

REACHING SUSTAINABLE MANAGEMENT OF FRESH WATER

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INTRODUCTION

The theme of this conference is: “Sustainable freshwater management: Are we there yet?”

My response is No, we are not there yet; but Yes, we can reach sustainable management of fresh water if, as a nation, we apply ourselves and persevere.

We will need to keep focused on the elements of sustainable management. In particular, we will need to phase out contamination from urban runoff and diffuse sources leaching through soil, as well as from point sources; we will need to phase out over-allocation; we will need to protect our few remaining wetlands; and we will need to integrate more fully land use and activities with managing water. These tasks will need using the Act, and the science, smartly and resolutely.

PRESENT CONDITIONS OF FRESH WATER

Development of these islands involved burning huge areas of natural vegetation, resulting in considerable erosion of steep country, and clogging of natural life in rivers and streams.

For many decades drainage of natural wetlands to increase areas in pasture was encouraged, despite the harm to natural life. The extent of the wetlands remaining is only about 10% of that in 1840.

Mining, and particularly mining for gold and for coal, was once a major industry and involved disturbance of large areas of ground. Runoff from ground disturbance, dumps of overburden, and tailings containing toxic materials, were discharged into streams and rivers, some designated as sludge canals. The resulting contamination caused considerable harm to the natural life of freshwater bodies, as well as to that of coastal waters. Some of that water is still contaminated.

The natural dynamic levels of several major lakes are considerably altered by regimes for hydro-electricity generation. The sequences of flows and freshes of several major rivers are also considerably altered by hydro dams, and by taking water for irrigating crops and pastures.

Many hydro schemes were established without thorough consideration of many of the elements indicated by Parliament’s current definition of sustainable management. I am

unaware whether or not irrigation schemes of the past involved rigorous consideration of effects on the freshwater environment.

In many urban districts it was, and in some it still is, regarded as acceptable to discharge to fresh water contaminants in stormwater, including runoff from roads and (in wet weather) even raw sewage. Water quality is generally poorest in rivers, streams and lakes in urban areas.

Throughout the country, pastoral farming has involved grazing of animals and application of quantities of artificial fertiliser. In several lowland areas, high stocking rates of cattle, and high application of artificial fertiliser, have resulted in surplus nutrients leaching through soil and ending up contaminating fresh water. In some pastoral catchments, the quality of fresh water is continuing to deteriorate further.

Credit can be taken for considerable reduction in point-source contamination in many regions.

Even so, the outcome is that now, in 2010, more than 40 years since the Water and Soil Conservation Act came into effect, and nearly two decades since the Resource Management Act commenced, the condition of much of our fresh water is disappointing.

PROMOTING SUSTAINABLE MANAGEMENT OF FRESH WATER

The cardinal criterion for managing our natural and physical resources is promoting their sustainable management, as described in Part 2 of the RMA. That sets the standard of what management of resources is acceptable.

The starting point is the description in section 5(2), which in every context should be applied consistently with any relevant provision in the following sections of Part 2.

The text of section 5(2) is well known to this audience. The first element is about managing resources in a way, and at a rate, which enables people and communities to provide for their social, economic, and cultural well-being, and for their health and safety.

The second element has three parts: sustaining the potential of resources to meet future needs; safeguarding the life-supporting capacity of air, water, soil and ecosystems; and avoiding, remedying or mitigating adverse effects on the environment.

The relationship between those two elements is identified by the word “while”. Managing for enabling well-being is sustainable *while* it sustains, safeguards, and avoids, remedies or mitigates.

I understand that in the context, “while” means “at the same time as”.

The intent seems to be that if an activity enabling wellbeing does not at the same time sustain, safeguard, and avoid, remedy or mitigate environmental effects, it does not qualify as sustainable.

As with other legislation of this generality, applying this criterion depends on the context. For example, applying it to urban development activities (new suburbs, shopping centres,

supermarkets) may call for balancing of conflicting values. But managing limited natural resources needs a more robust approach.

That approach is indicated by the directions of national importance to everyone exercising functions and powers under the Act.

