

THE USE OF TRADEABLE WATER RIGHTS IN NEW ZEALAND

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TABLE OF CONTENTS

INTRODUCTION.....	4
1. Why the Issue of Tradeable Water Rights Has Recently Resurfaced.....	5
1.1 The Theory Behind Tradeable Water Rights	5
1.1.1 The Regulatory Approach.....	6
1.1.2 Market-Based Economic Instruments.....	7
1.1.3 Concluding Remarks.....	10
1.2 Full and Over-Allocation	11
1.3 Increased Demand.....	12
1.4 Climate change.....	13
1.5 The <i>Sustainable Water Programme of Action</i>	15
1.5.1 Implications for tradeable water rights	16
1.5.2 The next step.....	17
1.6 Concluding Remarks.....	18
2. The Resource Management Act 1991	20
2.1 Regional policy statements and regional plans	20
2.2 Resource Consents	21
2.3 Nature of Water Permits	22
2.4 Water Allocation.....	25
2.5 Tradeable Water Rights	27
2.6 Concluding Remarks.....	29
3. The Current Use of Transferable Water Permits in New Zealand	31
3.1 The Oroua Catchment	31
3.1.1 The <i>OCWA</i>	31
3.1.2 Rationale behind the use of transferable water permits	32

3.1.3	Experience to date in the Oroua Catchment	33
3.1.4	The next step	33
3.2	Tasman District	35
3.2.1	<i>Tasman Regional Policy Statement (TRPS)</i>	36
3.2.2	<i>Tasman Resource Management Plan (TRMP)</i>	36
3.2.3	The Waimea Plains	37
3.3	Concluding Remarks	39
4.	Tradeable Water Rights in Australia	40
4.1	National Policy Framework	40
4.2	South Australia	41
4.3	Differences between Australia and New Zealand	44
4.4	Concluding Remarks	46
5.	Analysis	47
5.1	Administration	47
5.1.1	Initial distribution	47
5.1.2	Register	49
5.1.3	Monitoring and Enforcement	50
5.2	Information requirements	51
5.3	Nature of permits	53
5.4	Reduction of the Total Allocation Limit	54
5.4.1	How permits are expressed	55
5.4.2	Powers to vary the total allocation limit	55
5.4.3	Effect of reductions on permit holders	56
5.5	Monopolisation	58
5.5.1	Large, rich users	58
5.5.2	Risks arising from monopolisation	59
5.5.3	Solutions	60
5.6	Environmental concerns	61
5.6.1	Water for the environment	61
5.6.2	‘Sleepers’	62
5.7	Treaty of Waitangi	64

5.8	Maori Leasehold Land	66
5.9	Public perceptions	67
5.10	Incentives to trade	68
5.11	Alternative Water Management Mechanisms.....	68
5.11.1	Use it or lose it policy	68
5.11.2	Storage	69
5.11.3	User pays options	69
5.12	Concluding Remarks.....	70
CONCLUSION		71
BIBLIOGRAPHY		

INTRODUCTION

New Zealand as a nation has traditionally enjoyed plentiful water and the huge variety of interests in the resource have generally been comfortably provided for. However a situation is rapidly approaching (and has already been reached in some parts of the country) where there will no longer be enough water to go around. Under the current resource management system when this occurs the only way more water can be attained for use is through the use of water already allocated under existing permits. Tradeable water rights have been identified as a mechanism to enable more people to gain access to the resource and to ensure existing users are making the most of the water that they are allocated.

This discussion on the use of tradeable water rights in New Zealand will begin with an assessment in Chapter 1 of why this issue has resurfaced, focusing on the effects of full allocation, an increase in demand on water, climate change, and the recent government attention given to freshwater management. This section will also outline the theoretical basis for the use of tradeable water rights. Chapter 2 will go on to examine how water is currently managed in New Zealand and what provision there is for tradeable water rights under the present legislative framework. Some use has already been made of tradeable water rights in New Zealand, which will be dealt with in Chapter 3. Chapter 4 examines steps taken in Australia to initiate tradeable water rights, in particular in South Australia. Finally, Chapter 5 gives an analysis of how a tradeable water rights regime might be put in place in New Zealand, drawing on the experience with fisheries and the use of tradeable water rights in Australia. This final analysis will identify important considerations for New Zealand in the establishment of a tradeable water rights market and offer potential solutions to enable the effective establishment of such a system.¹

¹ The analysis does not attempt to make policy choices as to how a tradeable water rights regime could be implemented in New Zealand.

1. WHY THE ISSUE OF TRADEABLE WATER RIGHTS HAS RECENTLY RESURFACED

The issue of tradeable water rights has surfaced a number of times in the past, both overseas and in New Zealand and has arisen again in recent years. There are a number of reasons behind this.

New Zealand's freshwater resources are relatively plentiful in comparison with other countries, for example Australia, but there are significant regional and seasonal variations in water availability therefore during certain periods access to sufficient water can become an issue.² Rainfall differs significantly across the country. Some areas are very dry, such as Central Otago, while others receive substantial rainfall, such as Westland. As a result in some areas water availability does not meet demand at certain times of year.³

A brief examination of the theoretical basis behind the use of tradeable water rights is necessary to determine how they will help solve some of the problems New Zealand is currently facing with water.

1.1 THE THEORY BEHIND TRADEABLE WATER RIGHTS

Traditionally New Zealand has adopted a standards based, regulatory approach to resource management. However there is growing interest in the alternative 'free market' approach, which calls for deregulation and the use of economic instruments to manage the country's natural resources.⁴

² Dry summers and seasonal soil moisture deficits are one reason behind this problem. P A Memon, "Freshwater Management Policies in New Zealand", in P A Memon and H Perkins (eds) *Environmental Planning and Management in New Zealand* (Dunmore Press Ltd, 2000), pp. 234-250 at 243.

³ MAF and MfE, *Water Programme of Action: Water Allocation and Use*, (Technical Working Paper, MfE, June 2004) at 4.

⁴ B J Richardson, "Changing Regulatory Spaces: the Privatization of New Zealand Environmental Law?" in K Bosselmann and B J Richardson (eds) *Environmental Justice and Market Mechanisms: Key Challenges for Environmental Law and Policy: International Environmental Law and Policy Series Volume 54* (Kluwer Law International Ltd, 1999) pp. 208-231 at 209.

1.1.1 The Regulatory Approach

The command and control approach traditionally used in New Zealand involves the setting of environmental standards, targets or limits which are enforced via legislation and may incur penalties if not met.⁵

The most significant advantages of the regulatory approach are certainty and dependability. Users can foresee what consequences their actions will carry⁶ and are clear about what is and is not permitted.⁷ Thus it is relatively straightforward to identify and penalise where breaches have occurred.⁸ The command and control approach also appeals to the public's feeling of good will and duty to act in a manner that is in the best interest of the environment⁹ and ensures that environmental values are taken into consideration.

Despite the benefits of the regulatory approach there are concerns it imposes too many costs on government agencies and resource users,¹⁰ is unnecessarily bureaucratic and interventionist,¹¹ and impedes economic efficiency and competitiveness by placing excessive restrictions on the operation of the market.¹² Government regulation can be manipulated by powerful political pressure groups or subjected to undue influence by bureaucratic experts.¹³ Users may have no incentive to mitigate environmental impacts beyond standards set by the regulations¹⁴ by using more efficient abstraction methods. If

⁵ R K Turner, D Pearce, I Bateman, *Environmental Economics* (Harvester Wheatsheaf, 1994) at 144.

⁶ N Gunningham and D Sinclair, "Instruments for Environmental Protection", in N Gunningham and P Grabosky (eds), *Smart Regulation: Designing Environmental Policy* (Oxford University Press, 1998) pp. 37-91 at 41-42.

⁷ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 186. This approach may also minimise the risk arising from social protest and excessive environmental damage: see Richardson, "Changing Regulatory Spaces: the Privatization of New Zealand Environmental Law?" (1999) at 211.

⁸ Gunningham and Sinclair, "Instruments for Environmental Protection" (1998) at 41.

⁹ M C Blumm, "The Fallacies of Free Market Environmentalism" (1992) 15(2) *Hvd Jnl of Law and Public Policy* 371 at 386.

¹⁰ CSIRO Land and Water: Policy and Economic Research Unit, *Economic Instruments for Managing Water Quality in New Zealand* (CSIRO, January 2004) final report for Ministry for the Environment at 13.

¹¹ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 181.

¹² Gunningham and Sinclair, "Instruments for Environmental Protection" (1998) at 46.

¹³ These groups will not necessarily act in the environment's best interest, especially if doing so does not correspond with their own self-interest and would impose additional costs on them. Turner, Pearce, Bateman, *Environmental Economics* (1994) at 80-81.

¹⁴ For example firms that meet a pollution emission standard have no incentive to further reduce their pollution. B Ackerman and R B Stewart, "Reforming Environmental Law", in R L Revesz (eds) *Foundations of Environmental Law and Policy* (Oxford University Press, 1997) pp. 133-138 at 130.

the need arises to further reduce total abstractions, government will have to impose stricter standards and risk public dissent instead of users developing ways to use water more efficiently themselves.¹⁵ Regulations are also costly and difficult to enforce and monitor and may necessitate the creation of complex administrative systems.¹⁶ There is potential for ‘regulatory overload’ of resource users, who may have to deal with a myriad of environmental legislation and thus discourage development.¹⁷

1.1.2 Market-Based Economic Instruments

The creation of a market as a resource management mechanism would essentially involve regulatory authorities determining an overall level of tolerable activity then allocating tradeable rights up to this level.¹⁸ Users would then be allowed to trade these permits amongst themselves.¹⁹

1.1.2.1 Advantages

The major benefit from the use of tradeable water rights is efficient use of the resource. Theoretically users will realise the value of water and optimise water use in order to free up permits to trade with others.²⁰ The argument follows that self interest will always be better than command and control strategies as a reliable means of generating such efficiency.²¹

¹⁵ Gunningham and Sinclair, “Instruments for Environmental Protection” (1998) at 45.

¹⁶ If there are significant resource constraints limiting effective monitoring this could undermine the whole system. Ibid at 45.

¹⁷ Ibid at 46.

¹⁸ Ibid at 71.

¹⁹ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 181.

²⁰ M Doak, “Tradeable Water Permits” (April 2002) 9 MAF RM Update 5 (Internet) <www.maf.govt.nz/mafenet/publications/rmupdate/> Accessed 15/07/2006. A market system would create a powerful financial incentive for those who can develop efficient approaches to reduce their abstractions to sell their permits to others who are unable make reductions: see Ackerman and Stewart, “Reforming Environmental Law” (1997) at 135.

²¹ J Pigram, *Tradeable Water Rights: The Australian Experience*, (Taiwan Institute for Economic Research: Centre for Water Policy Research: University of New England, Australia, 21 June 1999), (Internet) *Centre for Ecological Economics and Water Policy Research* <www.une.edu.au/cwpr/> Accessed 19/05/2006 at 14.

Economic instruments are also perceived as voluntary, less bureaucratic and more flexible than regulatory approaches.²² Government retains some control by determining the total allowable abstractions, but users identify and specify what action they want to take within these parameters.²³ Individuals are encouraged to develop cost-effective and innovative solutions to reduce their water consumption, taking this burden away from regulators.²⁴

Economic instruments may reduce the costs associated with achieving environmental outcomes.²⁵ Once a trading regime is in operation transaction costs should be minimal. Markets tend to self-police as users have an interest in ensuring other permit holders comply with relevant terms and conditions. This reduces monitoring and enforcement costs along with users' compliance costs.²⁶ Finally, water permits may be acquired by environmental (or other) groups which would serve to mitigate environmental degradation.²⁷

²² Gunningham and Sinclair, "Instruments for Environmental Protection" (1998) at 81.

²³ Ibid at 72. For example, water permit holders who are able to easily reduce the amount of water they abstract could choose to do so in order to trade parts of their permits with other users who find it more difficult to reduce their abstractions.

²⁴ Ibid at 81.

²⁵ CSIRO Land and Water: Policy and Economic Research Unit, *Economic Instruments for Managing Water Quality in New Zealand* (2004) at 13.

²⁶ Gunningham and Sinclair, "Instruments for Environmental Protection" (1998) at 81. Costs would also be decreased as trading would enable water to be shifted from existing to new users, instead of regulators having to undertake new, possibly expensive surface supply and diversion projects that may carry negative environmental effects: see Z Willey, "Behind Schedule and Over Budget: The Case of Markets, Water and Environment" (Spring 1992) 15(2) *Hvd Jnl of Law and Public Policy* 391 at 407.

²⁷ However there is a concern that there would be difficulties in private water markets with financing acquisitions of water for environmental purposes. Willey, "Behind Schedule and Over Budget: The Case of Markets, Water and Environment" (Spring 1992) at 396, 407. For further discussion see Chapter 5, paragraph 5.6.1.

1.1.2.2 Disadvantages

The initial distribution of permits may be problematic,²⁸ and administrative issues may arise in relation to transaction and enforcement costs. Users can only be expected to undertake trading if it would save them money, so expensive transactions would decrease the likelihood of extensive trading.²⁹ Major regulatory oversight of individual trades would create a lengthy and uncertain approval process and increase information requirements, thus influencing the price of transactions.³⁰ Collation and verification of trades by administrators may create additional transaction costs not felt under a regulatory system.³¹ Self-policing may not be reliable, and similar enforcement costs to those incurred under a regulatory system may be involved.³²

Of fundamental concern is the possibility of monopoly control by one large, wealthy user.³³ Although fewer users would lower administrative costs, if one or two users ‘cornered the market’ and refused to trade this would exclude new users.³⁴ Such anti-competitive behaviour would serve to undermine the market system.³⁵ Major users may also gain a disproportionate influence over decision-making, and so the potential for political manipulation remains.³⁶

²⁸ There are a number of different methods for this initial allocation, for example grandparenting, auctions and tendering. See generally Richardson, “Changing Regulatory Spaces: the Privatization of New Zealand Environmental Law?” (1999) at 225. If permits go to existing users under a ‘grandparenting’ system this may prove inequitable, as new entrants will be forced to buy in to the market: Gunningham and Sinclair, “Instruments for Environmental Protection” (1998) at 73. New consents could be distributed via a tendering mechanism, but this would mean current permit holders would suffer a drop in capital via land value. A possible solution to this issue could be redistributing the funds from the tendering process over the previous holders as compensation: Doak, “Tradeable Water Permits” (April 2002).

²⁹ R W Hahn and G L Hester, “Marketable Permits: Lessons for Theory and Practice” (1989) 16(2) *Ecology LQ* 361 at 364.

³⁰ *Ibid* at 378.

³¹ *Ibid* at 388.

³² Gunningham and Sinclair, “Instruments for Environmental Protection” (1998) at 82.

³³ Blumm, “The Fallacies of Free Market Environmentalism” (Spring 1992) at 376. See Chapter 5, paragraph 5.5 for further discussion.

³⁴ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 187.

³⁵ Gunningham and Sinclair, “Instruments for Environmental Protection” (1998) at 73.

³⁶ For example, wealthy groups, businesses and bureaucracies may tend to have greater ‘consumer clout’ than smaller users. S Beder, “Costing the Earth: Equity, Sustainable Development and Environmental Economics (2000) 4 *NZJEL* 227 at 242

The effectiveness of trading systems may also be affected by limited understanding of natural resources.³⁷ Difficulties also arise in pricing access to ‘public’ resources such as water.³⁸ Some argue that markets are incapable of properly valuing public goods, and environmental costs, risks and benefits may be ignored.³⁹ If true, this would act as a fundamental flaw in a tradeable rights regime.

Finally, although a tradeable water permits might allocate the resource more efficiently, other goals such as fairness, due process, equality, open decision-making, public participation, compensation for past damages and risk minimization, may not be so compatible with a market regime.⁴⁰ It is far from clear that efficient resource allocation should be our only social goal.⁴¹

1.1.3 Concluding Remarks

The use of economic instruments around the world has increased over recent years as the limits of the regulatory approach have been identified and the potential benefits of economic instruments have received recognition.⁴² As a result there is a growing drive to include economic instruments in the management of natural resources. Blumm makes the argument that although markets fail to effectively allocate environmental resources, some privatisation is necessary in order to minimise transaction costs and conserve limited administrative resources, as the modern regulatory state is extending its controls over a large number of people who previously were not subject to such limitations.⁴³ The regulatory approach and the market approach both carry significant advantages and disadvantages which lead to the conclusion that a hybrid of regulation and economic instruments may be the most appropriate mechanism for resource management.

³⁷ For example, it is often difficult to predict flows available for irrigation, which makes the level of reliability that goes with the water being traded difficult to determine and the price of tradeable permits hard to define: Doak, “Tradeable Water Permits” (April 2002). See Chapter 5, paragraph 5.2.

³⁸ Blumm, “The Fallacies of Free Market Environmentalism” (Spring 1992) at 375-6.

³⁹ Ibid at 372 and 383.

⁴⁰ Ibid at 384.

⁴¹ Idem.

⁴² Gunningham and Sinclair, “Instruments for Environmental Protection” (1998) at 69.

⁴³ Blumm, “The Fallacies of Free Market Environmentalism” (Spring 1992) at 373.

