Aoraki Water Trust v Meridian Energy Ltd [2005] 2 NZLR 268 (HC).

Aotearoa Water Action Inc v Canterbury Regional Council [2018] NZHC 3240, [2019] NZRMA 316.

Carter Holt Harvey Ltd v Waikato Regional Council [2011] NZEnvC 380.

Central Plains Water Trust v Ngai Tahu Properties Ltd [2008] NZCA 71, [2008] NZRMA 200.

Central Plains Water Trust v Synlait Ltd [2009] NZCA 609, [2010] 2 NZLR 363.

Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd [2014] NZSC 38, [2014] 1 NZLR 593.

Falkner v Gisborne District Council [1995] 3 NZLR 622 (HC).

Fleetwing Farms Ltd v Marlborough District Council [1997] 3 NZLR 257 (CA).

Geotherm Group Ltd v Waikato Regional Council [2004] NZRMA 1 (HC).

Geotherm Group Ltd v Waikato Regional Council EnvC Auckland A151/06, 19 November 2006.

Glenmark Homestead Ltd v North Canterbury Catchment Board [1978] 1 NZLR 407 (CA).

Hampton v Canterbury Regional Council [2015] NZCA 509, [2016] NZRMA 369.

Hampton v Canterbury Regional Council (Environment Canterbury) [2016] NZSC 50, [2016] NZRMA 398.

Marlborough Ridge Ltd v Marlborough District Council (1997) 3 ELRNZ 483 (EnvC).

New Zealand Rail Ltd v Marlborough District Council [1994] NZRMA 70 (HC).

Ngai Tahu Property Ltd v Central Plains Water Trust [2008] NZSC 49.

Ngai Tahu Property Ltd v Central Plains Water Trust [2009] NZSC 24.

North Shore City Council v Auckland Regional Council (1996) 2 ELRNZ 305 (EnvC).

RJ Davidson Family Trust v Marlborough District Council [2018] NZCA 316, [2018] 3 NZLR 283.

St Lukes Group Ltd v North Shore City Council [2001] NZRMA 412 (EnvC).

Synlait Ltd v Central Plains Water Trust [2010] NZSC 32.

Telecom Corporation of New Zealand Ltd v Commerce Commission (1991) 3 NZBLC 102,340 (HC).

Tram Lease Ltd v Croad [2003] 2 NZLR 461 (CA).

2 England and Wales

Acton v Blundell (1843) 12 M & W 324, 152 ER 1223 (Exch).

Embrey v Owen (1851) 6 Exch 353 155 ER 579.

B. Legislation

1 New Zealand

Marine Farming Act 1971.

Resource Management Act 1991.

Resource Management Amendment Act 2005.

Water and Soil Conservation Act 1967.

Water and Soil Conservation Amendment Act 1983.

C. Planning Instruments

Department of Conservation *New Zealand Coastal Policy Statement 2010* (issued by notice in the New Zealand Gazette on 4 November 2010 and taking effect on 3 December 2010).

Ministry for the Environment *National Policy Statement for Freshwater Management 2011* (issued by notice in the New Zealand Gazette on 12 May 2011 and taking effect on 1 July 2011).

Ministry for the Environment *National Policy Statement for Freshwater Management 2014: Updated August 2017 to incorporate amendments from the National Policy Statement for Freshwater Amendment Order* (issued by notice in the New Zealand Gazette on 9 August 2017 and taking effect on 7 September 2017).

Waikato Regional Council *Waikato Regional Plan: Variation No 6 – Water Allocation* (April 2012).

D. Books and Chapters in Books

William Blackstone *Commentaries on the Laws of England* (Clarendon Press, Oxford, 1765–1769) vol 2.

Klaus Bosselmann and Vernon Tava "Introduction: Water in Context" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 1.

Marilyn Bramley and Jeff McNeill "Up the Creek and Down the River: In-stream ecological values and property rights under the RMA" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 173.

FM Brookfield *Laws of New Zealand* Water (Online ed).

Rachel Carson *Silent Spring* (Houghton Mifflin, Boston, 1962).