The first is the direction to decision-makers in section 6(a) to recognise and provide for the preservation of the natural character (relevantly) of wetlands, lakes and rivers. So consenting to a regime of levels and flows that significantly departs from the natural regime would conflict with that direction of national importance.

Another relevant direction is in section 6(c) for the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna. Significant indigenous life in freshwater is not protected if alterations to levels or flows, or contamination, threatens continuation of the extent, or even the existence, of those populations. There is further support in section 7(d) directing particular regard to intrinsic values of ecosystems, and section 7(h) about the protection of the habitat of trout and salmon.

Section 6(e) is another direction that should be considered in understanding how section 5(2) is to be applied in respect of fresh water. Functionaries are obliged to recognise and provide for the relationship of Maori and their culture and traditions with (relevantly) their ancestral water and so on. That relationship does not preclude activities associated with freshwater for a range of purposes for people's wellbeing. But activities that alter the flows and levels of freshwater, or result in contamination of it (especially by human waste, even though treated) directly conflict with Maori traditional cultural relationships with their ancestral water.

A further relevant provision of Part 2 is section 7(a), which mandates having particular regard to kaitiakitanga. That concept expresses the traditional responsibility of the people of a locality for the health of the natural resources, including fresh water. Consenting to activities that would harm the health of those resources would defy the direction to have regard to kaitiakitanga.

I return to section 5(2) and how it is to be applied to activities that would alter flows or levels of fresh water, or would result in it being contaminated.

The second element is to be fulfilled during the same time as managing the freshwater resource in a way or at a rate which enables people and communities to provide for their well-being.

Fulfillment of all three parts is involved. Mitigation of adverse effects, or remedying of them, is not sufficient unless the potential of the fresh water to meet the reasonably foreseeable needs of future generations is sustained; and unless the life-supporting capacity of the water, and of ecosystems associated with it, is safeguarded.

Whether those general thresholds are passed can be tested by considering the relevant indications in sections 6 and 7. Would the natural character of wetlands, lakes and rivers be preserved? Would significant indigenous vegetation and significant habitats of indigenous fauna be protected? Would intrinsic values of ecosystems, and the habitat of trout and salmon be protected? Would the relationship of Maori and their culture and traditions with

their ancestral water be provided for, or would it be undermined? Would kaitiakitanga be able to exercised?

None of those elements detracts from assessment of the enabling values of the first element. A proposal may be expected to create thousands of jobs, generate major quantities of renewable energy, produce large export earnings, and yield substantial profits. In those respects it may fulfil provisions of section 7 about efficient use and development of natural and physical resources, and in some cases also the benefits to be derived from the use and development of renewable energy.

Even so, it can only qualify as *sustainable* management of fresh water resources affected if, at the same time, it fulfils all three parts of the second element, understood consistently with the other provisions of Part 2.

The Act does not provide that interference with natural lake or river regimes, or contamination of fresh water from urban or rural activities, is to be endured because it serves economic well-being.

All the consideration of this conference about allocation of fresh water among competing demands or classes of activity needs to be informed by applying the standard of sustainable management.

MANAGING FRESH WATER FOR ENABLING WELLBEING

There are numerous important ways in which fresh water may enable people and communities to provide for their social, economic and cultural well-being and for their health and safety:

- As domestic drinking and washing water
- As an object of relationship of Maori culture and traditions, including symbolic significance and mauri, wahi tapu, wahi taonga, kaitiakitanga, source of mahinga kai, and means of travel
- As an object of emotional, and aesthetic, value by public generally
- As scenery, setting, and contributing to a sense of well-being and of attractiveness for holiday and tourism
- As an object for recreation and tourism : boating, swimming, rowing, fishing, and game birds
- For commercial fishing, including salmon, eels, whitebait
- For town and community requirements for water
- For hydro-electricity generation
- For irrigation for agriculture (including livestock drinking water) and horticulture
- For process water for industrial activities
- As an object for drainage for disposal of stormwater, effluent from sewage treatment works, and excess sewage in wet weather
- For cleaning, dilution and disposal of waste from other industries and activities.

Stormwater and sewerage reticulations are critical to the health of people in urban communities. Many municipalities are committed to very costly programmes of capturing wastes, even in wet weather, to mitigate risk of contamination of fresh and coastal waters.