1.2 FULL AND OVER-ALLOCATION

While New Zealand is generally perceived as having plenty of water, water has reached full and over-allocation in a number of areas.⁴⁴ Some regions have sufficient water to serve all the different demands but in other areas water is under significant pressure. Many catchments are fully allocated to existing users, leaving little to nothing for new users.⁴⁵ There is also a general perception that there is plenty of water available for all uses therefore people tend to consider water is ‘free’ and do not appreciate the many allocation and management issues associated with its use.⁴⁶

Difficulties that arose in the Waitaki Catchment demonstrate how over-allocation in some parts of New Zealand has become a significant problem.⁴⁷ In that case Aoraki Water Trust and the Mackenzie and Timaru District Councils sought a declaration about the consent authority’s powers to grant further water permits when Meridian Energy already held permits allowing it to use more water for hydro-generation than the natural flow of the river.⁴⁸ The High Court concluded there was nothing in the Resource Management Act (the RMA) giving the consent authority power to grant Aoraki a water permit if the grant would reduce the water available to Meridian.⁴⁹ The position seems to be that where a resource is fully allocated, new users and users who wish to obtain a larger allocation cannot be accommodated unless they are able to make use of an existing water permit.⁵⁰ Given the ‘first in, first served’ approach to the allocation of water permits,⁵¹

⁴⁴ ‘Over allocation’ refers to the case where an allocation limit has been set on the total amount of water that can be taken from a resource and the actual allocation is over that limit. ‘Full allocation’ is where the allocated amount is equal to the allocation limit. Lincoln Environmental, *Information on Water Allocation in New Zealand* (Report No. 4375/1, Lincoln Environmental, April 2000) prepared for Ministry for the Environment at 35.

⁴⁵ C James, *Ending a dry argument over dwindling water* (The Herald, 22 March 2006)

⁴⁶ MAF and MfE, *Water Programme of Action: Water Allocation and Use* (2004) at 6.

⁴⁷ *Aoraki Water Trust v Meridian Energy* [2005] NZLR 268. That case also provided some key pointers as to what will happen when over-allocation occurs, given the nature of water permits and the possibility of their transfer, which will be discussed further in Chapter 2, paragraphs 2.2 and 2.3.

⁴⁸ I Williams, “The Waitaki River” [June 2005] NZLJ 177 at 177.

⁴⁹ *Aoraki Water Trust v Meridian Energy* [2005] NZLR 268 at 282.

⁵⁰ S Berry and B Matheson, “Water”, in D Nolan (eds), *Environmental and Resource Management Law* (3rd ed, LexisNexis NZ Ltd, 2005) pp. 445-526 at 488-489.

⁵¹ See Chapter 2 Paragraph 2.3

this appears inequitable as new users are not catered for and little to no consideration is given to prioritisation of types of uses.

A possible way for users to make use of existing permits would be through the transfer or trade of water permits from an original permit holder to a new holder. It is in this context that the issue of tradeable water rights has arisen again in the sphere of resource management in New Zealand.

1.3 INCREASED DEMAND

One reason behind the increase in areas approaching full allocation lies in a rise in demand for the use of water. There are a number of competing demands on water throughout New Zealand, some of which have increased significantly in recent years.⁵² In some areas competing interests mean demand for water exceeds availability, in particular for irrigation.⁵³ Water demand for all out-of-river uses is expected to increase from 290 cubic metres per second in 2002 to 570 cubic metres per second in the next thirty years, and it is uncertain whether New Zealand's water resources will be able to cope with these demands.⁵⁴

Demands on water in New Zealand vary greatly, and there tends to be a great deal of competition for the resource.⁵⁵ It is estimated that seventy-seven percent of water allocated is allocated for the purpose of irrigation, which is the largest user of abstracted

⁵² Some recent examples of the increase in population and competition amongst users that have put a strain on water include the Auckland water crisis of 1994, the drought affecting farms and vineyards in Marlborough in 2001, the effect of low lake inflows on electricity generation in 2001 and 2003, water shortages on the Kapiti Coast in the summer of 2003 and the current competition between irrigation and hydro-electricity generation uses in the Waitaki River. K Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (New Zealand Institute for the Study of Competition and Regulation, 10 October 2003) at 2.

⁵³ MAF and MfE, *Freshwater for the Future: Information Sheet* (MfE, Wellington, April 2006) at 2.

⁵⁴ B Jenkins, *Water: lifeblood of the Canty region*, The Press, 31/03/2006

⁵⁵ Uses of water range from conservative values to extractive uses (such as example irrigation, livestock and household consumption), to industry use and hydroelectric generation. K Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (New Zealand Institute for the Study of Competition and Regulation, 10 October 2003) at 4.

water next to hydroelectric generation.⁵⁶ There has been huge growth and intensification of land uses involving irrigation in New Zealand, in particular viticulture in Marlborough and dairying in Canterbury. The area of irrigated land is estimated to be increasing at a rate of around fifty-five percent per decade.⁵⁷ A case can be made that the current allocation system has failed to keep up with this growth as there is not enough water to meet demand.⁵⁸ The Waitaki catchment provides an example of an area with increasing demand for water for a range of uses. Interests in that catchment range from hydroelectricity and irrigation to recreational, cultural and environmental uses.⁵⁹ Another example can be seen in the Oroua River where a high demand for water abstractions from users such as industry, irrigators and town and rural water supplies led to unnaturally low flows during dry periods.⁶⁰

Given the huge range of interests in water, it is difficult under the current management framework to clearly identify which uses should achieve priority and manage competing demands on the resource, in particular when this is combined with other concerns such as the increasing effects of climate change.⁶¹

1.4 CLIMATE CHANGE

Another reason behind the increase in the profile of tradeable water rights lies with the effects of climate change. As these become more apparent and environmental awareness in general increases, more attention is focused on possible increases in water scarcity and other issues linked to climate change. The effects of climate change are beginning to be seen on the drier east coast of New Zealand, and as a result the amount of available water

⁵⁶ MAF and MfE, *Water Programme of Action: Water Allocation and Use* (2004) at 4.

⁵⁷ Lincoln Environmental, *Information on Water Allocation in New Zealand* (April 2000) see Executive Summary.

⁵⁸ MAF and MfE, *Water Programme of Action: Water Allocation and Use* (June 2004) at 6.

⁵⁹ MAF and MfE, *Sustainable Water Programme of Action: Questions and Answers*, (Internet) <www.maf.govt.nz/mafnet/rural-nz/sustainable-resource-use/water-programme-of-action> Accessed 28/04/2006

⁶⁰ See Chapter 3, paragraph 3.1. MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues*, (MAF Policy Technical Paper 97/12, MfE and MAF, December 1997) at 9.

⁶¹ MAF and MfE, *Freshwater for the Future: A Supporting Document* (MfE, April 2006) at 2.

in those areas is declining.⁶² Climate change will serve to exacerbate problems in water resources that are already stressed and vulnerable due to intense competition from users for water supply.⁶³ It is projected that water is likely to become a key issue for Australia and New Zealand “due to projected drying trends over much of the region and change to a more El Nino-like state average.”⁶⁴

Most climate change scenarios for New Zealand predict rising temperatures, an increase in westerly winds and a decrease in precipitation as well as a rise in the frequency of the El Nino phenomenon.⁶⁵ There is likely to be a large decrease in the number of days with frosts and an increase in days above twenty-five degrees. The westerly wind is also forecast to rise by around ten percent of its current value in the next fifty years with corresponding precipitation increases in the west and decreases in the east.⁶⁶ The inter-annual variability in El Nino conditions leads to major floods and droughts, which has been linked with river flows during some seasons in New Zealand.⁶⁷ Scenarios for the year 2030 have indicated there may be changes of up to ten percent in precipitation magnitude and an overall decrease in rainfall.⁶⁸ An increase in evaporation and decrease in rainfall is expected to adversely affect water supply, agriculture and the survival and reproduction of key species in parts of Australia and New Zealand.⁶⁹ This decrease in rainfall carries significant implications for New Zealand’s water resources as the country, in particular the east, becomes drier.

⁶² MAF and MfE, *Freshwater for the Future: Information Sheet* (MfE, April 2006) at 2.

⁶³ B Pittock and D Wratt, “Australia and New Zealand” in IPCC, *Climate Change 2001: Impacts, Adaptation and Vulnerability* (IPCC, 2001) at 593-639 (Internet) <www.grida.no/climate/ipcc_tar/> Accessed 06/10/2006 at 593.

⁶⁴ IPCC, “Summary for Policymakers” in IPCC, *Climate Change 2001: Impacts, Adaptation and Vulnerability* (IPCC, 2001) pp. 3-17 (Internet) <www.grida.no/climate/ipcc_tar/> Accessed 06/10/2006 at 15.

⁶⁵ The El Nino-Southern Oscillation (ESNO) phenomenon is predicted to be felt across the Australia and New Zealand region and to lead to an increase in floods and prolonged droughts. Pittock and Wratt, “Australia and New Zealand” (2001) at 593.

⁶⁶ NIWA, *NIWA Science: National Climate Change* (Internet) <www.niwascience.co.nz/> Accessed 01/08/2006

⁶⁷ Pittock and Wratt, “Australia and New Zealand” (2001) at 597, 601.

⁶⁸ NIWA, *NIWA Science: National Climate Change*, Accessed 01/08/2006.

⁶⁹ Pittock and Wratt, “Australia and New Zealand” (2001) at 593.

Research has indicated it is likely that drought risk will increase in frequency during the coming century for all areas that are currently drought-prone.⁷⁰ The decrease in rainfall that is predicted for eastern New Zealand and corresponding increase in temperature are likely to lead to more droughts for these areas.⁷¹ It is predicted that by the 2080s, severe droughts (the current one-in-twenty year drought) will occur between two and four times as often in parts of Otago, eastern Canterbury and Marlborough, and parts of the Wairarapa, Bay of Plenty, Coromandel, Gisborne and Northland.⁷² The frequency of droughts is likely to rise due to rising temperatures and more frequent El Ninos, which will increase the stress on agriculture.⁷³ Droughts associated with El Nino have already placed stress on water supplies in New Zealand, and it is recognised that climate change could lead to further problems, especially if El Ninos occur more often.⁷⁴ The New Zealand agricultural sector and economy are particularly sensitive to the effects of droughts therefore any increase in their frequency or intensity will have a significant effect.⁷⁵ As a result there will be significant pressure to combat the effects of such events and investigate water allocation mechanisms to increase water efficiency to deal with the effects of climate change.⁷⁶

1.5 THE SUSTAINABLE WATER PROGRAMME OF ACTION

The above factors have contributed to an overall increase in pressure to address water management issues. One example of how this increase has manifested itself is the *Sustainable Water Programme of Action* (the *Action Plan*). This is a government action plan with the aim of ensuring freshwater resources are managed and used in ways that support long-term sustainable development in New Zealand. It was established in 2003

⁷⁰ NIWA, *NIWA Science: National Climate Change*, Accessed 01/08/2006.

⁷¹ Pittock and Wratt, "Australia and New Zealand" (2001) at 612.

⁷² K Atkinson, *Government set to announce trading in water rights* (NZPA, 8 April 2006) (Internet) <www.stuff.co.nz/stuff/print/0,1478,3631159a6160,00.html> Accessed 10/04/2006

⁷³ Pittock and Wratt, "Australia and New Zealand" (2001) at 593.

⁷⁴ Ibid at 602.

⁷⁵ An example of this sensitivity can be seen in the 1997-1998 El Nino drought, which resulted in an estimated loss of \$168 million in GDP for that year. Ibid at 613.

⁷⁶ An example of where industry pressure to combat the effects of climate change is likely to rise can be seen in Canterbury. In Canterbury, generally drier conditions and a decrease in the amount of available groundwater will have substantial impacts on cereal production, therefore those producing these crops will look to offset the effects of climate change. Ibid at 610.

by former Environment Minister Marian Hobbs and is now jointly led by the Minister for the Environment (David Benson-Pope) and the Minister of Agriculture and Forestry (Jim Anderton), who in April 2006 put the *Action Plan* to Select Committee, after which it was subsequently approved by Cabinet.⁷⁷ The *Action Plan* has a number of implications for tradeable water rights and water allocation in general, and demonstrates the attention that water resource issues have begun to attract.⁷⁸

1.5.1 Implications for tradeable water rights

Three national goals were agreed upon by Cabinet in April 2006 for freshwater, of which the third – “to provide for increasing demands on water and encourage efficient water management” is of key relevance here.⁷⁹ The emphasis in achieving this goal is on developing a regionally consistent and effective approach to managing demand, avoiding over-allocation and addressing over-allocation in areas where it already exists.⁸⁰ A number of specific actions have been recommended in order to achieve this outcome, some of which have implications for tradeable water rights.

Current practice with regard to transferring water permits is to be investigated and enhanced methods for this practice developed, although the *Action Plan* stresses it is not looking to privatise water, which will continue to be managed as a public resource.⁸¹ The *Action Plan* states that transfers aim to make the best use of what water is available beyond that needed for in-stream uses. It is acknowledged that transferring water will not be appropriate in all circumstances, but in areas of full allocation trading may be a useful mechanism.⁸² Transfers are intended to complement rather than substitute the existing

⁷⁷ Hon D Benson-Pope, *Charting dynamic new course to manage our water* (10 April 2006), (Internet) <www.beehive.govt.nz> Accessed 10/04/2006

⁷⁸ MAF and MfE, *Freshwater for the Future: Information Sheet* (April 2006) at 5.

⁷⁹ The other two national goals are:

- 1) To improve the quality and efficient use of freshwater by building and enhancing partnerships with local government, industry, Maori, science agencies and providers and rural and urban communities; and
- 2) To improve the management of undesirable effects of land-use on water quality.

MAF and MfE, *Freshwater for the Future: A Supporting Document* (April 2006) at 1.

⁸⁰ Ibid at 11.

⁸¹ David Benson-Pope stated at a presentation given in May 2006 that “water should continue to be managed as a public resource. We want to ensure that every New Zealander has fair access to water.” Hon D Benson-Pope, *Charting dynamic new course to manage our water* (10 April 2006)

⁸² MAF and MfE, *Freshwater for the Future: A Supporting Document* (April 2006) at 14.

‘first come, first served’ allocation approach,⁸³ although potential alternatives to this approach are to be investigated. Government intends to examine whether existing mechanisms for dealing with over-allocation need to be extended, and how consent replacement is addressed in over-allocated areas.⁸⁴

Other options of making more water available are also to be investigated such as the possibility of a ‘cap and trade’ system with regard to discharges into water. Such systems would only allow consent transfers within the total level of discharge allowed for the catchment (the ‘cap’). This option could also be applied to transferring water use permits within set allocation limits for specific water bodies.⁸⁵

1.5.2 The next step

A Leadership Group was named at the end of June 2006 to provide guidance and expertise to the Government in implementing the *Action Plan*.⁸⁶ It aims to produce a Progress Report by October 2006. Further reports are to be made to Cabinet in February 2007, with options to support and enhance local decision-making, and in March 2007, on the need for and proposed content of national instruments for addressing specific water issues, and on strategies for engaging with science agencies and providers. From then, a package of actions will be investigated, developed and implemented over the next two years.⁸⁷

Changes to the existing legislation in New Zealand may become necessary but at this stage Government still considers the RMA as the best legislative framework for the management of freshwater and is looking to investigate options with local government and stakeholders further before making any decisions.⁸⁸ However areas of the RMA are

⁸³ Idem. See Chapter 2, paragraph 2.3 for a discussion of the ‘first come, first served’ approach.

⁸⁴ Ibid at 16-17.

⁸⁵ Idem.

⁸⁶ The group comprises twelve members, all of whom are leaders in their respective fields relative to water, and represent a cross-section of different New Zealand sectors and regions. Hon D Benson-Pope, *Sustainable water panel named* (30 June 2006) (Internet) <www.beehive.govt.nz> Accessed 03/07/2006.

⁸⁷ MAF and MfE, *Sustainable Water Programme of Action: Questions and Answers*, (Internet) <www.maf.govt.nz/mafnet/rural-nz/sustainable-resource-use/water-programme-of-action> Accessed 28/04/2006

⁸⁸ MAF and MfE, *Freshwater for the Future: Information Sheet* (April 2006) at 6.

under review. These include current practices for transferring water consents and the provision for water user groups. Legislative change may be necessary sometime in the future, however no decisions have yet been made on this matter.⁸⁹

These proposals demonstrate a clear intention on the part of Government to fully investigate alternative methods of managing New Zealand's water allocation, and it is clear that tradeable water rights may play a significant part in the future management of water. The fact that steps are being taken to investigate the use of tradeable water rights is a positive move, demonstrating that thought is being given by Government to addressing issues relating to water allocation in some areas of New Zealand.⁹⁰

1.6 CONCLUDING REMARKS

The use of tradeable water rights as a mechanism in water management has attracted attention again in recent years for a number of reasons, in particular full and over-allocation from an intensification in demand from the many competing users of water. From the assessment in the previous paragraphs it can be seen that the present status of water management and allocation in New Zealand is unsustainable. Many New Zealanders view water as a plentiful resource which in many ways is a misconception. Limitations on the ability of users to take and use water are already occurring in a number of areas and this is likely to spread to other regions in the future, therefore change is necessary in order to deal with these difficulties. As Jim Anderton, Minister of Agriculture and Forestry stated: "up until now, most New Zealanders have taken water for granted. It is true that we have an abundance of freshwater in some parts of New Zealand, but we are finally reaching the point where pressure to satisfy our different values and needs... is pushing the resource to its limits in many places."⁹¹

⁸⁹ MAF and MfE, *Sustainable Water Programme of Action: Questions and Answers*

⁹⁰ See Paragraph 1.1 for further discussion on water allocation in New Zealand.