Kevin Counsell and Lewis Evans *Essays on Water Allocation in New Zealand: The Way Forward* (ISCR, Wellington, 2005).

Trevor Daya-Winterbottom "New Zealand Sustainability Laws and Freshwater Management" in Klaus Bosselmann and Vernon Tava (eds) *Water Rights and Sustainability* (New Zealand Centre for Environmental Law, Auckland, 2011) 27.

Trevor Daya-Winterbottom "Water Management" in Peter Salmon and David Grinlinton (eds) *Environmental Law in New Zealand* (Thomson Reuters, Wellington, 2015) 641.

Halsbury's Laws of England (5th ed, 2018, online ed) vol 100 Water and Waterways.

AM Honoré "Ownership" in AG Guest (ed) *Oxford Essays in Jurisprudence* (Oxford University Press, London, 1961) 108.

Bryan Jenkins *Water Management in New Zealand's Canterbury Region: A Sustainability Framework* (Springer, Dordrecht, The Netherlands, 2018).

Urs Luterbacher and Ellen Wiegandt "Cooperation or Confrontation: Sustainable Water Use in an International context" in Edith Brown Weiss, Laurence Boisson de Chazournes and Nathalie Bernasconi-Osterwalder (eds) *Fresh Water and International Economic Law* (Oxford University Press, Oxford, 2005) 11.

Derek Nolan (ed) *Environmental and Resource Management Law* (online ed, LexisNexis).

Richard A Posner *Economic Analysis of Law* (4th ed, Little Brown, Boston, 1992).

Tom Tietenberg and Lynne Lewis *Environmental and Natural Resource Economics* (9th ed, Addison-Wesley, Boston, 2012).

Jeremy Waldron *The Rule of Law and the Measure of Property* (Cambridge University Press, Cambridge, 2012).

E. Journal Articles

Helle Tegner Anker "The Resource Management Act and Protection of Water Quality – A Comparison with European Initiatives" (2003) 7 NZJEL 1.

Sharon Beder "Costing the Earth: Equity, Sustainable Development and Environmental Economics" (2000) 4 NZJEL 227.

Sarah Boone and Stephen Fragaszy "Emerging Scarcity and Emerging Commons: Water Management Groups and Groundwater Governance in Aotearoa New Zealand" (2018) 11 Water Alternatives 795.

FM Brookfield "The Conveyancer, Water Rights and the Environment" [1975] NZLJ 645.

Barry Brunette "Freshwater Management and Allocation Under the Resource Management Act 1991: Does First-in First-served Achieve Sustainable Management Principles?" (2006) 10 NZJEL 169.

Lara Burkhardt "A Freshwater Allocation to Iwi: Is it Possible under the Resource Management Act 1991? (2016) 24 Wai L Rev 81.

Ronald Coase "The Problem of Social Cost" (1960) 3 Journal of Law and Economics 1.

Jen Crawford and Ruby Moynihan "Fleetwing Revisited" [August 2009] RMJ 11.

Richard Epstein "Property Rights in Water, Spectrum and Minerals" (2015) 86 U Colo L Rev 389.

Ben France-Hudson "Statutory Property: Is it a Thing?" (2016) 46 VUWLR 411.

Ben France-Hudson "Surprisingly Social: Private Property and Environmental Management" (2017) 29 JEL 101.

Laura Fraser "Property Rights in Environmental Management: The Nature of Resource Consents in the Resource Management Act 1991" (2008) 12 NZJEL 145.

Thomas Gibbons "Property Rights in Resource Consents: Some Thoughts from Law and Economics" (2012) 25 NZULR 46.

Thomas Gibbons "Are Resource Consents Property? – Ongoing Issues" (2016) 6 Prop L Rev 127.

Garrett Hardin "The Tragedy of the Commons" (1968) 162 Science 1243.

Andrew Hayward "Freshwater Management: Water Markets and Novel Pricing Regimes" (2006) 10 NZJEL 215.

Ezekiel Hudspith "Freshwater Management in New Zealand: a Challenge for Ecology, Equity, and Economic Efficiency" (2012) 16 NZJEL 277.