Hydro-electricity is highly valuable as a renewable source of about a third of the nation's electricity.

The dairy industry is said to be worth 10 billion dollars a year in exports, providing premium quality food to a world that needs it. The industry accepts that emissions from its activities is a serious issue, and it is addressing it seriously. The industry also knows that continued irrigation is dependent on using the water wisely, and is adopting smart ways of avoiding it being contaminated.

MAORI TRADITIONAL RELATIONSHIP WITH FRESH WATER

Questions of Maori ownership of fresh water, and rights of Maori to governance and management of it, are being discussed in this conference. My part is confined to the application of the RMA. That includes the nationally important recognition of, and provision for the relationship of Maori, and their culture and traditions, with their ancestral water, waahi tapu and other taonga; and having particular regard to kaitiakitanga.

Fresh water has symbolic significance. I have already mentioned the concepts of mauri, waahi tapu, waahi taonga, and kaitiakitanga; fresh water being a source of mahinga kai; and a means of travel.

Fresh water can be managed in a way, and at a rate, that responds to the Maori relationship in those ways. But the concepts of mauri and kaitiakitanga in particular emphasise the importance of the second element of sustainable management.

Managing fresh water for enabling well-being in ways, or at rates, that do not fulfil the goals of sustaining, safeguarding, and avoiding, remedying and mitigating of environmental effects, can damage the relationship by depriving the water of its mauri, and depriving kaitiaki of real opportunities to carry out their responsibilities.

So anyone exercising functions or powers under the RMA is obliged to address these issues and ensure that in substance the outcome of their part does recognise and provide for the relationship, and that it shows particular regard to kaitiakitanga.

BIODIVERSITY VALUES OF FRESH WATER

I have nothing new to contribute on this topic.

The conference is considering the question whether we have reached sustainable management of our fresh water resources yet. As we approach answering that question, we are to promote enabling people and communities to provide for their health and well-being, sustaining the potential of fresh water to provide for future needs; and safeguarding the life-supporting capacity of water and ecosystems. In doing that we have also, as a matter of national importance, to provide for the protection of areas of significant indigenous

vegetation and of significant habitats of indigenous fauna. Those duties are relevant because the natural resources of fresh water include ecosystems supporting the diversity of indigenous vegetation and fauna.

In this context, vegetation includes phytoplankton (including algae); macrophytes and periphyton; fungi and bacteria. They are all integral to healthy freshwater ecosystems.

Indigenous fauna whose habitats are fresh water include about 40 species of native fish, 25 of which are not found elsewhere: galaxiids, eels, crayfish. There are also introduced fish species; hundreds of insect species, and hundreds of other kinds of invertebrate. Fresh water provides habitats for some species of birds too.

Management of fresh water is only sustainable if areas of these indigenous freshwater vegetation species, and habitats of indigenous fauna associated with fresh water, are maintained in a healthy state in their diversity and abundance. Our management of freshwater resources is not sustainable if those species are threatened with extinction (as some presently are).

The present increasing loss of biodiversity is largely due to fragmentation and loss of habitats, resulting from human impacts, including climate change. Those losses cannot be dismissed as being only of academic interest, because biodiversity is important for our health and well-being, and those of future generations. Biodiversity provides valued ecosystem services; food web stability and resilience; and valuable genetic resources for future food and medicine. It contributes to our evolutionary and genetic heritage; and in all these respects it also underlies Maori traditional relationships with their ancestral water and taonga.

CLIMATE CHANGE

I am not qualified to present a scientific paper on the present changes to the climate, or their likely impact on managing fresh water sustainably. This is just a brief and general reminder that the environment in which fresh water is to be managed is not stable but dynamic.

There are two aspects:

How is climate change likely to affect fresh water resources? and

How will those effects impact on sustainable management of them?

I understand that the likely changes to New Zealand's climate would affect fresh water by:

- increased frequency and intensity of storms and of rainfall in some regions, particularly in the west of the country
- decreased rainfall in other regions, particularly in the east
- higher mean temperatures.