⁹¹ Pers. comm. at seminar: J Anderton (Minister of Agriculture and Forestry) and D Benson-Pope (Minister for the Environment) *Sustainable Water Programme of Action: Freshwater for the Future – Government Decisions* (Dunedin, 5 May 2006).

Awareness of issues relating to water management has increased as the effects of climate change are beginning to be seen. Water management and allocation have attracted prominence in the public sphere, as demonstrated by the recently released *Action Plan*. As different regions reach full allocation, the expectation that existing allocations actually be used and be used efficiently will increase,⁹² and pressure from new users wanting a share in the resource will rise. Changes need to be made in order to deal with these problems. Enhancing the use of a tradeable water rights regime may be an appropriate mechanism through which to reduce some of New Zealand's current water management difficulties.

In order to assess the possibilities for the use of tradeable water rights as a means of dealing with water allocation and management difficulties in New Zealand an examination of the system under the RMA and the provision currently made for transferring water permits is necessary. There has been some use of tradeable water rights in New Zealand, but at this point this has been limited. In order to determine what changes are necessary the current regime must first be investigated.

⁹² A Fenemor and J Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (Ecologic Research Report No. 6, Ecologic Foundation, December 2005) at 3.

2. THE RESOURCE MANAGEMENT ACT 1991

The use and management of water in New Zealand is regulated by the RMA. All rights to natural water were vested in the Crown by section 21 of the Water and Soil Conservation Act 1967 (the WSCA),⁹³ the effect of which has been preserved by the RMA, section 354(1). Restrictions on the use of freshwater are set out in section 14 of the RMA,⁹⁴ which prohibits the taking or use of water unless expressly allowed by a rule in a regional plan (or a relevant proposed regional plan) or by resource consent.⁹⁵

2.1 REGIONAL POLICY STATEMENTS AND REGIONAL PLANS

Regional councils carry the responsibility for the management and allocation of water resources as set out in section 30 of the RMA.⁹⁶ They enforce sections 14 and 15, administer the resource consent process, and provide appropriate rules and policies for water management.⁹⁷ Regional councils prepare regional policy statements and plans in order to achieve these objectives. Of particular relevance is the role of councils in controlling the quantity, level and flow of water in any water body under section 30(1)(e) of the RMA.⁹⁸

Regional policy statements under the RMA provide a strategic and holistic overview of resource management in each region and policies and methods for integrated management. Regional plans go on to provide more specific objectives and policies and

⁹³ WSCA, s 21(1): “the sole right to dam any river or stream, or to divert or take natural water, or discharge natural water or waste into any natural water, or to use natural water, is hereby vested in the Crown subject to the provisions of this Act.”

⁹⁴ Further restrictions are set out in relation to discharges of contaminants into water in the RMA, s 15.

However for the purposes of this paper the focus will be on restrictions in relation to the taking or use of water for abstractive purposes, such as irrigation and hydro-electricity generation.

⁹⁵ RMA, s 14. Some limited uses of freshwater are allowed as of right provided there are no adverse effects on the environment. Water may also be automatically taken or used for firefighting purposes.

⁹⁶ In particular the RMA, ss 30(1)(c) and (e).

⁹⁷ S Berry and I Cowper, “Water Law” in D A R Williams (eds) *Environmental and Resource Management Law* (2nd ed, Butterworths, 1997) pp. 241-323 at 284.

⁹⁸ Regional councils under this section are able to set maximum or minimum levels or flows of water, control the range or rate of change of levels or flows of water, and control the taking or use of geothermal energy. RMA, s 30(1)(e).

methods for their implementation.⁹⁹ The preparation of regional plans involves defining catchment and groundwater management objectives, prescribing minimum flows and maximum extraction thresholds to achieve those objectives, and then determining how this water is to be allocated amongst users.¹⁰⁰

Regional plans are binding on district councils and user groups and have been established as the central concept in administering New Zealand's water resources.¹⁰¹ Freshwater is managed through these plans and policy statements in conjunction with the resource consent process.¹⁰²

2.2 RESOURCE CONSENTS

Water is allocated between users under the resource consent process, unless an express rule permits the activity in the relevant regional plan.¹⁰³ If there is no such rule, those wishing to take or use water must apply to their relevant regional council for resource consent (or, in this context, a water permit).¹⁰⁴

Part VI of the RMA sets out the relevant provisions to the resource consent process.¹⁰⁵ In order to make an application for consent, an application must be made to the relevant local authority.¹⁰⁶ The application must be in the prescribed form and manner and include an assessment of environmental effects of the activity.¹⁰⁷ Once the consent authority has

⁹⁹ Memon, "Freshwater Management Policies in New Zealand" (2000) at 236.

¹⁰⁰ Ibid at 245.

¹⁰¹ Ibid at 236, 245.

¹⁰² MAF and MfE, *Sustainable Water Programme of Action: Questions and Answers*

¹⁰³ R Peart, "Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches", (2001) 5 NZJEL 127 at 133

¹⁰⁴ A water permit is a resource consent to do something that would otherwise contravene section 14: RMA, s 87(d).

¹⁰⁵ L Bartrum, *Management and Allocation of Fresh Water in New Zealand* (University of Otago, Dunedin, October 2004), a dissertation submitted in partial fulfillment of the requirements of the degree of Bachelor of Laws (Honours) at 15.

¹⁰⁶ RMA, s 88(1).

¹⁰⁷ RMA, s 88(2). Schedule 4 of the RMA sets out matters that should be included and considered in an assessment of effects on the environment for the purposes of section 88.

received the application it will determine if the application requires notification under section 93.¹⁰⁸

An application will be assessed against the council's regional plan and regional policy statement which will determine whether resource consent is needed for the particular activity.¹⁰⁹ When coming to a decision on a resource consent application the consent authority must, subject to the provisions in Part II of the RMA, have regard to the list of matters in section 104.¹¹⁰ These mandatory considerations include the actual and potential environmental effects of the activity, any relevant plans and policy statements and any other matters the consent authority considers relevant and reasonably necessary to determine the application.¹¹¹ The adverse effects of an activity on the environment may be disregarded if the plan permits an activity with that effect.¹¹² Where a resource consent is granted, the consent authority may attach conditions it considers appropriate.¹¹³ The right of appeal for a consent decision by the applicant, consent holder, or any person who made a submission is set out under sections 120 and 121.

2.3 NATURE OF WATER PERMITS

The duration of water permits varies according to what is decided on in the consent.¹¹⁴ If consent is not given effect to within five years of its granting it will lapse,¹¹⁵ and the regional council may cancel a consent if it is not exercised for a continuous period of five

¹⁰⁸ The consent authority must notify an application unless the application is for a controlled activity or if the authority is satisfied that the adverse effects of the activity will be minor: RMA, s 93. Notification allows any person to make submissions regarding the resource consent application: RMA, s 96. If notification is required the application must be served within ten days: RMA, s 95.

¹⁰⁹ There are six categories of activities requiring resource consent classified under the RMA, ss 77A-77D. Rules in regional plans will identify which category an activity falls within and whether consent will be necessary. Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 15-16.

¹¹⁰ "Subject to Part II" refers to the RMA's purpose and principles as set out in that part.

¹¹¹ RMA, s 104(1). Things that a consent authority must not do in making a decision on an application are set out in the RMA, s 104(3).

¹¹² RMA, s 104(2).

¹¹³ RMA, s 108(1). Conditions a resource consent may include are set out in RMA, s 108(2).

¹¹⁴ Resource consents may not be granted for more than 35 years. Where their duration is not specified in the consent the default period is five years after the date of commencement. RMA, s 123(b)

¹¹⁵ Unless otherwise provided for in the consent or an extension is granted. RMA, s 125.

or more years.¹¹⁶ The circumstances under which the conditions of consents may be reviewed are set out in section 128.¹¹⁷ The RMA does not provide a right of renewal for consents therefore upon expiry of a water permit a new resource consent must be applied for,¹¹⁸ although section 124 provides some protection for the holder of a consent that is due to expire who applies for a new resource consent. Renewals are generally treated as new applications unless there is a condition in the plan or resource consent stating otherwise.¹¹⁹ Although there is no guarantee for the renewal of a water permit, to date it has been customary for this to occur.¹²⁰

Common law rights to water were effectively extinguished by the WSCA, which has continued under the RMA¹²¹ therefore water in New Zealand is a public resource and access to it is controlled by the State.¹²² A water permit does not constitute ownership of the resource, makes no guarantee of the water's availability and does not prevent the grant of upstream consents that may derogate from other permitted consents.¹²³ Section 122 of the RMA provides that resource consents are "neither real nor personal property." There has been considerable contention as to exactly what rights permits do convey, which is particularly important when there are competing demands on a resource.

The High Court in *Aoraki Water Trust*¹²⁴ clarified some aspects of the nature of consents. Aoraki had argued a water permit is a bare licence and does not pass an interest or

¹¹⁶ RMA, s 126. However an alternative period may be specified in the consent.

¹¹⁷ See RMA, ss 128-133 for the relevant provisions relating to the review of consent conditions.

¹¹⁸ Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 32.

¹¹⁹ Harris Consulting, The Agribusiness Group, *Property Rights in Water: A Review of Stakeholders' Understanding and Behaviour* (Harris Consulting, November 2003) report prepared for Ministry of Agriculture and Forestry Policy and Ministry for the Environment at 11.

¹²⁰ However consent conditions may be modified or added in order to address environmental effects or efficiency requirements. MAF and MFE, *Water Programme of Action: Water Allocation and Use* (June 2004) at 8.

¹²¹ See Chapter 2, paragraph 2

¹²² Peart, "Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches" (2001) at 132.

¹²³ Harris Consulting, *Property Rights in Water: A Review of Stakeholders' Understanding and Behaviour* (November 2003) at 10-11.

¹²⁴ *Aoraki Water Trust v Meridian Energy Ltd* [2005] NZRMA 251. See Chapter 1 paragraph 1.1 for more detail on the facts of this case.

transfer property in anything, merely authorising the holder to act in a way which would otherwise be unlawful.¹²⁵ The Court rejected this argument for four reasons:

- 1) The RMA prescribes a comprehensive statutory management regime for water allocation and use and effectively imposes a licensing system whereby a previously publicly owned resource is converted to the exclusive but controlled domain of licence-holders.¹²⁶
- 2) The argument was contrary to authority.¹²⁷ The Court of Appeal in *Fleetwing Farms Ltd*¹²⁸ required that applications be dealt with on a ‘first come, first served’ basis. The High Court in *Aoraki Water Trust* applied this principle and held that “the grant of one [consent] necessarily excludes the other. Consequently, the first enjoys an exclusive right to the resource.”¹²⁹
- 3) There are a number of specific provisions in Part VI of the RMA which elevate a water permit’s status above a bare licence to a licence plus a right to use the subject resource. The Court likened a consent to a ‘profit a tron’, which confers on the grantee the right to enter another’s land and to sever and remove from that land some part of it.¹³⁰ If a permit were granted to Aoraki, the value of Meridian’s permit would be decreased which would conflict with the non-derogation from grant principle.¹³¹
- 4) “An original permit holder enjoys a legitimate expectation that a public authority will not deliberately erode a grant during its term by granting a permit to another party.”¹³²

In conclusion, the Court held that where a resource is fully allocated to a permit holder the consent authority cannot lawfully grant further permits unless specifically empowered by the RMA.¹³³ The effect of this decision becomes evident with regard to the allocation of water rights.

¹²⁵ *Aoraki Water Trust v Meridian Energy Ltd* [2005] NZLR 268 at 276

¹²⁶ *Ibid* at 276-277.

¹²⁷ *Ibid* at 277-278.

¹²⁸ *Fleetwing Farms Ltd v Marlborough District Council* [1997] 3 NZLR 257 (CA)

¹²⁹ *Ibid* at 278.

¹³⁰ *Ibid* at 279.

¹³¹ *Idem*.

¹³² *Ibid* at 283.

¹³³ *Idem*. The special powers enabling the consent authority to interfere with existing resource consents are narrow and particular.

2.4 WATER ALLOCATION

The RMA does not specifically provide how water is to be allocated when there are a number of competing applications for consent so this is left up to regional councils to address through regional plans in accordance with the broader principles of the RMA.¹³⁴

In practice, councils allocate water on a ‘first come, first served’ basis.¹³⁵ This means that the first applicant to apply for a water permit will be the successful candidate, subject to the criterion contained in the RMA and any relevant plans.¹³⁶ This allocation principle, first identified by the Court of Appeal in *Fleetwing Farms Ltd v Marlborough District Council*¹³⁷ has been widely applied to assets in the public domain, but can become an issue when a water resource is over or fully allocated, as was the case in the Waitaki Catchment.¹³⁸ The key issue in *Aoraki Water Trust* was whether any of the provisions of the RMA empowered permits to be granted to new users when the resource was already fully allocated to an existing holder.¹³⁹ The Court concluded there was nothing in the RMA authorising the consent authority to grant a water permit to Aoraki if this would reduce the water available to Meridian under its existing permit.¹⁴⁰ Once a permit holder has the right to take a certain amount of water no further consents can be granted to take or use that same water because that would derogate from the grant of the first consent.¹⁴¹

The lack of specific guidance in the RMA as to how to allocate water among multiple users means that if there is no relevant plan detailing how water is to be allocated in a certain region it will be allocated on a ‘first come, first served’ basis.¹⁴² Considerable difficulties are created by councils only being able to decide between competing permit

¹³⁴ Peart, “Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches” (2001) at 133.

¹³⁵ Memon, “Freshwater Management Policies in New Zealand” (2000) at 244-245.

¹³⁶ Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 38.

¹³⁷ *Fleetwing Farms Ltd v Marlborough District Council* [1997] 3 NZLR 257 (CA)

¹³⁸ I Williams, “The Waitaki River” [June 2005] at 179.

¹³⁹ *Aoraki Water Trust v Meridian Energy Ltd* [2005] NZLR 268 at 283.

¹⁴⁰ *Ibid* at 284.

¹⁴¹ Berry and Matheson, “Water” (2005) at 488.

¹⁴² For a full discussion see Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 22

applications on the basis of which has priority in time.¹⁴³ This approach does not give rise to any consideration of efficiency of the competing applications or of the cumulative effects of consents on a water resource in the long-term.¹⁴⁴ Preference is generally given to current rather than potential users, and any consideration of which allocation would be most economic is avoided.¹⁴⁵ Generally, upon application by a water user a council will have to grant the permit if the applicant is able to show their use of the water would not harm the environment and there are no remaining objections. As a result other uses with a higher value to society may not be granted.¹⁴⁶ Difficulties will arise in circumstances where a block of water comes available and a ‘gold rush’ occurs, and where competing applications are received at almost exactly the same time. Little to no guidance is given as to how to deal with this.¹⁴⁷ However, there is a possibility that the efficiency of competing applications can be compared and assessed in light of section 7(b) in Part II of the RMA, which directs that particular regard is to be had to the efficient use and development of natural and physical resources.¹⁴⁸

Equity issues are of particular concern in water allocation. It is difficult to provide for future users of water under the current consent process, which tends to place more emphasis on existing users’ interests.¹⁴⁹ In addition to this, where the resource is fully or over-allocated, new users have little potential to gain access to that resource unless an existing permit is re-allocated, shared or transferred, regardless of the potential ‘value’ of their permit. There is substantial potential under the current regime for the unfair distribution of water rights through the lack of provision for new and competing users.

¹⁴³ Ibid at 38.

¹⁴⁴ Ibid at 38-39.

¹⁴⁵ Lincoln Environmental: C Robb, S Harris, T Snelder, *Water Allocation: A Strategic Overview* (Report No. 4455/1, Lincoln Environmental, May 2001) prepared for Ministry for the Environment at 9.

¹⁴⁶ Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 18.

¹⁴⁷ Lincoln Environmental, *Water Allocation: A Strategic Overview* (May 2001) at 9.

¹⁴⁸ It is noted that this is not a baseline requirement or a set standard, as this matter is only to be “had particular regard to” in exercising powers and functions under the RMA. See Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 38-39.

¹⁴⁹ Where user groups have an input into planning processes this generally relates to the protection of existing users’ interests. It is difficult to assess potential future demand amongst organisations that are collections of individual users. Lincoln Environmental, *Water Allocation: A Strategic Overview* (May 2001) at 9.

Debate has recently arisen at a national and regional level as to how to fairly allocate New Zealand's freshwater resources between competing users, especially given the increase in demand on the resource. One particular mechanism currently being investigated is the possibility of enhancing transfers between users.

2.5 TRADEABLE WATER RIGHTS

The RMA currently provides for the transfer of water permits in certain situations, and as a result transferable water rights systems have been investigated and implemented in some parts of New Zealand.¹⁵⁰ The rules relating to the transferability of water permits are provided for in section 136 of the RMA. The whole or any part of the interest in the permit may be transferred to any owner or occupier of the site, to another person on another site or to another site if both sites are within the same catchment.¹⁵¹

If the permit is to be transferred to another owner or occupier of the same site, transfer can be achieved by giving written notice to the consent authority.¹⁵² However, if the permit is to be transferred to another site or another person on such a site, the approval of the relevant consent authority will be required.¹⁵³ Otherwise the transfer needs to be expressly allowed by a rule in a regional plan, which would also require that written notice be given to the consent authority.¹⁵⁴ The new section 136(2A) specifically allows for water permits to be transferred for a limited time, in effect providing for the temporary transfer of water rights.¹⁵⁵

If a transfer application is made under section 136(2)(b)(ii), it must be made jointly by the transferor and transferee, and will be determined in accordance with the same provisions of the RMA which deal with whether to approve resource consent

¹⁵⁰ Of particular note are the Tasman District and the Oroua Catchment in the Manawatu-Wanganui region, which are discussed in further detail in Chapter 3.