JR Jackson "The Role of Economics in the RMA (or Vice Versa)" (1999) 3 NZJEL 19.

Miria Lange, Ann Winstanley and David Wood "Drivers and barriers to water transfer in a New Zealand irrigation scheme" (2008) 51 Journal of Environmental Planning and Management 381.

Brent Layton "Tradable systems for water: Best use and maximising value" [2011] RM Theory & Practice 107.

James Lennox, Wendy Proctor and Shona Russell "Structuring stakeholder participation in New Zealand's water resource governance" (2011) 70 Ecological Economics 1381.

Robert Makgill "A New Start for Fresh Water: Allocation and Property Rights" (2010) 2(1) Lincoln Planning Review 5.

CW Maughan "Economics and the Law" [1994] NZLJ 110.

Pyar Ali Memon "Freshwater management policies in New Zealand" (1997) 7 Aquatic Conservation: Marine and Freshwater Ecosystems 305.

Ali Memon and Peter Skelton "Institutional Arrangements and Planning Practices to Allocate Freshwater Resources in New Zealand: A Way Forward" (2007) 11 NZJEL 241.

Philip Milne "Allocation of Water Between Productive Uses" [November 2003] RMJ 12.

Philip Milne "Allocation of Public Resources under the RMA: Implications of *Aoraki Water Trust v Meridian*" [2005] RM Theory & Practice 146.

Philip Milne and Matt Conway "Implementing the law on consent application priority – powers and potential pitfalls" [April 2010] RMJ 1.

Olivia Nyce "Water Markets Under the Resource Management Act 1991: Do They Hold Water?" (2008) 14 Canta LR 123.

Elinor Ostrom "The Challenge of Common-Pool Resources" (2008) 50(4) Environment: Science and Policy for Sustainable Development 8.

Raewyn Peart "Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches" (2001) 5 NZJEL 127.

Michael Pickford "Economic Efficiency and the Resource Management Act" (2014) 18 NZJEL 149.

Jacinta Ruru "Māori legal rights to water: Ownership, management or just consultation?" [2011] RM Theory & Practice 119.

Greg Severinsen "Variation 6: A fresh approach to water allocation" [April 2012] RMJ 17.

David Sheppard "Reaching sustainable management of fresh water" [2011] RM Theory & Practice 85.

SD Upton "Purpose and Principle in the Resource Management Act" (1995) 3 Wai L Rev 17.

Hannah Watson "Putting a Price on Freshwater in New Zealand: Can We Afford Not To?" (2018) 22 NZJEL 245.

F. Parliamentary and Government Materials

(28 August 1991) 510 NZPD 3952.

Cabinet Office Circular "New Start for Fresh Water" (2008).

Ministry for the Environment *People, Environment and Decision Making: the Government's Proposals for Resource Management Law Reform* (December 1988).

G. Papers and Reports

Aqualinc Research Limited *Update of Water Allocation Data and Estimate of Actual Water Use of Consented Takes 2019-10* (Ministry for the Environment, Report No H10002/3, October 2010).

Board of Inquiry *New Zealand King Salmon Requests for Plan Changes and Applications for Resource Consents* (22 February 2013).

Daniel Collins, Christian Zammit, Andrew Willsman and Roddy Henderson *Surface water components of New Zealand's National Water Accounts, 1995-2014* (Ministry for the Environment, May 2015).

Peter Gluckman *New Zealand's fresh waters: Values, state, trends and human impacts* (Office of the Prime Minister's Chief Science Advisor, 12 April 2017).

Neil Gunningham *Innovative Governance and Regulatory Design: Managing Water Resources* (Landcare Research, Contract Report LC0708/137, August 2008).

Bryan Jenkins "The Development of Sustainable Alternatives to Applicant's Proposals using Collaborative Approaches" (paper presented to New Zealand Planning Institute Conference, Hamilton, April 2013).

Land and Water Forum *Report of the Land and Water Forum: A Fresh Start for Freshwater* (September 2010).