Even if we could be reasonably satisfied with the present *condition* of our fresh-water resources, the present changes in our climate are likely to have growing impacts on its sustainability.

How will those effects impact on our sustainable management of fresh water?

- Due to higher temperatures, snow and frost is likely to be less frequent, and the quantities of water stored in glaciers and snow cover are likely to be reduced
- Significant loss of biodiversity in alpine areas is predicted
- The annual flows of large rivers rising in the Southern Alps are likely to increase
- The hydrological regimes of many rivers are likely to alter, with more frequent and bigger floods
- Change in flooding regimes are likely to affect the functioning of wetlands in their nutrient dynamics and their habitat support
- Lower availability of water in spring and summer would reduce quantities available for irrigation
- Decreased rainfall in eastern areas is likely to diminish groundwater and exacerbate drought conditions
- Associated with rising mean sea level, this could lead to saltwater infiltration of groundwater resources near the coast
- Increased temperatures and evaporation are likely to lead to drying out of soil and vegetation, to reduction of stream flow, to communities moving upstream, and to spread of invasive species
- Increased temperatures and reduced rainfall are likely to have significant effects on wetlands, including drying, resulting in invasion by non-wetland species
- The resilience of many freshwater species is likely to be exceeded, and many species of freshwater fauna and flora are at risk of being restricted in range, and their habitats fragmented
- Erosion of soil is likely to be more frequent and extensive, resulting in considerable contamination of rivers to which they drain.

IMPACTS OF LAND USE AND OTHER ACTIVITIES

Degraded conditions of fresh water may result from direct discharges of contaminants. Degraded conditions may also result, less directly and less intentionally, from various uses of land and other activities.

In urban areas, contamination results from stormwater runoff from roofs, roads, parking areas and other impermeable surfaces; also from clearance of vegetation cover (as in land development). Particles carried in runoff contribute to enhanced turbidity; and to contamination by chemical and other toxins. These reduce the suitability of fresh water to support healthy aquatic life and ecosystems associated with it. They also reduce the intrinsic value of the water for Maori cultural needs, for its aesthetic value, and for its value for recreation.

In rural areas, fresh water can be degraded as a result of agricultural and horticultural activities. Chemicals applied as fertilisers, and droppings from livestock, can leach through the soil and (sometimes much later) enter diffusely into fresh water. These can also reduce its life-supporting ability, adversely affect its ecosystems, and reduce intrinsic, aesthetic, tourism and recreation values.

Those effects may be aggravated by artificial reductions in the quantities of water in lakes and rivers. Reductions can result from abstractions for irrigation of farms and orchards, and for industrial activities, and as a result of damming for hydro generation or for seasonal storage for irrigation.

Harm, damage and loss resulting from larger and more frequent floods in changing climatic conditions can also aggravate the degradation of lakes and rivers, particularly in turbidity following land erosion.

Clearance of forest cover can also result in soil erosion effects degrading fresh water.

The RMA entrusts to regional councils functions for giving effect to the Act in their regions. Relevantly, those functions include the control of the use of land for soil conservation; for maintenance and enhancement of water quality; and for maintenance and enhancement of ecosystems in water bodies.ⁱ The functions remitted to regional councils also include the control of discharges of contaminants into or onto land or water.ⁱⁱ Further, the councils are enabled to have objectives, policies and methods for maintaining indigenous biological diversity.ⁱⁱⁱ

The concept of cumulative effects^{iv} recognises that effects which in themselves may seem insignificant or minor can contribute to major degradation by continuing over lengthy periods or by combining with other effects. Because the accumulation in time or combination can lead to major impacts, the Act does not absolve urban or rural activities which result in effects that in themselves may be thought trivial. Nor does the Act excuse activities resulting in contamination by setting off environmental harm of the contamination against improvements elsewhere in a catchment resulting in what may be called net improvements in water quality. That set-off concept would conflict with the essence of sustainability. It would also put at risk effective practical control of activities leading to contamination.