¹⁵¹ RMA, s 136(2).

¹⁵² RMA, s 136(3)

¹⁵³ RMA, s 136(2)(b)(ii)

¹⁵⁴ RMA, s 136(2)(b)(i)

¹⁵⁵ Inserted by the Resource Management Amendment Act 2005, s 74.

applications.¹⁵⁶ Of particular note are the mandatory considerations under section 104.¹⁵⁷ The consent authority is also to have regard to “the effects of the proposed transfer, including the effect of ceasing or changing the exercise of the permit under its current conditions and the effects of allowing the transfer.”¹⁵⁸ When the transfer goes ahead in accordance with section 136 the original permit or part thereof that is to be transferred will be deemed cancelled and the interest transferred will be deemed a new permit, subject to the same conditions as the original permit or on such conditions as the consent authority determines.¹⁵⁹

When the *Tasman Regional Policy Statement* (the *TRPS*) was at the proposal stage¹⁶⁰, it was challenged in *Eco-Net v Tasman DC*.¹⁶¹ The appellant was concerned that the use of transferable water permits as an economic instrument would lead to the privatisation of water which would have major adverse effects on the intrinsic values of eco-systems in the region.¹⁶² The council had stated the proposed investigation into a transferable permit system was a valid option for achieving efficient use of water and that the sale of water was not proposed or legally possible.¹⁶³ The Environment Court agreed, holding that the emphasis throughout the relevant section of the *TRPS* was on sustainable limits for abstraction and the maintenance of in-stream and life support values.¹⁶⁴ The Court stated that section 136 of the RMA envisages that for transfers to take place without a consent they must be expressly allowed by a rule in a regional plan, and that such a rule would have to accord with the sustainability principle in section 5 of the RMA and be consistent

¹⁵⁶ The relevant sections an application will be considered in accordance with are sections 88 to 115, 120 and 121: see RMA, s 136(4)(b). Berry and Matheson, “Water”(2005) at 485

¹⁵⁷ For further discussion on section 104 see paragraph 2.2.

¹⁵⁸ RMA, s 136(4)(b).

¹⁵⁹ RMA, s 136(5).

¹⁶⁰ This proposed regional policy statement had identified transferable water permits as a means of dealing with freshwater management in the region and was looking to investigate different areas in the Tasman District that might suit a transferable water permit regime. See Chapter 3 paragraph 3.2.1 for further details on the *TRPS*.

¹⁶¹ *Eco-Net v Tasman DC* W117/97

¹⁶² *Ibid* at 1.

¹⁶³ *Ibid* at 2.

¹⁶⁴ *Ibid* at 7.

with the regional policy statement. As a result it is only once the bottom line for sustainability is met that a transferable permit regime could be implemented.¹⁶⁵

The use of transferable water permits has potential as a mechanism to overcome some difficulties in water management and allocation,¹⁶⁶ but as of yet trading has been very limited. Kevin Counsell makes the observation that if a transfer system were to ensure the movement of water to higher value users these difficulties would be overcome. He considers that in New Zealand transfers tend to be to lower-value users and that there are a number of barriers to trading in the first place which mean in practice trading is quite limited. Counsell identifies transaction costs, inadequate markets, uncertainty over the nature of the resource in the future, and general misconceptions that water is tied to the land it is used on as examples of such barriers.¹⁶⁷ Water permits are also of a relatively short duration¹⁶⁸, which, when combined with uncertainty over whether the permit would be renewed also serves as a barrier to transfers.¹⁶⁹

Despite the provision made for transferable water permits in the RMA, in practice there is no active trading market and there are little transfers actually occurring.¹⁷⁰

2.6 CONCLUDING REMARKS

There are a number of difficulties with the current allocation system under the RMA, in particular with how to deal with competing consent applications and with fully allocated resources. Provision has been made for the transfer of water permits in limited circumstances, but as of yet these have not been exercised widely in New Zealand. The next chapter will go on to examine the extent to which some regions have implemented

¹⁶⁵ Ibid at 8.

¹⁶⁶ See Chapter 1 for further information on issues that have arisen with water allocation and management.

¹⁶⁷ Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 18-19.

¹⁶⁸ Under the RMA, the duration of resource consents for water is limited to a maximum of 35 years. In practice most councils review or renew water rights at 5 to 15 year intervals. Lincoln Environmental, *Information on Water Allocation in New Zealand* (April 2000) at 50.

¹⁶⁹ Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 20.

¹⁷⁰ Bartrum, *Management and Allocation of Fresh Water in New Zealand* (October 2004) at 33.

transferable water permit regimes. This will provide a means of assessing how the current regime might be reformed in order to further address water allocation and management problems, and may also provide a model for further enhancement of such regimes in other areas around the country.

3. THE CURRENT USE OF TRANSFERABLE WATER PERMITS IN NEW ZEALAND

Transferable water permits have already been used in some areas in New Zealand, but despite the provision for tradeable water rights in the RMA in practice regional councils have been reluctant to adopt market-based mechanisms for allocating water.¹⁷¹

3.1 THE OROUA CATCHMENT

The Manawatu-Wanganui Regional Council (the ‘Horizons Regional Council’) incorporated a transferable water permit system into the *Oroua Catchment Water Allocation and River Flows Regional Plan* (the *OCWA*).¹⁷² As of yet, this is New Zealand’s most comprehensive example of the use of tradeable water rights.

The Oroua River drains a 900 square kilometre catchment in the Manawatu-Wanganui region. Agriculture is the predominant land use in the area, and the main water uses range from stock and domestic use, town and rural water supplies, irrigation to industrial use.¹⁷³ Use of groundwater as an alternative resource is limited due to poor quality and inadequate supply, therefore surface water is the primary source for water users.¹⁷⁴ High demand for surface water abstractions leads to unnaturally low flows in the Oroua River during dry periods, in particular during summer.¹⁷⁵

3.1.1 The OCWA

¹⁷¹ Peart, “Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches” (2001) at 135. The *OCWA* was incorporated under the RMA, s 65 and became effective on 20 January 1995, building on an existing agreement between the Council and major permit holders in the catchment.

¹⁷² Amendments to abstraction restriction thresholds in the *OCWA* under the *Oroua Catchment Water Allocation and River Flows Regional Plan (Change 1)* became operative on the 9 June 1997. Horizons Regional Council, *Horizons Regional Council* (Internet) <www.horizons.govt.nz> Accessed 08/08/2006

¹⁷³ Manawatu-Wanganui Regional Council, *Oroua Catchment Water Allocation and River Flows Regional Plan (Change 1)* (Manawatu-Wanganui Regional Council, 9 June 1997) at 1.

¹⁷⁴ *Ibid* at 18.

¹⁷⁵ MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 9.

One of the key objectives in the *OCWA* was to achieve equitable and efficient use of surface water in the Oroua Catchment and address competing demands on surface water.¹⁷⁶ Due to high demand for water abstractions when the *OCWA* was developed, it was doubtful that a future applicant for a permit to use a large amount of water could be accommodated.¹⁷⁷ To achieve this objective a limited water trading market was created.

OCWA Policy 8 and *OCWA Rule 10* allow the transfer of all or part of water permits among permit holders who use water for irrigation.¹⁷⁸ The transferred permit is only to be used for irrigation and permits can only be transferred within (not between) catchments.¹⁷⁹ The process is voluntary on the part of the transferor and transferee, and can only take place during periods of water restriction (when the river has reached a ‘low-flow’ threshold). Written notice of the transfer must be sent to the Council (in accordance with section 136(3) of the RMA).¹⁸⁰ Additionally, a schedule for multiple transfers between the two parties within the following twelve month period may be set out in the notice of transfer.¹⁸¹ Permits may not be transferred in any other circumstances except in accordance with section 136(2)(b)(ii) of the RMA.¹⁸² Transfers in accordance with the rules in the Plan can proceed without any further involvement by the Council.¹⁸³

3.1.2 Rationale behind the use of transferable water permits

¹⁷⁶ Objective 3 in Manawatu-Wanganui Regional Council, *Oroua Catchment Water Allocation and River Flows Regional Plan (Change 1)* (9 June 1997) at 23.

¹⁷⁷ *Ibid* at 23.

¹⁷⁸ *OCWA Policy 8*: “To allow the whole or any part of the interest in water permits to be transferred during periods of low flow, provided:

- a) the end use of the water abstracted is irrigation; and
- b) the sites for the abstraction are both within the same catchment; and the Council is informed in advance of the transfer.”

OCWA Rule 10 goes on to identify the terms and conditions under which transfers can take place.

Ibid at 26.

¹⁷⁹ An example is given to explain this point: a permit to abstract water from a stream can only be transferred to another abstractor from the same stream. *Ibid* at 26

¹⁸⁰ No transfer will be effective until the Council receives notice of the transfer. The Memorandum of Agreement is set out in Annex 3. Manawatu-Wanganui Regional Council, *Oroua Catchment Water Allocation and River Flows Regional Plan (Change 1)* (9 June 1997) at 70.

¹⁸¹ *Ibid* at 44.

¹⁸² *Ibid* at 56.

¹⁸³ *Ibid* at 8.

The *OCWA* essentially creates a limited water market where the circumstances under which water rights can be traded are strictly limited. According to the Horizons Regional Council permits will be taken up by the most efficient users, as a high market price on water would decrease demand for highly consumptive, less efficient uses.¹⁸⁴ Allowing transfers between similar end users also allows permit holders to transfer their permits for short periods, which is useful when another irrigator has different seasonal needs for water abstraction rights. This creates flexibility during periods of water restrictions and is more equitable as permit holders do not need to retain portions of the total water budget when they are not using them.¹⁸⁵

The *OCWA* notes that in order for a system of transferable water permits to be effective there must be a fully allocated water resource, good information about the availability of the resource and environmental effects of its use and provision for enforcement of permit and transfer conditions.¹⁸⁶

3.1.3 Experience to date in the Oroua Catchment

The *OCWA* stated that there would be an appraisal of the low flow conditions five years after the plan's adoption and a full review ten years after it came into operation.¹⁸⁷ As of yet there has been no documentation reviewing the implementation of transfers in the Oroua Catchment area. Water allocation in the Oroua Catchment has reduced over time, and the volume of water being taken from the area has also decreased due to a number of local conditions. As a result, there have been few transfers in the Oroua Catchment.¹⁸⁸

3.1.4 The next step

The *OCWA* is currently due for review. Assessment of the water resource has begun, which should result in recommendations for the future management of water allocation in the catchment. The Horizons Regional Council has developed a framework to merge the

¹⁸⁴ *Idem*.

¹⁸⁵ *Ibid* at 9.

¹⁸⁶ *Ibid* at 8.

¹⁸⁷ As required by the RMA, s 79. *Ibid* at 58.

¹⁸⁸ Pers. comm. *by email*: J Roygard (Manager Science, Horizons Regional Council) 4 August 2006.

seven regional plans currently in operation in the Manawatu-Wanganui region into ‘*One Plan*’ and has undertaken a comprehensive review of the existing regional plans.¹⁸⁹

The Council prepared a *Draft Water Allocation Policy* in September 2004¹⁹⁰ which was intended to cover all parts of the Manawatu-Wanganui region not already covered by other regional plans.¹⁹¹ Transferable water permits had previously been identified as a potential mechanism to deal with the increase in competing demands on water, the adverse effects of decreased surface water flows and as a means of achieving greater efficiency of water use.¹⁹² Under the *Draft Water Allocation Policy* the transfer of whole or part of a water permit is allowed subject to conditions outlined in *Policy 18*,¹⁹³ which provides a formal mechanism for users to make up low flow shortfalls through the use of other users’ permits that do not need their full allocation at a particular time.¹⁹⁴ The transfer of surface water permits would be a controlled activity under the RMA¹⁹⁵ and the transfer of groundwater permits discretionary activities.¹⁹⁶

¹⁸⁹ The *One Plan* will be a combined Regional Policy Statement and Regional Plan and will comprise of eight key themes, one of which is ‘Water.’ Surface and groundwater allocation policies will be developed as part of this theme. Horizons Regional Council, *One Plan: Frequently Asked Questions* (Internet) <www.horizons.govt.nz> Accessed 28/07/2006.

¹⁹⁰ Horizons Regional Council, *Land and Water Regional Plan: Draft Water Allocation Plan Change* (Horizons Regional Council, September 2004) (Internet) <www.horizons.govt.nz> Accessed 19 May 2006 at 67

¹⁹¹ This policy was to be included in the *Land and Water Regional Plan* but is now to be incorporated into the ‘Water’ theme in the *One Plan*. Horizons Regional Council, *Water Allocation Newsletter*, Issue 7 (January 2005) (Internet) <www.horizons.govt.nz> Accessed 08/05/2006

¹⁹² This envisaged the use of transfers when taking surface water in the same catchment, with written notice to the Council a specified number of days beforehand, similar to that used in the *OCWA*. Horizons Regional Council, *Discussion Document: Allocating Water Amongst Users* (Horizons Regional Council, September 2003) (Internet) <www.horizons.govt.nz> Accessed 19 May 2006 at 7, 11

¹⁹³ Horizons Regional Council, *Land and Water Regional Plan: Draft Water Allocation Plan Change* (September 2004) at 80.

¹⁹⁴ *Ibid* at 86

¹⁹⁵ *Rule 8 Draft Water Allocation Policy*. *Ibid* at 86. The meaning of “controlled activity” is set out in the RMA, s 77B(2): a resource consent will be required for a controlled activity, and the consent authority has no power to decline that consent. The consent authority must specify in the plan matters over which it has restricted control, and the authority’s power to impose consent conditions is restricted to these matters. The activity must comply with terms and conditions as set out in the plan.

¹⁹⁶ *Rule 17 Draft Water Allocation Policy*. *Ibid* at 86. The meaning of “discretionary activity” is set out in the RMA, s 77B(4): resource consent will be required for a discretionary activity, and the consent authority has discretion to grant the resource consent with or without conditions or to decline it. The activity must comply with the standards, terms and conditions specified in the relevant plan.

If the *Draft Water Allocation Policy* becomes operative as a part of the *One Plan* it will provide for the transfer of water permits across the entire region.¹⁹⁷ This policy differs from the *OCWA* in that transfers will not be limited to between those who are using the permit for the purpose of irrigation or during periods of low flow, therefore a less restricted market may be created. The Council is looking to develop the *One Plan* policy framework sufficiently to release a draft for public comment in the last quarter of 2006.¹⁹⁸

It remains to be seen exactly what the Horizons Regional Council's policies will entail both in the Oroua Catchment following the review of the *OCWA*, and across the entire Manawatu-Wanganui region in the *One Plan*. Transfers have so far been limited in the Oroua Catchment, but the provision made for them there (albeit under restricted circumstances) gives a good example of their use as a mechanism for managing fully allocated water resources.

3.2 TASMAN DISTRICT

There have been extensive investigations into the use of a transferable water permit regime by the Tasman District Council (TDC) as a means of dealing with fully allocated water resources in the Tasman District. The TDC eventually decided against including transferable water permits in its regional plan, although it has approved enhanced transferability of permits in the Wai-iti catchment where water supplies are to be augmented via a storage scheme.¹⁹⁹

The main alternative to transferable water permits in the area is the existing 'use it or lose it' policy, which involves bona fide reviews of water permits and the reduction or

¹⁹⁷ Pers. comm. by email: J Roygard, 4 August 2006

¹⁹⁸ Horizons Regional Council, *One Plan Newsletter*, Issue 5 (May 2006) (Internet) <www.horizons.govt.nz> Accessed 08/08/2006

¹⁹⁹ J Sinner, J Palmer, A Fenemor, J Baines and H Crengle, *The adoption of market-based instruments for resource management: Three New Zealand case studies* (Ecologic Research Report No. 3, Ecologic Foundation, October 2005) at 7.

cancellation of permits that are not fully used during dry years.²⁰⁰ This approach was adopted particularly in the Waimea Plains prior to the new provisions under the *TRMP*.²⁰¹ There are a number of issues with this approach as it tends to undermine the relationship between Councils and permit holders, and many see it as unnecessarily interventionist.²⁰² The discretion for bona fide review is retained under the current system, but permit holders are encouraged to consider transfers rather than risking losing unused portions of their permits.²⁰³ Transfers are encouraged in order to promote efficiency of use, subject to any restrictions that there may be on the allocation limit of a zone.²⁰⁴

3.2.1 Tasman Regional Policy Statement (TRPS)²⁰⁵

The *TRPS* identified transferable water permits as a means of dealing with freshwater management in the region. The *TRPS* anticipated the scope of a transfer market would be specified in the regional plan, and transfers would be allowed within a particular water resource and established allocation limits.²⁰⁶ Under the *TRPS* the TDC was to investigate a transferable water permit system and take steps towards its implementation.²⁰⁷

3.2.2 Tasman Resource Management Plan (TRMP)²⁰⁸

The *TRMP* is a combined district and regional plan, publicly notified on 25 May 1996. It has proposed plan status under the RMA, and will become operative when all submissions and references relating to it are decided upon.²⁰⁹

²⁰⁰ Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 10.

²⁰¹ Pers. comm. by email: M Baker (Policy Planner, Tasman District Council) 30 August 2006

²⁰² A Fenemor and M Kearney, *Transferable Water Permits for the Waimea Catchment, Nelson: Waiwhenua conference paper* (Waiwhenua joint conference of the NZ Hydrological Society and the Institution Engineers Australia, Auckland, 1998) at 10. See Chapter 5, paragraph 5.11.1 for further discussion on this policy.