Land and Water Forum *Second Report of the Land and Water Forum: Setting Limits for Water Quality and Quantity, Freshwater Policy and Plan-Making Through Collaboration* (April 2012).

Land and Water Forum *Third Report of the Land and Water Forum: Managing Water Quality and Allocating Fresh Water* (October 2012).

Land and Water Forum *Fourth Report of the Land and Water Forum* (November 2015).

Land and Water Forum *Better freshwater management: A Land and Water Forum Report to the Minister for the Environment and Minister for Agriculture* (December 2017).

Ministry for the Environment *Water Programme of Action: Water Allocation and Use – Technical Working Paper* (June 2004).

Ministry for the Environment *Report of the Sustainable Development Water Programme of Action Local Government Workshops* (July 2005).

Ministry for the Environment *Environment New Zealand 2007* (December 2007).

Ministry for the Environment *Report of the Minister for the Environment's Technical Advisory Group* (February 2009).

Ministry for the Environment *Next steps for fresh water: Consultation document* (February 2016) at 27.

Ministry for the Environment and Ministry for Primary Industries *Essential Freshwater: Healthy Water, Fairly Allocated* (October 2018).

Ministry for the Environment and Stats NZ *New Zealand's Environmental Reporting Series: Environment Aotearoa 2019* (April 2019).

Ministry of Agriculture and Forestry *Economic Efficiency of Water Allocation* (Technical Paper No 2001/7, November 2001).

New Zealand Business Council for Sustainable Development *A Best Use Solution for New Zealand's Water Problems* (2008).

The New Zealand Initiative *Refreshing Water: Valuing the priceless* (2019).

New Zealand Institute of Economic Research *Water management in New Zealand: A road Map for understanding water value* (Working Paper 2014/01, March 2014).

Rod Oram "The Resource Management Act: Now and in the Future" (paper prepared for Beyond the RMA Conference, Auckland, May 2007).

Organisation for Economic Co-operation and Development *Environmental Performance Reviews: New Zealand 2017* (2017).

Parliamentary Commissioner for the Environment *Beyond Aging Pipes: Urban Water Systems for the 21st Century* (April 2001).

Christina Robb, Matthew Morgan and Simon Harris *Attitudes and Barriers to Water Transfer* (Ministry for the Environment, Report No 4464/1, December 2001).

Joseph L Sax "Our Precious Water Resources: Learning from the Past, Securing the Future" (paper presented to the Resource Management Law Association Conference, 26 September 2008).

Tax Working Group *Future of Tax: Final Report Volume I – Recommendations* (21 February 2019).

Waitangi Tribunal *The Stage 1 Report on the National Freshwater and Geothermal Resources Claim* (Wai 2358, 2012).

Waitangi Tribunal *The Stage 2 Report on the National Freshwater and Geothermal Resources Claims: Pre-Publication Version* (Wai 2358, 2019).

Water Programme of Action inter-departmental working group *Freshwater for a sustainable future: issues and options – A public discussion paper on the management of New Zealand's freshwater resources* (Ministry for the Environment, December 2004).

H. Internet Resources

Green Party "Protecting drinking water" (13 September 2017) <https://www.greens.org.nz/policy/environment-policies/protecting-drinking-water>.

Labour "Clean rivers for future generations" (2017) <https://www.labour.org.nz/water>.

Ministry for the Environment "Table of Water Conservation Orders" (5 September 2018) <www.mfe.govt.nz/fresh-water/water-conservation-orders/existing-water-conservation-orders/table-water-conservation>.

Peter Skelton "Project Aqua reveals flaws in regional planning" *The National Business Review* (online ed, Auckland, 19 September 2003).

The Opportunities Party "Clear Water Action" (2017) <https://www.top.org.nz/top9>.

Waitangi Tribunal "National Fresh Water and Geothermal Resources Inquiry" (26 April 2019) <https://www.waitangitribunal.govt.nz/inquiries/kaupapa-inquiries/national-fresh-water-and-geothermal-resources-inquiry/>.

Audrey Young "Key on Waitangi Claim: 'No one owns water'" *The New Zealand Herald* (online ed, Auckland, 7 February 2012).