Claims that a particular lake or river is capable of assimilating contamination without adverse effects on ecosystems have to be approached with a questioning attitude, because important cumulative effects may not be apparent, and may be overlooked. Allowing an activity that contaminates the freshwater environment in return for some kind of trade-off or set-off is problematic. It could lead to double standards favouring activities that are well-resourced (sometimes from use of natural resources) over intrinsic values that are not readily measurable in money's worth, and which cannot compete in that measure with profitable commercial activities.

If it is ever sustainable to use fresh water for cleaning, diluting or disposing of waste, it can only be where, after careful assessment of lag times and cumulative effects, there is positive assurance that the life-supporting capacity of the water and of associated ecosystems, and the potential of the water to meet reasonably foreseeable needs, will not be diminished. Assessment of that question has to be made according to relevant principles in the rest of Part 2, including avoiding, remedying or mitigating any adverse effects of activities on the environment.

Regional councils' control of land use for water quality and ecosystem health can lead to the integration that is necessary to reach sustainable management.

LIMITS TO ABSTRACTION AND DIVERSION

Fresh water can be managed to enable provision for well-being, health and safety, while sustaining its potential for future needs, and safeguarding its life-supporting capacity and that of associated ecosystems. Sustainable management of fresh water is critical to being able to realise that capability in future. Nationally important instances are the preservation of the natural character of wetlands, lakes and rivers and their margins, the protection of significant indigenous vegetation and significant habitats of indigenous fauna associated with fresh water, and the relationship of Maori with their ancestral fresh water.

Taking too much water from lakes and rivers would imperil the many and various values and needs of fresh water for providing for wellbeing, health and safety. Taking too much would as well imperil attaining the sustaining and safeguarding goals. Also, interfering too much with the natural changes of levels and flows would endanger the capability of fresh water to provide for wellbeing, health and safety, and the sustaining and safeguarding elements of sustainable management. In brief, for sustainable management, interference with the natural levels and flows of fresh water has to be closely limited.

As mentioned, Parliament has entrusted regional councils with control of the use of *land* for the maintenance of the quantity of water, and for the maintenance and enhancement of ecosystems in water bodies.^v

Consistent with the need to limit interference with natural patterns of changes in occurrences and movements of fresh water, Parliament has also entrusted regional councils with control of the taking, use, damming, and diversion of water, and control of the quantity, level, and flow of water in any water body, including setting maximum and minimum levels or flows, and the range, or rate of change, of levels or flows.^{vi} In addition, Parliament has specifically empowered regional councils to allocate (by rule) the taking or use of water;^{vii} and to have objectives, policies and methods for maintaining indigenous biological diversity.^{viii}

People and communities make use of water for well-being, health and safety. The important uses include town supplies, irrigating pasture and horticultural crops, renewably generating electricity, food processing industries, and so on. Some claim that the benefits of those activities justify greater interference with levels and flows, and deny that their activities significantly affect the environment.

However even small weirs for “run-of-river” generating can impact on the health of ecosystems. Many major dams were built in times when impacts on the health of lake and river ecosystems, and consequential impacts, were not fully analysed.

A water body may be able to tolerate some abstraction, diversion, or interference with the natural pattern of changes of levels and flows while still qualifying as sustainably managed. But the manner and rate of interference with its natural regime that can be tolerated has to be prudently considered in respect of each water body and catchment, and the conditions that would apply to the proposed abstraction, diversion, or other interference.

The Act does not support a practice of assuming that some toleration of interference will be sustainable unless the contrary is proved. Judgement of an acceptable extent of interference can be assisted by contents of a national or regional policy statement and a regional plan.

There is no formal burden of proof on an applicant for a water permit or other resource consent. However a consent authority can only grant consent if it is satisfied that the manner and rate of interference promotes sustainable management of the fresh-water resource. So absence of evidence that proposed abstraction, diversion, or other interference with natural levels or flows would be unsustainable does not justify granting a permit. Rather, *unless* a consent authority is positively satisfied that exercise of the permit sought would be sustainable management of the resource, it should refuse consent.