²⁰³ Pers. comm. by email: M Baker, 30 August 2006

²⁰⁴ Harris Consulting, *Property Rights in Water: A Review of Stakeholders' Understanding and Behaviour* (November 2003) at 35

²⁰⁵ Tasman District Council, *Tasman Regional Policy Statement* (Tasman District Council, 1 July 2001) (Internet) <www.tdc.govt.nz> Accessed 08/08/2006. See Chapter 2, Paragraph 2.4 for discussion on a challenge in the Environment Court to this proposed regional policy statement.

²⁰⁶ *Ibid* at 62-64.

²⁰⁷ *Ibid* at 71

²⁰⁸ Tasman District Council, *Tasman Resource Management Plan* (Tasman District Council, 25 May 2006) (Internet) <www.tdc.govt.nz> Accessed 08/08/2006

²⁰⁹ As a proposed plan, the Council must have regard to the *TRMP*'s provisions when considering resource consent applications, may begin to implement parts of the Plan, and may propose any amendment to the

Part V of the *TRMP* identifies issues with regard to water availability and contains rules for managing the quantity of water. The proposed plan recognised the potential of site-to-site transfers to encourage efficient water use and provide for greater access to water therefore it looked to encourage transfers as an alternative to rationing permits during dry periods.²¹⁰ The Plan continued a regulatory regime for permit transfers as provided for in the RMA due to uncertainties about the effect of transferable permit regimes.²¹¹ Rules in the *TRMP* specify standards and terms applying to transfers and matters the Council will take into account when considering applications to transfer permits. The Council has also undertaken to provide information about transfers to users who otherwise might lose unused parts of their permit through bona fide reviews.²¹²

Since the preparation of the *TRMP*, the TDC has resolved not to investigate the inclusion of transferable water permits further in the regional plan, and as of March 2001 the draft water chapter of the *TRMP* has made site-to-site transfers of water permits a discretionary activity,²¹³ essentially retaining the status quo position under the default provisions of the RMA.²¹⁴ However the position is different in the Wai-iti area of the Waimea Plains.

3.2.3 The Waimea Plains

The Waimea Plains (an alluvial plain near Richmond) have been identified as a key area where the use of transferable water permits could be an option to improve water efficiency.²¹⁵ The water available for irrigation in 1997 had been fully allocated in all

Proposed Plan: Tasman District Council, *Chapter I – Introduction: Tasman Resource Management Plan* (Tasman District Council, 3 March 2003) (Internet) <www.tdc.govt.nz> Accessed 08/08/2006

²¹⁰ Under the existing rationing system, cutbacks would be put in place as a percentage of the total allocation when environmental triggers such as minimum river flows were reached. Fenemor and Kearney, *Transferable Water Permits for the Waimea Catchment, Nelson: Waiwhenua conference paper* (1998) at 3.

²¹¹ Transfers under the *TRMP* are either controlled or discretionary activities and therefore require resource consent before they can take place, which is where the regulatory aspect of transfers lies.

²¹² Tasman District Council, *Part V – Water, Tasman Resource Management Plan* (Tasman District Council, 29 January 2005) (Internet) <www.tdc.govt.nz> Accessed 08/08/2006, at 31, 22.

²¹³ See fn. 196 for what a “discretionary activity” entails.

²¹⁴ Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 6.

²¹⁵ In 1997 the Ministry for the Environment and the Ministry of Agriculture and Forestry released a policy paper looking to gauge the community’s views on transferable water permits in the Waimea Plains, and trying to help facilitate the process for the Tasman Community. The findings from this project were taken

management zones since 1992, with some areas fully allocated since 1972. During a one in ten year drought, it was anticipated that users would face rationing cuts of around thirty-five percent. The problems were amplified by the fact that no easy, reasonably economic alternative water sources existed.²¹⁶ Since the Waimea water resource became fully allocated the Council put in place a waiting list for permits, although there is a substantial backlog of potential permit holders.²¹⁷

Transferable water permits emerged as an option to deal with allocation issues in the whole of the Waimea Plains and a number of policy documents making provision for their use were developed. However the TDC has since discovered its current groundwater and surface water model is inaccurate and allocation limits have had to be reassessed. As a result the TDC is no longer looking to promote trading in the Waimea Plains due to its potential to increase the amount of land under irrigation.²¹⁸

The situation is different in the Wai-iti Valley (a small catchment in the Waimea Plains). The Wai-iti Water Augmentation Committee (WWAC) has been investigating how to construct a large storage dam to solve over-allocation in the area and provide additional water for irrigation,²¹⁹ and has suggested the TDC should make transferable water permits for the Wai-iti Valley a ‘controlled activity’²²⁰ under the *TRMP* and drop the ‘use it or lose it’ policy for that particular zone.²²¹ As a result these changes have been made to the *TRMP* and transfers in the Wai-iti zone are now a controlled activity.²²²

into consideration in the development of the *TRMP*: MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997)

²¹⁶ *Ibid* at 19.

²¹⁷ The current unsatisfied demand on the waiting list is the equivalent of 200 hectares of irrigation water. Fenemor and Kearney, *Transferable Water Permits for the Waimea Catchment, Nelson: Waiwhenua conference paper* (1998) at 2.

²¹⁸ Pers. comm. by email: M Baker, 30 August 2006

²¹⁹ Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 6.

²²⁰ See fn. 195 for what a “controlled activity” entails.

²²¹ The TDC had previously been preventing people from moving points of take closer to the river because of the impact on flows and other users. The plan now allows site-to-site transfers in order to allow people to move points of take closer to the river. Pers. comm. by email: M Baker, 30 August 2006.

²²² Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 6.

3.3 CONCLUDING REMARKS

At this stage the use of tradeable water rights has been limited, despite the provision made for them in the RMA. Regional councils have generally been cautious in the adoption of transferable water permit regimes, which tends to reflect community attitudes.²²³ The Oroua Catchment provides the most comprehensive example in New Zealand to date but there have been few transfers in that region. There have been some instances of transfers on application by the parties. For example there have been about fifteen transfers on the Ngaruroro River in the Hawke's Bay between 1996 and 2004. However such transfers are generally rare, probably due to the fact that under the present framework there is little incentive to trade unless water resources are fully allocated.²²⁴

The preceding chapters identify the water allocation problems New Zealand is currently facing and how in theory tradeable water rights may operate to solve some of these. Provision has been made for transferable water permits under the RMA and some use has been made of this but practically trading has been very limited. The next chapter will go on to examine how water markets have been established in Australia with a view to (if appropriate) applying the models there in a future expansion of tradeable water rights in New Zealand.

²²³ Memon, "Freshwater Management Policies in New Zealand" (2000) at 247. For further discussion on the importance of public perceptions see Chapter 5, paragraph 5.9.

²²⁴ MAF and MfE, *Water Programme of Action: Water Allocation and Use*, (June 2004) at 8.

4. TRADEABLE WATER RIGHTS IN AUSTRALIA

Trading in water rights has been permitted in a number of different parts of Australia for several years.²²⁵ The systems put in place around the country could possibly form a basis for future action in New Zealand, as Australia has been “recognised as something of a pacesetter in the implementation of strategies directed towards efficient and sustainable management of water resources.”²²⁶ Australia’s national policy agenda influenced the creation of a legal framework enabling the transfer of water rights in a number of different jurisdictions, of which South Australia (SA) is under particular consideration in this chapter.²²⁷

4.1 NATIONAL POLICY FRAMEWORK

The Council of Australian Governments (COAG)²²⁸ decided nationwide water management reforms were necessary in order to ensure the long-term sustainability of Australia’s water²²⁹, and in 1994 agreed upon the *COAG 1994 Water Reform Framework Agreement*.²³⁰ COAG agreed that States should implement comprehensive systems of water allocation and entitlements backed by the separation of water rights from land title and clear specification of entitlements, and that the use of tradeable water rights should be initiated.²³¹ This was built on in 2003 by the *National Water Initiative*,²³² which aimed

²²⁵ For a review of the use of tradeable water rights in a range of other countries, see Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 25-41

²²⁶ J Pigram, *Tradeable Water Rights: The Australian Experience* (21 June 1999) at 14.

²²⁷ Specific aspects of the SA approach and several other Australian regimes will be examined in further detail in relation to how they might be used in the New Zealand context in Chapter 5.

²²⁸ COAG is the peak intergovernmental forum in Australia, comprising of federal and state governments. It initiates, develops and monitors the implementation of policy reforms that are of national significance and require cooperative action by the Australian governments. COAG, *Council of Australian Governments* (Internet) <www.coag.govt.au> Accessed 11/09/2006

²²⁹ A Pye, “Water Trading Along the Murray: A South Australian Perspective” (2006) 23(2) EPLJ 131 at 133.

²³⁰ COAG, *Communiqué of the Council of Australian Governments’ Meeting: Attachment A: Water Resource Policy*, (COAG, February 1994), (Internet) <www.coag.govt.au> Accessed 11/09/2006.

²³¹ Tradeable water rights were to be initiated as a means of maximizing water’s contribution to national income and welfare within the social, physical and ecological constraints of catchments. Cross-border trading was also to be facilitated where possible. *Ibid* at para 4 and 5.

to put in place more efficient administrative arrangements to facilitate water trading and remove institutional trade barriers.²³³

These Agreements set down a broad basis for reform and left states and territories flexibility to implement change in relation to their particular local situations.²³⁴ As a result, the various jurisdictions in Australia have put in place measures to comply with the COAG Agreements.

4.2 SOUTH AUSTRALIA

SA has (arguably) made the most progress of the Australian jurisdictions in implementing the COAG reforms, which prompted the enactment of the Water Resources Act 1997 (SA).²³⁵ The Water Resources Act 1997 was subsequently repealed by the Natural Resources Management Act 2004 (SA).²³⁶ The legislation has put in place a comprehensive framework regulating the taking and use of water and enabling the transfer of licences and water allocations.²³⁷ The approach taken by SA has been followed by some other jurisdictions, for example Western Australia (WA) which ‘copied’ a number of aspects of it.²³⁸

In order to review the water management system in place in SA some basic rights in relation to water need to be set out. There is a general prohibition on taking water from a prescribed water resource unless authorised to do so by a water licence.²³⁹ A user may not take water if doing so would detrimentally affect another user’s ability to exercise their

²³² COAG, *Intergovernmental Agreement on a National Water Initiative* (COAG, August 2003) (Internet) <www.coag.gov.au> Accessed 11/09/2006

²³³ *Ibid* at para 58.

²³⁴ R Banyard and A Kwaymullina, “Tradable Water Rights Implementation in Western Australia” (2000) 17(4) *EPLJ* 315 at 315.

²³⁵ *Ibid* at 317

²³⁶ Natural Resources Act 2004 (SA), Schedule 4, s 43. The 2004 Act essentially mirrors the transfer and water allocation provisions of the 1997 Act in Chapter 7, Part 3, Division 3.

²³⁷ D E Fisher, *Water Law*, (LBC Information Services, 2000) at 230

²³⁸ Banyard and Kwaymullina, “Tradable Water Rights Implementation in Western Australia” (August 2000) at 315.

²³⁹ Natural Resources Management Act 2004 (SA), ss 124(3), 127(1). Certain uses of water are allowed without a water licence. These are set out in sections 127 and 128.

right to take water from the same resource or if it would detrimentally affect the ability of the occupier of adjoining land to enjoy the resource's amenity.²⁴⁰

A 'water licence' authorises the holder to take (or hold) water from a prescribed water resource.²⁴¹ A licence is endorsed with a 'water allocation' which authorises the holder to take water if it is a water (taking) allocation.²⁴² If the licence is endorsed with a water (holding) allocation, it will allow the licence holder to hold the water but not use it without first making a request to the Minister to convert the allocation to a water (taking) allocation.²⁴³ Both the water allocation and the licence are characterised as personal property for the purposes of the Act, and will pass to another user in accordance with the laws for the passing of property.²⁴⁴ A licence is the fully enforceable personal (not real) property of the holder, issued in perpetuity, separate from land title, and is fully tradeable on either a permanent or temporary basis.²⁴⁵

Under the transfer system²⁴⁶ a licensee may transfer their licence (or the whole or part of the water allocation) for an absolute or limited time period.²⁴⁷ This requires the Minister's approval, which can be refused on the same grounds as a licence application.²⁴⁸ The basis for this decision is set out in section 160. The Minister's decision must, as to the allocation to be endorsed on the transferred or receiving licence, be consistent with the relevant water allocation plan and, as to the conditions attached to the licence, not be seriously at variance with the relevant water allocation plan.²⁴⁹ The decision must also be

²⁴⁰ Ibid, s 124(3). Limited exceptions to this rule set out in s 124(4)-(6).

²⁴¹ A licence may be granted under Chapter 7, Part 3 of the Natural Resources Management Act 2004 (SA). See section 3 for the definition of a 'water licence'.

²⁴² Ibid, s 146(1)(a)

²⁴³ Ibid, s 146(1)(b)

²⁴⁴ "A licence (including the water allocation of the licence) is personal property vested in the licensee and will pass to another person under Division 3 or (subject to that Division) in accordance with any other law for the passing of property." Natural Resources Management Act 2004 (SA), s 146(11) D E Fisher, *Water Law*, (2000) at 231

²⁴⁵ This was a major change made by the Water Resources Act 1997 (SA), Part 5, and has been continued under the Natural Resources Management Act 2004 (SA), Part 3. A Pye, "Water Trading Along the Murray: A South Australian Perspective" (2006) at 135

²⁴⁶ Set out in the Natural Resources Management Act 2004 (SA), Part 3, Division 3.

²⁴⁷ Natural Resources Management Act (2004) (SA), s 157(1).

²⁴⁸ Ibid, ss 157(2), (3)

²⁴⁹ Ibid, s 160(1)(a)

made in the public interest and be consistent with any requirements prescribed by relevant regulations.²⁵⁰

The relevant Minister is empowered to take specific considerations into account and require certain actions on the part of the applicant. Before a transfer application is granted, the Minister may direct an expert assessment of the effect of granting an application be undertaken at the applicant's expense.²⁵¹ If a licence is transferred, Minister may reduce the water allocation (of the receiving or transferring licence) and vary the conditions attached to the licence.²⁵² Where a person is noted on the register as having an interest in a licence, in addition to the Minister's approval the written consent of that person must be obtained for a transfer.²⁵³ A transfer application does not require notification unless the relevant water allocation plan specifies otherwise.²⁵⁴ The Minister must endorse on a water licence the name and address of the transferee, and (where the transfer is of an allocation) endorse on the licences affected such particulars as he or she thinks fit relating to the transfer.²⁵⁵

The legislation sets out the consequences of the effect of the breach of a licence in section 162. A licensee who contravenes or fails to comply with a condition of their licence is guilty of an offence, which may result in their licence being cancelled, suspended or varied.²⁵⁶ These provisions should enable the water licence and allocation system (including transfers) to be enforced effectively in SA.

²⁵⁰ Ibid, ss 160(1)(b), (d). There are also other specific requirements if the licence relates to a water resource within the Murray-Darling Basin.

²⁵¹ Ibid, s 158(2)

²⁵² Ibid, s 158(4). ss 158(5) provides two examples of where the Minister's s 158(4) powers may be exercised where water will be taken from a different part of the resource to before the transfer. The Minister is empowered to ensure that demand for water from the new point of take does not prejudice other licensees by exceeding the water availability in that area, and can also reflect the loss to the water resource of part of the water represented by the transfer by reason of evaporation or any other cause as the water flows to the part of the resource from which it will be taken in future.

²⁵³ Ibid, s 160(3) See Chapter 5, paragraph 5.1.2 for further discussion of the register.

²⁵⁴ Ibid, s 159

²⁵⁵ Ibid, s 160

²⁵⁶ Ibid, s 162. Maximum penalties for offenders are set out in s 127(6).

The SA legislative framework is in accordance with the requirements of the COAG Agreements, but given that the 2004 legislation is relatively new there has been little assessment of its success in terms of increasing efficiency and dealing with over-allocation. Concerns remain about the environmental effects of increased efficiency on water resources²⁵⁷ and water users have tended to be cautious about trading due to uncertainties about their security of supply and a lack of information about the total size of the resource.²⁵⁸ Knowledge gaps and uncertainties about the nature of water rights are obstacles New Zealand would also face in the implementation of a transferable water permit regime.²⁵⁹

4.3 DIFFERENCES BETWEEN AUSTRALIA AND NEW ZEALAND

The Australian experience is likely to provide useful lessons for future models in New Zealand, but there are some key differences between the two countries that need to be noted when considering its application here.

Australia has a federal system of government, therefore legislative and executive capacity is distributed among the Commonwealth, States and the Territories by the Commonwealth Constitution.²⁶⁰ The Constitution says very little about water resources therefore their management is generally a matter for individual States.²⁶¹ As a result the management of natural resources varies between States, which increases the complexity of the overall system.²⁶² New Zealand in comparison does not have to deal with segmentation along state boundaries so water management tends to be more uniform across the country.²⁶³

²⁵⁷ A Pye, "Water Trading Along the Murray: A South Australian Perspective" (2006) at 146. See Chapter 5, paragraph 5.6.2.

²⁵⁸ A Pye, "Water Trading Along the Murray: A South Australian Perspective" (2006) at 146.

²⁵⁹ See Chapter 5, paragraphs 5.2 and 5.3.

²⁶⁰ D E Fisher, *Water Law* (2000) at 35.

²⁶¹ *Ibid* at 37.

²⁶² *Ibid* at 61.

²⁶³ However local authorities in New Zealand still have discretion to adopt policies that are suitable to their own particular situations.

Australian water management is structured through multiple layers of various organisations, for example federal government, state government, COAG, individual irrigation companies and a huge variety of others. The level of bureaucracy in Australia complicates the process, and, it has been suggested, should be avoided in New Zealand.²⁶⁴ The more simplistic nature of the New Zealand government system may lend itself to less bureaucracy and thereby avoid the many costs associated with litigation in the Australian context.²⁶⁵

Water resource issues in parts of Australia are more pressing than in New Zealand although the situation here may escalate to a similar level as that in Australia in the future. New Zealand is not ‘water poor’ in comparison to Australia, which suffers from huge water shortages.²⁶⁶ In proportion to its size, it is the world’s driest inhabited continent.²⁶⁷ Due to the significant water issues faced by Australia water has tended to attract greater prominence amongst users and the general public and more comprehensive systems have been put in place for its management.

There are also some differences in the nature of the Australian and New Zealand water resources themselves. Unlike Australia there are a number of relatively small catchments in New Zealand that are unconnected to other catchments, therefore an irrigator drawing from one resource cannot trade with one drawing from a different resource.²⁶⁸ In comparison Australia tends to have large rivers with significant catchment areas.²⁶⁹ Australia also faces major water quality problems such as water salinity (particularly in groundwater resources), which are not such an issue here.

²⁶⁴ N Campbell, *Access to water key strength for NZ over Australia* (The New Zealand Farmers Weekly, 15 May 2006)

²⁶⁵ N Campbell, *Storage answer ever-lasting* (The New Zealand Farmers Weekly, 22 May 2006)

²⁶⁶ N Campbell, *Access to water key strength for NZ over Australia* (15 May 2006)

²⁶⁷ This lack of water resources is most significant in inland areas, whereas the more highly populated coastal regions do not tend to suffer from shortages to the same degree. M Bond and M Comino, “Environmental Justice and the Water Market in Australia”, in K Bosselmann and B J Richardson (eds) *Environmental Justice and Market Mechanisms: Key Challenges for Environmental Law and Policy: International Environmental Law and Policy Series Volume 54* (Kluwer Law International Ltd, 1999) pp. 232-247 at 234.

²⁶⁸ Doak, “Tradeable Water Permits” (April 2002)

²⁶⁹ Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 4.

4.4 CONCLUDING REMARKS

The national policy framework established by the COAG Agreements prompted a series of reforms across Australia of which a major part was the initiation of trading in water rights. Changes have been undertaken to varying degrees in most Australian jurisdictions. SA has implemented a comprehensive legislative framework providing for the trading of water rights which has been mirrored by other Australian states and parts of which could be useful in the New Zealand context. Aspects of regimes that have been put in place in other Australian jurisdictions such as Western Australia and New South Wales and their relative success in those regions are also interesting in view of their possible application to New Zealand.²⁷⁰

Despite the differences between Australia and New Zealand the progress Australia has made will provide a useful example for future action in this country. In light of the difficulties that are faced under New Zealand's current water management framework and the Australian experience an analysis can be made of how the use of tradeable water rights may be extended here as a mechanism in water management.

²⁷⁰ These will be discussed in Chapter 5.

5. ANALYSIS

The extension of tradeable water rights as a means of dealing with water allocation issues in New Zealand can be analysed in light of the previous comments on the current New Zealand situation and the Australian experience. The New Zealand fisheries Quota Management System (QMS) may also act as a useful model upon which to base a tradeable water rights regime, and be a warning for issues that are likely to arise with relation to the water resource.²⁷¹ A number of issues can be identified when considering how a tradeable water rights regime could be extended in New Zealand.

5.1 ADMINISTRATION

5.1.1 Initial distribution

The basis for the initial distribution of permits will be of major importance in the implementation of any tradeable rights scheme.

One option is to ‘grandparent’ allocations, so permits are allocated to users based on their historical use of water.²⁷² Under the QMS, quota allocations were grandparented to quota holders based on their previous catch history.²⁷³ After this the government invited quota holders to tender for a price buy-out of their quota in order to achieve the TAC.²⁷⁴ Although this initial distribution system was useful as a non-coercive, incentive-driven method for reducing the fishing effort, it did not cater for those who were excluded by the previous regime. Quota recipients (who had previously been the largest and wealthy

²⁷¹ The Quota Management System (QMS) was established in 1986, and is now dealt with by the Fisheries Act 1996. Under the QMS annually reviewable limits to fishing effort are set and the total allowable catch (TAC) divided between competing fishers. The total allowable commercial catch (TACC), which is the most that can be taken from a fishery for commercial interests, is available in the form of Individual Transferable Quota (ITQ). See the Fisheries Act 1996, ss 2, 12 and 20 for definitions of the maximum sustainable yield, TAC and TACC. C Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) 3 NZJEL 33 at 34.

²⁷² Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 46.

²⁷³ Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 45

²⁷⁴ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 187.

users) became richer and those excluded received nothing which generated a great deal of resentment.²⁷⁵

On one view grandparenting is fair, as those that pioneered the resource are rewarded with the most allocations. Grandparenting in the case of water permits would carry the added benefit of recognising existing users have often paid a price for the land the water is associated with which implicitly included the ‘price’ of attached water permits.²⁷⁶ However this system may also reward those who currently use excessive amounts of the resource. Difficulties also arise where a date is set as a benchmark for allocation, in which case users may try to increase their abstractions in order to maximise their claim for future allocations.²⁷⁷ The experience with the QMS suggests grandparenting is a politically acceptable solution when followed by buy-back or proportional reductions in order to reach the appropriate take level.²⁷⁸ However there are some potential difficulties with its use which need to be taken into consideration.

Where water is over-allocated and the previous allocation levels are above what can sustainably be taken the implementation of some type of buy-back scheme may be necessary. This was the case in 1986 when the QMS was brought in. ITQs were only allocated to fishers with a commercial catch history. The problem was that while the catch history was high, what could sustainably be taken from the fisheries was quite low. In order to deal with this a ‘buy-back’ was initiated whereby the government made an offer to buy back quota from the fishers so quota holders could choose to surrender all or

²⁷⁵ Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 45

²⁷⁶ This was the case in the Oroua Catchment. When the river reaches a certain low-flow level restrictions are put in place so that new users with Category B permits must cease abstractions. Those with Category A permits are still able to make limited abstractions, and are given the opportunity to transfer. Category A permits were ‘grandparented’ to existing users, recognising the price they often paid for the land associated with the water. New users or those seeking a larger allocation have the option of purchasing transferable permits from existing holders or apply for a non-transferable Category B permit from the Council. MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 12.

²⁷⁷ Attempts were made to deal with this issue in section 33 of the Fisheries Act 1996 which sets the qualifying years during which a fisher’s eligibility to receive a provisional catch history under section 32 is assessed. Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 41.

²⁷⁸ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 188.

part of their quota to the Crown.²⁷⁹ The use of this mechanism in addition to the threat of pro-rata reductions without compensation enabled the government to bring back the amount of allocated quota towards a sustainable level.²⁸⁰ A similar system may be a useful option in dealing with over-allocated water resources.

There are a number of other alternatives, for example tendering, auction, lottery, allocation on the basis of equality between all members of the community, or by some other bases such as obligations to indigenous peoples.²⁸¹ Selling quota through tendering or auctions would provide some return to the community for the increased exclusivity to rights to use the resource.²⁸² However smaller users might be unable to afford to buy permits, giving large, rich users the opportunity to buy up the majority of permits.²⁸³ This approach would also fail to recognise existing users' rights to the resource and the costs they have incurred in incurring their current use-rights.

5.1.2 **Register**

During the initial set-up of a market there may be some increase in administration work such as the establishment of a register to keep track of total water allocations and transfers.²⁸⁴ Different Australian states have implemented fairly similar registers which could be adapted to the New Zealand context.

²⁷⁹ (1985) NZPD 8958-8959

²⁸⁰ In the initial open tender round the government did not obtain enough quota to achieve the desired reductions in catch levels so it offered fishers the opportunity to sell quota at a fixed price before imposing pro-rata administrative cuts. For a more detailed overview of the buy-back process see J Sinner and A Fenemor, *The Adoption of ITQ for New Zealand's Inshore Fisheries* (Ecologic Research Report No. 4, Ecologic Foundation, November 2005) at 12.

²⁸¹ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 42

²⁸² When the QMS was first implemented a system of resource rental payments by fishers for quota held was put in place which were payable whether or not quota were actually fished. These proved very contentious and were particularly harmful for smaller fishers. The system was removed after a challenge by Maori on the grounds that Crown ownership of the fish was unclear. In its place a 'cost recovery' system has been generated whereby fishers pay the costs of fisheries management (including research) instead of resource rentals. Ibid at 50.

²⁸³ Ibid at 42.

²⁸⁴ When the transferable water permit regime was first set up in the Oroua Catchment it was envisaged there would be some increase in administrative work for the council, such as the establishment of a computer spreadsheet to monitor the total water budget and permit transfers during times of low flow. However it was considered that as users became more familiar with the system this involvement would decrease. MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 13.

A Natural Resources Management Register has been established in South Australia which records all licences, permits and other prescribed matters under the legislation including the details of transferred licences and water allocations.²⁸⁵ A person with an interest in a particular licence can apply to have this noted on the register.²⁸⁶ The register is to be made available for public inspection unless the Minister considers it should be kept confidential for safety or security reasons.²⁸⁷ A similar ‘Register of Instruments’ has been created in Western Australia (WA).²⁸⁸ Some protection is given in WA to those who hold security interests in water licences, as these can be noted on the register at the application of the licensee. Holders of security interests are to be notified of certain events affecting the relevant licence and must consent to transfer applications.²⁸⁹ These registers could provide a useful model to adapt to the New Zealand situation.²⁹⁰

5.1.3 Monitoring and Enforcement

A method to deal with transfers and set, monitor and enforce some form of regulation needs to be put in place.²⁹¹ If a register is put in place (as has been done in the Australian states) there will need to be a body with authority to oversee this and ensure permit and transfer conditions are complied with. Currently the main regulatory authorities for water are regional councils which enables localised management of the resource. The additional involvement of a central, nationally coordinated body could enable harmonisation in approaches taken around the country.

²⁸⁵ Natural Resources Management Act 2004 (SA), s 226.

²⁸⁶ This means that if proceedings for an offence against the Act are commenced against the licence holder, the person taking those proceedings must give the named person with an interest written notice of the alleged offence. Ibid, ss 226(5)(c) – (e).

²⁸⁷ Ibid, ss 226(3), (4)

²⁸⁸ Rights in Water and Irrigation Act 1914 (WA), Part 3, Division 3E. A Gardner, “Water Resources Law Reform in Western Australia – Implementing the CoAG Water Reforms” (February 2002) 19(1) EPLJ 6 at 27.

²⁸⁹ Rights in Water and Irrigation Act 1914 (WA), ss 26GZL-26GZO. Interestingly, section 26GZN provides that the Commission is not to be concerned with the nature of any security interest that is the subject of an application for notation of a security interest or whether the person specified in the application as having the security interest actually has that interest.

²⁹⁰ In addition to the two registers that are detailed here, NSW has also established a Water Access Licence Register under the Water Management Act 2000 (NSW), Division 3A, ss 71-71K

²⁹¹ For example if the resource size cannot be accurately defined at the outset then there must be some clear process to determine what will happen to consents upon variation of the resource size. Doak, “Tradeable Water Permits” (April 2002)

To some extent a tradeable water rights system would be self-policing as users have a vested interest in making sure each other complies with the permit conditions. However given the potential for market failure there remains a need for some regulation to monitor and enforce the water market.²⁹² The current role of regional councils in overseeing overall abstractions under the RMA would fulfill this function.²⁹³ Concerns have been raised in the Tasman District as to what mechanisms may be put in place with regard to temporary transfers to ensure that permits return to the original permit holder within the agreed period, particularly where the point of take is transferred to another property during the transfer.²⁹⁴

5.2 INFORMATION REQUIREMENTS

The effective operation of a water market is likely to be restricted by limitations to knowledge about the water resource. There needs to be sufficient knowledge about its availability and the environmental effects of its use so conditions can be put on permits and transfers and to provide permit holders with certainty about their rights.²⁹⁵ This problem has arisen with the QMS and it is likely an analogous situation would arise with water.

The nature of fish stocks under the QMS have been impossible to determine due to a lack of information about the maximum sustainable yield. The TAC is set at a level which will maintain the maximum sustainable yield therefore any difficulties as to what this is will make determining the TAC and the overall allocation limit within which quota can be transferred very difficult.²⁹⁶ Assessment of the success of the QMS in terms of its impact on fishing stocks has been very difficult.²⁹⁷ The QMS aims for a sustainable yield, but

²⁹² An administrative system like this will be necessary in any type of resource management system. For a more detailed examination of the potential for market failure see Chapter 1 paragraph 1.1.2.2.

²⁹³ RMA, s 30(1)(e). See Chapter 2 paragraph 2.1.

²⁹⁴ Pers. comm. *by email*: M Baker, 30 August 2006.

²⁹⁵ MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 8.

²⁹⁶ The maximum sustainable yield is defined in the Fisheries Act 1996, s 2. See section 13 for the setting of the TAC.

²⁹⁷ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 48

cannot guarantee it due to scientific imperfections.²⁹⁸ The Ministry of Fisheries reported that of the fish stocks for which there is information on stock size, eighty percent are at or near target levels, and for the remainder rebuilding strategies are in place.²⁹⁹ These results have only been provided on stocks for which information is available, suggesting that the status of some stocks is unknown. There are many uncertainties in determining the TAC so decisions are often made without sufficient information. Determination of these questions is also subject to considerable pressure from quota holders as they stand to make huge gains or losses according to such decisions.³⁰⁰

It is likely similar issues will be faced in relation to water. Determining the allocation limit for a particular resource can be difficult due to uncertainty about what the river flows will be from year to year. Although provision is made for variation of allocation limits, this may cause issues with determining the appropriate price of water that is being traded if the future supply and whether any compensation should be provided for losses incurred through variation of the total allocation limit.³⁰¹

The adequacy of information about different water resources in New Zealand varies, as some regions have more certainty about the nature of the resource than others which would enable a water market to operate more effectively. This was one of the reasons why a transferable water permit regime was initially identified as a possible solution in the Oroua Catchment. Geographically that catchment is relatively small and at the time of the implementation of the regime there was a good record of hydrological information.³⁰² The use of tradeable water rights will be more effective and easier to implement in parts of New Zealand like the Oroua Catchment that have good information on the water resource.

²⁹⁸ Sinner and Fenemor, *The Adoption of ITQ for New Zealand's Inshore Fisheries* (November 2005) at 28.

²⁹⁹ *Idem*.

³⁰⁰ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 41

³⁰¹ Doak, "Tradeable Water Permits" (April 2002)

³⁰² MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 10.

5.3 NATURE OF PERMITS

In order for a water market to operate effectively there need to be clear, enforceable proprietary rights to water so users are sure of the rights they are trading and the conditions on their transfers.³⁰³ Rights to water need to be defined sufficiently to deal with the uncertain nature of water resources and identify risks permit holders face. The nature of the right will reflect the legal remedy available for infringement of a right as well as questions of liability.³⁰⁴ Externalities associated with water markets need to be addressed, for example the effect on third parties where trading of water rights to upstream users has a detrimental effect on the return flows for downstream users.³⁰⁵ The nature of a permit is important in determining exactly what rights the holder has in relation to other water users,³⁰⁶ whether permit holders will be compensated for reductions in the total allowable take and what remedies will be available if conditions are breached. Where one party has clearly specified rights to a resource but another has ill-specified rights that are not implemented or enforced, the former party will “tend to accrete power and control at the expense of those whose rights are ill-specified and therefore hard to enforce.”³⁰⁷

Ambiguity in the ownership of the water resource and the exact nature of rights held under water permits will be obstacles to the implementation of a water market in New Zealand.³⁰⁸ The RMA vests all rights to water in the Crown, which may then be allocated to other users by regional councils.³⁰⁹ The exact nature of water permits has been a matter

³⁰³ Pigram, *Tradeable Water Rights: The Australian Experience* (21 June 1999) at 10

³⁰⁴ D E Fisher, *Australian Environmental Law*, (Lawbook Co., 2003) at 154.

³⁰⁵ Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 45.

³⁰⁶ For example Maori rights under the Treaty of Waitangi may mean Maori have a customary right to use the water, which could conflict with existing users' rights to the use the resource. Discussed further in paragraph 5.7. Harris Consulting, *Property Rights in Water: A Review of Stakeholders' Understanding and Behaviour* (November 2003) at 12

³⁰⁷ This has been the case in fisheries, where existing users who have had their quota grandparented have tended to dominate the market and the political and legal arena in terms of lobbying power, at the expense of other users such as recreational fishers and Maori non-commercial customary fishers. Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 63.

³⁰⁸ Willey, “Behind Schedule and Over Budget: The Case of Markets, Water and Environment” (Spring 1992) at 410.

³⁰⁹ RMA, s 354(1) preserves section 21 of the WSCA. For further discussion see Chapter 2

of contention as they do not constitute ownership of the resource³¹⁰ and are not real or personal property.³¹¹ However they do constitute a valuable commodity and are granted to the individual rather than being attached to the land.³¹² The High Court has held that water permits have been elevated above a bare licence to a licence plus a right to use the resource.³¹³

Water rights in New Zealand are not absolute in order to make provision for the public interest and environmental values. This may undermine the stability and security of permits in terms of their commercial value depending on the ease with which they can be varied and the compensation available for their reduction.³¹⁴ The nature of water permits is highly contentious and variability on this issue will serve to obstruct the successful operation of a water market.