COMPETITION FOR FRESH WATER

Introduction

There can be much competition for fresh water. There may be claims for hydro generation; for irrigation for agriculture and horticulture; for urban water supplies; for aquaculture; for industrial processes (including mining and quarrying); and for cleaning, diluting and disposing of waste. As soon as considerable amounts of water are used for those kinds of purpose, needs arise for limiting them, so enough water is left for intrinsic values; cultural values (including sustaining the mauri of the lake or river); recreational values (including fishing and boating); and aesthetic values.

Competition among claims of those kinds for water in a particular water body can be resolved by a “first-in” concept, by which whoever, or whichever class of activity, was taking or using the water first has preference over other people or activities. Historically, mining, hydro, rural irrigation and urban water supplies have gained advantage by application of a “first in” concept, and by invoking the related concept of non-derogation from current grants. Intrinsic, cultural, recreational and aesthetic values seem not to be explicitly allowed for in these concepts (even though some of them will generally have pre-dated taking, even for mining).

Competition might also be resolved by a market, in which economic values would largely prevail over the others. For instance hydro generation and irrigation, yielding substantial monetary returns and calling in aid being renewable and food producing respectively, could command much of the fresh-water resource. That might be at the cost of intrinsic, cultural, recreational and aesthetic values, which may end up with less that they need.

Case law

In three cases over the last 15 years, the higher courts have described the law about this.

In *Fleetwing Farms v Marlborough District Council*^{ix} the Court of Appeal held that priority is to be decided on a “first come, first served” basis, without comparison between competing applications, and that each application is to be considered individually on its own merits.

In *Aoraki Water Trust v Meridian Energy*^x the High Court agreed that the Court of Appeal’s “adoption [in *Fleetwing*] of the ‘first come, first served’ approach where there is competition for the same resource would be pointless unless it meant that the first permit in time of grant also had priority in terms of right to use the resource.”^{xi}

Justices Chisholm and Harrison also held that “a consent authority is not entitled to deliberately erode the grant unless it is acting pursuant to specific statutory powers”,^{xii} and

that “unless power exists elsewhere ... overallocation of a resource would be inconsistent with the principles set out in Part 2, to which section 104(1) is expressly subject.”^{xiii}

The Court identified statutory provisions that might arguably empower the Regional Council to derogate from the grant(s) in Meridian’s favour. They include the power to include in a regional plan a rule relating to maximum or minimum levels of flows or rates of use of water even though this may affect the exercise of existing consents (citing section 68(7)).^{xiv}

The learned Judges found that in the section 14 context, “authorisations by way of a rule in a regional plan and by way of a resource consent are on an equal footing”.^{xv} They identified exceptions to that where a regional rule on maximum or minimum levels or flows or rates of use of water is by section 68(7) expressed to affect exercise of existing consents for activities which contravene the rule,^{xvi} in conjunction with review of the consents under sections 128-132.^{xvii}

In *Central Plain Water Trust v Ngai Tahu Properties*,^{xviii} the priority principle identified in *Fleetwing* was not itself in issue. The question in that case related to how the “first come, first served” principle was to be applied to the facts of that case. Even so, dicta of both Justices Hammond and Baragwanath touched on what they considered desirable attributes of a priority policy that the “first come, first served” approach does not have.

Justice Hammond described that policy as a “bureaucratic solution”, and as a “simplistic yardstick”^{xix} which is problematic when viewed in the light of legal history.^{xx} He suggested:^{xxi}

...when the needs of proprietors are known in advance the ideal rule is to allocate water resources in proportion to their particular needs. It is only when the proprietors —actual or anticipated— are not known in advance that a “fall-back” rule is required. Then, and in that situation, a priority rule can allocate the resource to the first user, and compel later users to pay the first user for any resources they wish to divert. But in fundamental principle, a priority rule should not be the priority rule.

Justice Baragwanath remarked that the high policy of ensuring sustainable management must weigh heavily in assessing what priority regime accords with Parliament’s policy.^{xxii} The Judge considered that it would infringe fundamental policies of the RMA if a major complex development proposal for which a whole resource is sought could be frustrated or significantly interfered with by later small, simpler, inconsistent proposals that are able to be made comprehensively, not in stages.^{xxiii}

So we have high authority that under the Act, priority in terms of right to use the resource is to be governed by the “first-come, first-served” concept. There are also dicta deserving respect that recognise deficiencies in using that policy alone for resolving competition for a fresh water resource.

Discussion

In the RMA context, the resolution of competing claims to water permits should be substantially influenced by the overarching purpose of the Act.

On priority to use a resource, that calls for management of fresh water to be strongly influenced by other concepts than who applied first:

- The first concept is sustaining the potential of fresh water resources to meet future needs;
- The second is the imperative of safeguarding the life-supporting capacity of freshwater, and that of ecosystems associated with it;
- Thirdly, freshwater management has to be influenced by the national importance of providing for the preservation of the natural character of fresh water and its protection from inappropriate use etc;
- Fourthly, management has to be influenced by the national importance of providing for the relationship of Maori, their culture and traditions, with their ancestral waters and taonga;
- Fifthly, it is to be influenced by having particular regard to kaitiakitanga.

However the reasoning for the “first-in first-served” concept for substantive priority for fresh water, and the reasoning for applying the non-derogation from grant concept for resolving competitive claims for water, do not seem to be derived from, or influenced by, those concepts.

So applying the “first in, first served” policy alone would, as Justice Hammond said, be problematic if competing claims for water are to be decided on individual applications scattered in time and locality. Justice Baragwanath was surely right in assigning heavy weight to the high policy of ensuring sustainable management in assessing what priority regime accords with Parliament’s policy.

However the Act does provide more than the “first-in, first-served” concept for dealing with competing claims for fresh water. It provides more according to the principle of sustainable management. What the Act does provide is the well-established use of schemes or plans prepared by and for districts and regions. These plans (as they are called in the RMA regime) are integral to the intended operation of the Act. They are prepared for achieving the sustainable management purpose of the Act. They are to give effect to national and regional policy statements; and are not to be inconsistent with a water conservation order.

Regional plans are developed by a well-tried process in which a draft or proposal is published. Anyone can lodge a submission about its contents; anyone can support or oppose a submission; an elected public body, or its delegates, hears the submissions in a public and quasi-judicial process, and gives public decisions with reasons. Any submitter can appeal to an independent special court. This is a reputable process, being inclusive, open, and based on evidence and reason.

The content of the plan has, of course, to be designed to promote sustainable management of the natural and physical resources affected. Objectives, policies and rules are stated. Relevantly, a plan can address management of fresh water, and competing claims for it. It should do so in ways that respond to the physical, cultural, ecological, economic and social circumstances of the catchment. It should do so in response to needs of people and communities for providing for their well-being, health and safety.

Such plans, developed in those ways, are the intended method by which numerous separate applications for water are to be considered and decided. The intended outcome is that each decision individually, and the total body of decisions collectively, is, and can be seen to be, made to give effect to Part 2, and to objectives and policies in national and regional policy statements.

A regional plan can, by policies and rules, allocate fresh water to various classes of activity or use, applying Part 2 to the conditions of the region or part of it to which it applies. A consent authority would have regard to those allocation policies and rules in deciding each resource consent application individually on its own merits. It would not compare a proposal with competing proposals. In accord with the law, if more than one application relating to the one resource is current at the same time, the consent authority would give priority to deciding that which was first, before considering later applications. That accords with the higher court judgments mentioned.

In short, the Act does not need to be further amended to make provision for resolving competition for water permits. Rather, to attain sustainable management of fresh water, the intention of the Act should be fully applied.

AVOIDING WASTE OF FRESH WATER

Although in general fresh water may be considered a renewable resource, its availability is limited in places, at times and seasons. A likely result of climate change is that in future even less fresh water may be available in those places and at those times and seasons. Use of water infrastructure designed and installed in times of perceived plenty may result in wastage, including leakage and evaporation.

This provides a challenge to adapt to reduced and more variable water supplies, for renewable generation, sustainable production, and for supporting the health of lakes, wetlands, rivers, and their ecosystems. Ingenious methods need to be devised and adopted to supply towns and communities, generate hydro electricity, and manage pastures and crops.

Plans and decisions made under the RMA can be expected to seek reduction in wastage of water, in limiting consented quantities to no more than the minimum for effective production, in requiring physical infrastructure that minimises wastage from leakage and evaporation, and in mandating accessible metering.