5.4 REDUCTION OF THE TOTAL ALLOCATION LIMIT

Whether permits are expressed in terms of a proportion of the total allowable take or as a particular amount of the resource will be relevant when the total allocation limit is adjusted. Existing permit holders will be concerned in the event of variations about whether they will receive compensation for losses suffered and what kind of security of supply they have. Uncertainty surrounding water availability may also affect the value of transfers. Despite reforms to the water management system in New South Wales (NSW) water allocations and consumption exceed sustainable levels therefore the risk of reductions is of major concern to permit holders.³¹⁵ An analogous situation may arise in New Zealand therefore this will be an important issue for users here.

³¹⁰ In accordance with the RMA, s 354(1).

³¹¹ *Ibid*, s 122(1).

³¹² Harris Consulting, *Property Rights in Water: A Review of Stakeholders' Understanding and Behaviour* (November 2003) at 11.

³¹³ The Court rejected Aoraki's argument that a water permit is a bare licence in that it does not pass an interest or transfer property in anything but only authorises the holder to act in a way which would otherwise be unlawful. *Aoraki Water Trust v Meridian Energy Ltd* [2005] NZLR 268 at 279. See Chapter 2, paragraph 2.3 for a discussion of this case.

³¹⁴ Fisher, *Australian Environmental Law* (2003) at 156.

³¹⁵ C Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) 22 EPLJ 431 at 431.

5.4.1 How permits are expressed

The QMS has varied in how it expresses quota. Initially quota were defined as an access right to fish for a particular tonnage of the quota species.³¹⁶ However this changed in 1990 when initial quota entitlements were switched to being defined in terms of percentage shares of the TACC in order to share risks and benefits of adjustments amongst all quota holders instead of the government having to implement quota buy-backs to make reductions.³¹⁷ The way in which water permits are expressed will have a significant impact if there is variation in the total allocation limit.

5.4.2 Powers to vary the total allocation limit

Section 20 of the Fisheries Act 1996 enables the setting or variation of the TACC for a QMS stock. When making this decision the Minister is to have regard to the TAC and allow for certain non-commercial fishing interests and all other mortality to the stock caused by fishing.³¹⁸ Before making adjustments the Minister must consult with interested parties.³¹⁹ In the event of a reduction of the TACC where the Crown owns unencumbered quota shares for that particular stock, section 22 provides a formula by which these will be transferred to every quota holder. If the Crown does not hold any unencumbered quota shares, no deductions or transfers of quota will be made.³²⁰ There is no compensation for losses incurred through the reduction unless there is some unencumbered stock.

Restrictions may be put in place in South Australia (SA) at the relevant Minister's discretion to prevent a reduction in water quality, damage to the ecosystem, or because there is insufficient water to meet demand.³²¹ The Minister must reduce the allocation of

³¹⁶ The government was expected to buy back and sell quota on the market to make changes necessary to meet TACC adjustments. Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 45-46.

³¹⁷ The fishing industry made objections to this change, so all resource rentals as well as \$5 million were put into a fund during six years to compensate fishers for downward adjustments in the TACCs for orange roughy and hoki. Ibid at 46.

³¹⁸ These include Maori customary non-commercial fishing interests and recreational interests. Fisheries Act 1996, s 21(1)

³¹⁹ Ibid, s 21(2)

³²⁰ Ibid, s 22(2)

³²¹ Natural Resources Management Act 2004 (SA), s 156(1)

all licences to that water resource proportionately, unless regulations have been made which provide an alternative scheme for the reduction of allocations.³²²

Water users in NSW face the risk of variations to allocations due to the potential for governmental policy changes and under the Water Management Act 2000 (NSW).³²³ Reviews and amendments of plans under the Act may result in changes to the allocation limit.³²⁴ Restrictions may also be put in place in order to deal with severe water shortage³²⁵ or on a temporary basis where this is in the public interest.³²⁶ Currently access licences in NSW have differing priorities so that where water supply is limited in any particular area the holders of higher priority licences will take precedence.³²⁷ This however is no guarantee that the holder of the higher priority licence will be able to use their full allocation therefore they may still be affected by reductions.³²⁸

5.4.3 Effect of reductions on permit holders

The problem when variations are imposed is whether the government will share some of the costs of reductions with users.³²⁹ There has been significant debate over how the risk of reductions should be shared and whether compensation should be payable at all, but it is acknowledged that most users agree some sharing of the risk will be appropriate.³³⁰

³²² Ibid, ss 156(2), (3)

³²³ Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) at 437.

³²⁴ In addition to periodic plan review the Minister may amend management plans where he or she is satisfied that this is in the 'public interest': Water Management Act 2000 (NSW), s 45(1). Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) at 437.

³²⁵ Water Management Act 2000, s 60(2). Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) at 439.

³²⁶ Water Management Act 2000, s 323.

³²⁷ Ibid, s 58(2): If one access licence has priority over another, then if the water allocations under them have to be diminished, the water allocations of the higher priority licence are to be diminished at a lesser rate than those of the lower priority licence. Priorities between different categories of water access licence are set out in s 58(1).

³²⁸ Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) at 433.

³²⁹ Ibid at 432.

³³⁰ Environmental groups have argued there should be no compensation because water rights carry an obligation to leave a healthy and sustainable resource, and reductions in the available water due to the need to preserve 'environmental flows' is a consequence of failing to meet that obligation. Arguments have also been made that if compensation is paid this may become a precedent for the future. Herbert, "Risk of

An interesting example of the effect of reductions on permits can be seen in the case of snapper.³³¹ The Court of Appeal held that while quota are a valuable form of property right, they are not an absolute right and are subject to the limitations of the legislation (such as the reduction of quota) without compensation.³³² Wallace suggests that this ruling also applies to “the RMA and other situations where those with property rights often like to portray these in absolute terms.”³³³

Compensation may be payable for variation in water licences in WA.³³⁴ If a licence is varied there is a basic duty to compensate the licensee for damage suffered, including the loss of profits.³³⁵ This is qualified so compensation is only payable if the use of water was reasonable, authorised under the legislation and consistent with the objects of the Act; and the effect of the variation is permanent and (in the Commission’s opinion) not fair and reasonable having regard to the exercise of the power in respect of other licence holders in the surrounding area.³³⁶ Gardner considers that compensation should not be payable if the variation was in accordance with a plan or the requirements of ecologically sustainable management, unless there is effectively the transfer of a benefit from one party to another, which is usually done through trading.³³⁷

The powers under the NSW legislation to reduce allocations have been criticised for being broadly discretionary with limited consultation and prior notice before variations are made.³³⁸ Currently the provision for compensation in NSW is quite limited. The legislation contains a risk assignment framework in relation to the compulsory

further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales” (2005) at 441.

³³¹ *NZ Fishing Industry Association (Inc) v Minister of Fisheries*, unreported, 22 July 1997, CA 82/97.

Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 49.

³³² *NZ Fishing Industry Association (Inc) v Minister of Fisheries*, unreported, 22 July 1997, CA 82/97 at 16.

Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 49.

³³³ Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 49.

³³⁴ Rights in Water and Irrigation Act 1914 (WA) Schedule 1 cl 39.

³³⁵ *Ibid*, Schedule 1 cl 39(1).

³³⁶ *Ibid*, Schedule 1 cl 39.

³³⁷ A Gardner, “The Legal Basis for the Emerging Value of Water Licences – Property Rights or Tenuous Permissions” (2003) 10 APLJ 1 at 15.

³³⁸ Herbert, “Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales” (2005) at 440.

acquisition of access licences but this is yet to be incorporated.³³⁹ Under the unincorporated provisions where an access licence is compulsorily acquired entitlement holders will be eligible for state compensation for the market value of the licence at the time of acquisition.³⁴⁰ However as of yet these provisions are not operative so risk-sharing in NSW remains uncertain.

In the interests of fairness it is important to ensure reductions are shared in equal proportions across all users. All permits should be treated as equal as under the existing legislative system, so that transferees share similar risks of future reductions to existing permit holders under the current regime.³⁴¹ Consideration will need to be made of whether compensation should be payable for reductions in allocations at all. If so, the substantive limits put in place in WA may be introduced.

5.5 MONOPOLISATION

5.5.1 Large, rich users

Studies undertaken in the Oroua Catchment and the Tasman District have indicated irrigators have major concerns about irreversibly losing their licences to urban and or industrial users.³⁴² Irrigators in the Oroua Catchment feared large urban abstractors (like the Council) would exert an influence and monopolise the purchase of water permits.³⁴³ Irrigators in the Tasman District were also concerned that water allocations would be bought up by wealthy town supply and industrial users and that this would permanently

³³⁹ Ibid at 442.

³⁴⁰ Water Management Act 2000, s 79(2). Herbert, "Risk of further reduction in water availability from the consumptive pool: Current issues and approaches in New South Wales" (2005) at 442. The legislation also provides for compensation in several other limited circumstances: Water Management Act 2000, ss 87-87AA. No compensation is payable in relation to certain conduct identified in s 87AB and in the circumstances outlined in s 87A.

³⁴¹ This system was envisaged with regard to a possible transferable water permit regime in the Tasman District. Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 8.

³⁴² Peart, "Innovative Approaches to Water Resource Management: A Comparison of the New Zealand and South African Approaches" (2001) at 135.

³⁴³ MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 11-12.

transfer water away from traditional rural uses so parts of the district would no longer be irrigated and rural production would decrease.³⁴⁴

Most quota under the QMS have ended up in the hands of companies. For a variety of reasons many independent fishers who received their ITQ under the initial distribution system have sold their quota, leaving large, rich quota holders in their place.³⁴⁵ Some of these companies viewed buying up large quantities of quota through the trading regime as a means to secure dominance of the industry, while others viewed it as a way to protect themselves against reductions in the TAC. Companies also tend to be better equipped to deal with the administrative reporting demands of the QMS than individual fishers.³⁴⁶ An analogous situation may arise in the case of a tradeable water market, a concern which has been raised a number of times in recent years.

Concerns about the possibility of monopolisation are based on principles of fairness, but in reality although the domination of large, wealthy users in a market may seem inequitable it is theoretically what is supposed to happen under a trading regime. The basis of efficiency of resource use is the movement of permits to the highest value users.³⁴⁷ Despite the significant problems associated with monopolisation in economic terms this could be seen as a positive effect.

5.5.2 Risks arising from monopolisation

Due to transfers of wealth from grandparenting under the QMS, the fishing industry has become wealthy and powerful which enables it to exercise significant power in the legal and political arena and to lobby officials and politicians to make decisions in its favour. There is often pressure for a TACC increase and strong resistance to any TAC or TACC

³⁴⁴ Ibid at 21.

³⁴⁵ Of 1750 fishers who received provisional ITQ in 1986, the number of these had declined to only 57% of the original number by 1998. In addition to the advantages a trading regime holds for companies, individual fishers may also have seen the buy-back system as a means of capitalizing and exiting the industry and paying off mortgages on their fishing vessels or homes. Sinner and Fenemor, *The Adoption of ITQ for New Zealand's Inshore Fisheries* (November 2005) at 29-30.

³⁴⁶ Sinner and Fenemor, *The Adoption of ITQ for New Zealand's Inshore Fisheries* (November 2005) at 29.

³⁴⁷ See Chapter 1, paragraph 1.1.2.1.

reductions, despite scientific evidence indicating this is necessary.³⁴⁸ Where evidence is incomplete or uncertain management decisions will be further subjected to industry influence.³⁴⁹ The QMS has (arguably) led to a significant disparity in wealth, power and influence between quota holders and all other interests in the fisheries. The industry tends to focus on the commercial value of fisheries as opposed to environmental concerns for example, which has the potential to create injustice towards other interests.³⁵⁰

An example can be seen where efforts were made to reduce the TACC in order to rebuild snapper stock.³⁵¹ Industry representatives twice took out legal injunctions against the Minister then took the case to appeal, all of which delayed the reduction's implementation. The Minister's decision was eventually overturned on a technical point, but the case demonstrates the potential power of the industry and the lengths it will go to, to oppose decisions that are not favourable to it.³⁵²

Anti-competitive behaviour may be magnified by monopoly control of the market. 'Deterrent pricing' is one example that has occurred with the implementation of the QMS. This problem occurs where large firms bid up the price of quota in order to deter entry to new fishermen, an issue which might also arise in a water market.³⁵³ There is also a risk in relation to water permits where users 'hoard' their permits to sell them in times of drought where they can transfer their prices for higher prices.³⁵⁴

5.5.3 Solutions

Due to concerns raised by irrigators about the rural to urban shift and monopoly control by larger users the Horizons Regional Council limited the ability to transfer permits to

³⁴⁸ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 49

³⁴⁹ Ibid at 41.

³⁵⁰ Ibid at 64.

³⁵¹ *NZ Fishing Industry Association (Inc) v Minister of Fisheries*, unreported, 22 July 1997, CA 82/97.

³⁵² Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 49

³⁵³ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 188.

³⁵⁴ MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues*, MAF Policy Technical Paper 97/12 (MfE and MAF, Wellington, December 1997) at 14.

agricultural users.³⁵⁵ This solved monopolisation problems in the region but may have limited the market's effective operation. In the Tasman District it was suggested that restrictions be placed on rural to urban and industrial transfers in order to limit the possibility of an urban monopolisation.³⁵⁶

Some provisions in the RMA may help prevent the formation of monopolies, such as sections 125 and 126 which provide that all permits exist for five years before lapsing or being liable to cancellation.³⁵⁷ These provisions would mean permit 'hoarders' would have their permit cancelled if they were not using it. Other solutions could be provided for in the regional plan such as limiting single party ownership to an agreed level, or a continuation of the 'use it or lose it' rule that is in place in the Tasman District.³⁵⁸

5.6 ENVIRONMENTAL CONCERNS

5.6.1 Water for the environment

There is a concern as to how make provision for the environmental values of water. Where a resource is fully allocated consumptive demands and the environmental needs for a healthy water resource need to be considered. Transfers and acquisitions could be for environmental purposes as well as abstractive uses such as irrigation, which would enable environmental values to be catered for.³⁵⁹ The issue however is how such acquisitions would be financed, as a number of environmental groups who might be expected to buy up the water for environmental purposes would not have the capital to do so.

³⁵⁵ Abstraction limits for large non-agricultural users such as the beef-packers plant and the Manawatu District Council water supply were negotiated separately. MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 11-12.

³⁵⁶ Ibid at 21.

³⁵⁷ Unless otherwise provided in the consent. RMA, ss 125, 126. Richardson, "Changing Regulatory Spaces: the Privatization of New Zealand Environmental Law?" (1999) at 225.

³⁵⁸ See paragraph 5.11.1.

³⁵⁹ A water market could permit the acquisition and transfer of water for environmental purposes such as the maintenance of stream flows and ensuring the sustainability of aquatic ecosystems and other instream values. Pigram, *Tradeable Water Rights: The Australian Experience* (21 June 1999) at 9-10.

The recent reforms in NSW have defined three types of environmental water to be provided for in water management plans.³⁶⁰ The first is ‘environmental health water’ which is reserved to maintain or restore water resources and dependent ecosystems, and cannot be traded or converted to extractive use. The second type is ‘targeted environmental water’, which is water that can be used for environmental purposes above the fundamental ecosystem health requirements, at the Minister’s discretion. This water cannot be traded but subject to the Minister for Land Water Conservation’s approval it can be converted to extractive use. Finally there is ‘market-based environmental water’, which is water that can be used for environmental purposes by a private user and can be traded or converted back to extractive use.³⁶¹ The provision made for environmental water in NSW could potentially be a model for New Zealand reforms, although the changes made in NSW have been quite recent and therefore their success is relatively untested.

5.6.2 ‘Sleepers’

There is a concern that increased efficiency in water use through trading may actually operate to the detriment of the environment. Where users trade parts of their permits that were previously unused this increases the amount of water abstractions. In some cases where a resource is theoretically over-allocated, allocations in fact may not be over the total allocation limit as some are not being used and lie dormant as ‘sleepers’. Where sleepers are exercised this increase in abstraction may have a detrimental effect on the environment.³⁶²

An example can be seen in the Murray-Darling Basin Pilot Trading Project.³⁶³ All the states involved in trading under this project allow trading in sleepers therefore water which was previously part of unofficial environmental flows is now being abstracted for

³⁶⁰ Banyard and Kwaymullina, “Tradable Water Rights Implementation in Western Australia” (August 2000) at 320.

³⁶¹ *Idem.*

³⁶² Counsell, *Achieving Economic Efficiency in Water Allocation: A Review of Domestic and International Practices* (10 October 2003) at 32.

³⁶³ This project was set up in 1997 to expand trading across the state boundaries of SA, Victoria and NSW and improve the economic and environmental sustainability of irrigation. Pye, “Water Trading Along the Murray: A South Australian Perspective” (2006) at 135

irrigation. Sleepers account for up to thirty percent of licenced allocations in some rivers.³⁶⁴ Historically these systems were over-allocated because the licensing authority assumed a number of licences would remain as sleepers which raises questions as to whether the environmental impacts of trading are being accurately assessed.³⁶⁵ A review of the Pilot Project in December 2000 demonstrated that 99 percent of the water traded derived from water that came from sleepers,³⁶⁶ indicating trading is having a more detrimental effect on water resources than previously recognised. River resources remain over-allocated and stressed in these areas, and it is possible that these issues are being amplified by the extension of trading.³⁶⁷

In parts of New Zealand some councils have also allocated more water than is actually available on the assumption few permits are used to their full extent.³⁶⁸ The use of transfers and the corresponding increased efficiency may result in an increase in the amount of water used overall, in particular during dry years, leading to minimum river flows and groundwater thresholds being reached earlier and rationing of water use being triggered more quickly.³⁶⁹ A major reason behind the Tasman District Council's decision not to proceed with the implementation of a transferable water permit regime in the Waimea Plains relates to the potential for trades to increase the amount of land under irrigation and the amount of water being abstracted.³⁷⁰

³⁶⁴ Ibid at 136

³⁶⁵ Ibid at 135-136.

³⁶⁶ Ibid at 138

³⁶⁷ Ibid at 146

³⁶⁸ For example in practice only 60 percent of an allocated water resource might actually be used. Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 3

³⁶⁹ Ibid at 10.

³⁷⁰ A related factor in this decision was a reassessment of the groundwater and surface water model upon discovery that the information held was inaccurate in light of droughts in the region and a change to what the levels needed to maintain environmental limits. Pers. comm. *by email*: M Baker, 30 August 2006.

5.7 TREATY OF WAITANGI

Any move to further enhance a tradeable water rights market would be likely to raise Treaty of Waitangi issues ('the Treaty').³⁷¹ Articles One and Two are particularly relevant to the controversy.³⁷²

Treaty issues were raised in under the QMS. The QMS excluded part-time fishers and allocated quota according to previous catch histories which had a significant impact on small-scale seasonal Maori fishers.³⁷³ Maori based their dispute on the grounds that quota transfers, which gave exclusive fishing rights to quota holders, breached Article Two, which they felt provided protection for Maori possession and enjoyment of fisheries.³⁷⁴ The lack of provision for Maori to obtain quota was contested due to quota being grandparented without consideration of customary practices.³⁷⁵ Maori also challenged transfers on the grounds that aboriginal title to fish was never extinguished by legislative resumption by the Crown of ownership. Section 88(2) of the Fisheries Act 1983 added weight to this argument.³⁷⁶ An additional reason for the Maori challenge was that the Muriwhenua fisheries claim was being heard at the time.³⁷⁷ There was a perception that by transferring what had previously been a publicly-owned resource into private hands the resource would be alienated from any potential future settlement package with the Crown.

³⁷¹ Concerns have already been raised in Marlborough in relation to Maori ownership, Maori customary rights to the region's water resources and consultation with Maori on water allocation decisions. P Easton and D Williams, *Maori eye ownership of water* (The Marlborough Express, 2 August 2006)

³⁷² Article One of the Treaty of Waitangi 1840 states that Chiefs cede absolutely sovereignty over their territories. Under Article Two the Crown guaranteed Maori the full, exclusive and undisturbed possession ('tino rangatiratanga') of their lands, forests, fisheries and other properties ('taonga').

³⁷³ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 51

³⁷⁴ P Page, *The Quota Management System: a study of the implementation of a property rights model* (University of Otago, Dunedin, 31 March 1994) a thesis submitted for the degree of Master of Laws, at 134

³⁷⁵ S Milroy, "The Fisheries Reports" in J Hayward and N Wheen (eds) *The Waitangi Tribunal* (Bridget Williams Books, 2004) pp. 83-96 at 88.

³⁷⁶ "Nothing in this Act shall affect any Maori fishing right." Fisheries Act 1983, s 88(2); Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 52.

³⁷⁷ The Muriwhenua Fisheries Claim involved a Waitangi Tribunal claim by Maori tribes in Northland which argued that the government had failed to meet its Treaty obligations to protect Maori fishing rights. Sinner and Fenemor, *The Adoption of ITQ for New Zealand's Inshore Fisheries* (November 2005) at 12.

Opposition to the QMS led to Maori claimants obtaining a High Court injunction against the Crown bringing further fish stocks under the QMS.³⁷⁸ Settlement was made after the Muriwhenua report was produced.³⁷⁹ An interim allocation of ten percent of quota was made in 1990 to the Treaty of Waitangi Fisheries Commission to hold until Maori developed an allocation formula to distribute Maori. Further settlement was made in 1992.³⁸⁰ In return, all other Maori commercial fishing rights were extinguished and all future Treaty claims regarding commercial sea fisheries abolished.³⁸¹ A special regime was established under regulations issued in 1998 to deal with Maori non-commercial customary fishing rights.³⁸²

The extent of the controversy over Maori rights to fisheries demonstrates the potential litigation that could result in the implementation of a similar trading regime for water, in particular where small scale users of a resource are excluded by the initial method of allocation distribution. It is at least possible Maori would claim that potential transfers would breach the Treaty as water is one of the ‘other properties’ guaranteed to them under Article Two. An argument could be made that despite the guarantees made to Maori under Article Two, Article One authorises the government to regulate New Zealand’s resources in a sustainable way, which would enable it to implement a water market if this was seen as the best way to manage the resource.³⁸³ Potential issues may also arise due to obligations under the RMA if the principles of the Treaty are not

³⁷⁸ This claim was led by the Muriwhenua claimants in Northland, and was based on the protections contained in section 88(2) Fisheries Act 1983. The injunction stopped the extension of ITQ to additional species until the substance of the Maori fisheries claims were determined. *Ibid* at 13.

³⁷⁹ The Muriwhenua Fisheries Report (1988) provided that the QMS conflicted with the Treaty as it gave the full, exclusive and undisturbed possession of fishing to non-Maori (a right guaranteed to Maori under the Treaty). However it also held that the QMS did not need to conflict with the Treaty and that attempts should be made to reach agreement on it. *Ibid* at 13.

³⁸⁰ In 1992 the government bought a half share in the Sealords fishing company (worth \$150 million) and gave it to Maori. In addition, the 1992 settlement provided that twenty percent of any future quota created as new species should go to Maori. Significant problems have been encountered in determining how this quota should be distributed among Maori. Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 52.

³⁸¹ J Dawson, *Lecture Notes from Treaty of Waitangi (LAWS 459)* (University of Otago, Semester One 2005)

³⁸² Wallace, “Environmental Justice and New Zealand’s Fisheries Quota Management System” (1999) at 54

³⁸³ J Dawson, *Lecture Notes from Treaty of Waitangi* (Semester One 2005)

adhered to in decision-making.³⁸⁴ Maori submitters have already raised concerns, in particular stating that customary rights in water must be addressed before any market is established.³⁸⁵ Wallace has commented that "...if there were moves to establish quota management systems for other aspects of the environment ...Maori would challenge such moves again and make a serious pitch for allocation and ownership of the resource in question.."³⁸⁶ Extensive consultation with Maori and provision for their input into management needs to be ensured as well as consideration of the customary rights issue, as litigation by Maori groups could serve to undermine any attempts at reform.³⁸⁷

5.8 MAORI LEASEHOLD LAND

Problems may arise with Maori leasehold land. Some existing permits relating to leased land are held by the lessee, not the land owner, therefore provision is necessary to prevent the permit being transferred without the lessor's permission.³⁸⁸ Maori want to ensure there is sufficient water to irrigate leasehold land and for future supplies.³⁸⁹ The most appropriate solution has been the use of lease agreements restricting subleases without the lessor's permission rather than restrictions in the regional plan.³⁹⁰ A similar type of provision may need to be put in place in order to deal with this risk in any larger scale implementation of a water trading market.

³⁸⁴ "In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi." RMA, s 8.

³⁸⁵ These concerns were raised in feedback received on the discussion document to the *Sustainable Programme of Action*. MAF and MfE, *Reflections: A Summary of Your Views on the Sustainable Water Programme of Action* (MfE, July 2005) at 12.

³⁸⁶ Wallace, "Environmental Justice and New Zealand's Fisheries Quota Management System" (1999) at 52-53.

³⁸⁷ Memon, "Freshwater Management Policies in New Zealand" (2000) at 247

³⁸⁸ The risk of water being traded away from Maori leasehold land was recognised in the Tasman District and a rule in the *TRMP* has been put in place reserving water for Maori perpetual lease land. See Schedule Rule 3.1.D of the *TRMP*. Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 8.

³⁸⁹ This issue was identified by Maori in the Motueka Catchment in the Tasman District. J Sinner and A Fenemor, *Enhancing Water Use Flexibility and Security Using the Motueka Catchment as a Case Study: Discussion Paper* (Integrated Catchment Management (ICM), 10 March 2006) (Internet) <<http://icm.landcareresearch.co.nz>> Accessed 30/08/2006 at 2.

³⁹⁰ Fenemor and Kearney, *Transferable Water Permits for the Waimea Catchment, Nelson: Waiwhenua conference paper* (1998) at 5.

5.9 PUBLIC PERCEPTIONS

One major issue with the use of tradeable water rights and economic instruments in general is that they are not generally well understood therefore are not widely accepted by the public.³⁹¹ In any implementation of a tradeable water rights regime it is essential that the support of existing users is obtained, as previously this has been the major barrier in the way of effectively executing such systems.³⁹²

Many members of the public hold cultural and religious objections to the notion that water can be bought or sold.³⁹³ A common misconception is the view that enhancing the use of transfers will equate to a step towards the privatisation of water, which is perceived as a public resource.³⁹⁴ This view was particularly evident in the preparation of the *Sustainable Water Programme of Action*, which has stressed throughout that its proposals do not entail a privatisation of water.³⁹⁵ Cultural opposition to tradeable water rights based on a misconception that this would later lead to charging for water or the privatisation of a public resource could be a significant obstacle to community acceptance of tradeable water rights.

The norms and values held by those with an interest in the resource can stand as a barrier to the implementation of tradeable water rights, but this may be overcome through consultation and the involvement of stakeholders throughout the development stage.³⁹⁶ Adequate education of water users and the general public throughout the planning process so that all those with an interest in the resource are adequately informed as to the risks and benefits of a tradeable water rights regime would go a long way to combating this type of opposition.

³⁹¹ Gunningham and Sinclair, "Instruments for Environmental Protection" (1998) at 82.

³⁹² The support of existing users was recognised as vital in the Tasman District. See: Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 27.

³⁹³ Pigram, *Tradeable Water Rights: The Australian Experience* (21 June 1999) at 15.

³⁹⁴ Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 11.

³⁹⁵ MAF and MfE, *Freshwater for the Future: Information Sheet* (April 2006) at 6.

³⁹⁶ Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 27.

5.10 INCENTIVES TO TRADE

Despite the many benefits of a tradeable water rights system there is the possibility that water users will simply not want to trade, choosing instead to hold onto their permits.³⁹⁷ A competitive market with a number of buyers and sellers is a necessary precondition for a water market regime to work effectively.³⁹⁸ As a result it may be necessary to employ other water allocation mechanisms in concert with tradeable water rights, and also to provide some incentives to trade. Councils could actively encourage transfers or take steps to educate and support water users in order to familiarize them with the system and its benefits.³⁹⁹

In order to facilitate the trade in quotas under the QMS, an electronic nationwide ‘Quota Trading Exchange’ has been set up with brokers acting as intermediaries between traders.⁴⁰⁰ This trading facility allows fishers to make provision for short term quota needs quickly and easily.⁴⁰¹ Despite this provision most trades have in fact taken place privately with all trades being reported to quota managers.⁴⁰²

5.11 ALTERNATIVE WATER MANAGEMENT MECHANISMS

5.11.1 Use it or lose it policy

The ‘use it or lose it’ policy employed in the Tasman District involves reviewing existing consents and reducing allocations or cancelling permits where they are not fully used

³⁹⁷ For example in the Oroua Catchment there was some indication that permit holders were not willing to transfer their water as they wanted to keep it in reserve because they were uncertain as to when they might need it in the future. Other users may have held onto their permits in order to sell them during a drought where they could demand a higher price. MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 14.

³⁹⁸ A competitive market envisages a large number of traders without a small minority monopolizing the market. D E Fisher, “Markets, Water Rights and Sustainable Development” (2006) 23 EPLJ 100 at 105.

³⁹⁹ MAF and MfE, *Transferable Water Permits: Two Case Studies of the Issues* (December 1997) at 16.

⁴⁰⁰ Turner, Pearce, Bateman, *Environmental Economics* (1994) at 187

⁴⁰¹ Page, *The Quota Management System: a study of the implementation of a property rights model* (31 March 1994) at 57.

⁴⁰² Turner, Pearce, Bateman, *Environmental Economics* (1994) at 187

during a dry year.⁴⁰³ Despite freeing up water this approach can devalue the property the water allocation relates to if a review results in the removal of a user's permit. It can also undermine the relationship between the Council and users and amongst users themselves, as many users see it as unnecessarily interventionist.⁴⁰⁴ This policy may also result in the wastage of water as some users attempt to use their full allocations in order to keep their full permit.

5.11.2 Storage

Maximum water allocations limits have only been reached in some parts of New Zealand therefore there is potential for the continuation and extension of water use in a number of areas. Some regions such as Canterbury have adequate water to meet foreseeable needs but it is in the 'wrong place at the wrong time'.⁴⁰⁵ Investigations into the use of storage have been made in Canterbury under the proposed Central Plains Water irrigation scheme.⁴⁰⁶

5.11.3 User pays options

There is some possibility for the use of 'user pays' options such as water charging. Charges based on the amount of water a permit holder uses could allow some cost recovery from permit holders for the water management services that councils provide.⁴⁰⁷ There are potential benefits from this option, but investigations into its use have already invoked considerable criticism amongst some farmers.⁴⁰⁸ Opposition to this type of mechanism can also be seen with the contentious resource rentals under the QMS.⁴⁰⁹

⁴⁰³ See Chapter 3, paragraph 3.2. Fenemor and Sinner, *Institutional Inertia? Case Studies of Transferable Water Permits in New Zealand* (December 2005) at 10.

⁴⁰⁴ Ibid at 13-14.

⁴⁰⁵ Doak, "Tradeable Water Permits" (April 2002)

⁴⁰⁶ The scheme would involve the channeling of river water into an irrigation network where surplus flows would be stored in a reservoir, which would effectively act as a water bank to provide water for irrigation during times of drought and low river flows. D Crombie, *Water woes solution* (The Press, 30 March 2006)

⁴⁰⁷ Such charges could be reduced where it is evident that a user has complied with water efficiency, water measurement and water quality management. B Jenkins, *Water: lifeblood of the Canty region* (The Press, 31 March 2006)

⁴⁰⁸ A Scott, *User-pays water pressure rising* (The New Zealand Farmers Weekly, 12 June 2006)

⁴⁰⁹ See paragraph 5.1.1.

5.12 CONCLUDING REMARKS

The above analysis demonstrates that it would be possible to implement an enhanced tradeable water rights regime in New Zealand, but also that there are a number of important considerations to be worked through first. Tradeability will not solve all the water management problems in New Zealand, but if used in conjunction with other mechanisms such as storage it would have a place in relieving a significant amount of the stress placed on water resources around the country.

It has been said that "...tradeability cannot be viewed as a panacea but may be instigated...when the necessary conditions of full allocation, defined property rights, plus willing buyer and seller come to pass."⁴¹⁰ The major issues facing the implementation of a water market appear to be administrative issues, such as the initial distribution of permits, the nature of water permits, monopolisation of the market and environmental concerns such as the effects of increased efficiency on water resources. This analysis has not attempted to make policy choices between the different options for dealing with such problems, but has identified a number of alternatives that may be useful in future consideration. It is clear that given the number of interested parties involved in this issue and the wide variation of the values they hold, extensive consultation will be necessary during the planning process for any reforms in order to produce a workable system.⁴¹¹

⁴¹⁰ Doak, "Tradeable Water Permits" (April 2002)

⁴¹¹ Hahn and Hester, "Marketable Permits: Lessons for Theory and Practice" (1989) at 400.

CONCLUSION

The ability of New Zealanders to take and use our country's water resources is of paramount importance. In recent years this has come under threat so steps must be taken to protect this finite resource, one of which may be the use of tradeable water rights.

The main reason the tradeable water rights issue has recently resurfaced is due to a number of water resources around New Zealand reaching full and over allocation as a result of increasing demand from resource users and the effects of climate change. Tradeable water rights have been promoted for use as an alternative to or in conjunction with regulation as a means of alleviating pressure on water and increasing efficiency of use. The RMA currently makes some provision for tradeable water rights, but as of yet their practical implementation has been severely limited.

Australia recently underwent a series of national policy reforms which have led to the establishment of different tradeable water rights systems in various states. Some aspects of these may be useful for application in the New Zealand context. New Zealand's experience with the QMS also provides some lessons that may be taken on board in enhancing a tradeable water rights regime here.

Drawing on the experience so far with water allocation in New Zealand and Australia and with fisheries under the QMS, some conclusions can be drawn about obstacles and important considerations for New Zealand if steps are taken to implement an enhanced tradeable water rights regime. Significant issues such as how to initially distribute tradeable permits and exactly what rights water permits will confer on users need to be addressed in order for such a system to operate effectively. Difficulties are likely to be encountered with monopolisation of the market by small groups of users and Treaty of Waitangi claims. The environmental effects of increased efficiency of use due to trading also need to be taken into consideration. Given the potential for market failure and the limitation of such systems to areas that are fully allocated, the most appropriate path may

be to implement tradeable water rights regimes in conjunction with other water management mechanisms such as storage dams.

I have given some indication as to potential solutions for these matters, but I have not attempted to make policy choices on where the direction of New Zealand water management should lie. One conclusion can be drawn with certainty however, and that is that the present situation is unsustainable, and change is necessary in order to ensure that this valuable resource is preserved for the enjoyment of future generations.

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