GOVERNANCE AND MANAGEMENT

Finally, I have been asked to address governance structures under the Act.

I have nothing to say about the past or current arrangements in any region in particular. The only contribution I can make on this topic is to identify the governance and management tasks expected by the RMA, and the personal qualities those tasks call for. I leave it to others to consider whether the classes of public body to which Parliament has entrusted these functions are those best equipped to perform them in the public interest and for achieving the purpose of the Act.

Everyone who exercises functions under the RMA has to do so for the single purpose of promoting sustainable management of the natural and physical resources involved. That applies to all the governance and management functions.

Of course those functions have also to be done within the scope of those devolved on the particular class of body, and in accordance with other directions in the Act. They have also

to be carried out for achieving the objectives, and applying the policies, in applicable national instruments made under the Act.

For the present purpose I emphasise that the function is to be carried out for the *public* interests embodied in the purpose, and in those objectives and policies. The functions are not to be done for *private* interests, however worthy.

That means that those entrusted with governance or management have to genuinely apply themselves to those public interests. They are to exclude any personal predisposition, priority, or political agenda inconsistent with them. They have to avoid advancing or favouring the interests of any section of the population at the cost of the public interest generally in sustainable management of the environment. Also, they have to avoid burdening any section of the public unfairly.

Exercising functions under the Act calls for impartiality, and for independence.

Impartiality involves that a decision-maker does not favour, nor oppose, any party (proponent or opponent), or may reasonably be thought to do so because of association with a party.

Independence involves that freedom from being influenced in doing the task so that *every* party, if fully informed, would be willing to entrust to that person the decision of an issue affecting them.

Governments, major industries, interest groups, may sometimes find plans or decisions under the RMA inconvenient or troublesome. They may try to circumvent or postpone the effects. But it is a *right* of the parties, and of the public generally, that those entrusted with governance, and with management, under the Act are truly independent.

Those functions should be based on contestable evidence and on reason. There is no place for emotion, for personal or political agenda, or for being overborne by a well-resourced or otherwise influential party. So they should be entrusted to people who, by training and practice, are able to exclude improper and irrelevant influences, and can discipline their minds in a process of reason for achieving the prescribed purpose.

Multi-disciplinary bodies or panels can have double value. The separate disciplines of the individuals assist a panel's understanding of the issues, whether technical or social. A combination of trained minds helps assure a decision process that meets the required standard. Use of such bodies or panels can also afford opportunity for proponents and opponents to address the decision-makers themselves.

CONCLUSIONS

The theme of the conference asks whether we are yet at sustainable management of freshwater resources.

Fresh water is being managed in many valuable ways to enable people and communities to provide for their social, economic and cultural well-being and for their health and safety.

But there are important respects in which the management of fresh water is still not conforming to the elements of safeguarding the life-supporting capacity of water and associated ecosystems; is still not safeguarding the potential of freshwater resources to meet future needs; and is not avoiding, remedying or significantly remedying adverse effects on the environment.

There are shortfalls in imperatives that are classified as having national importance; in particular, those of preserving the natural character of water bodies; of protecting significant indigenous vegetation and significant habitats of indigenous fauna; and of providing for Maori traditional cultural relationship with their ancestral water and taonga.

Although there have been many advances, after a couple of decades the management of fresh water does not yet qualify as sustainable in some catchments and some respects. The likely effects of climate change will make the need to reach that standard more urgent, but more costly.

Experience shows that fuller integration of land use and activities with management of fresh water would help timely progress to reaching sustainable management.

We need to keep attention on urban runoff; on the full effects of abstraction and diversion for irrigation and generation; on extending planning allocation of water for which there may be competition; and on avoiding wastage.

My proposal is that under the RMA we can achieve sustainable management of fresh water by using the Act, and the science, more smartly and more resolutely.

That is achievable, and our own esteem of ourselves as a nation calls for us to keep on with progress in a determined way to sustainable management of our fresh water resources.

ⁱ S 30(1)(c).

ⁱⁱ S30(1)(f).

ⁱⁱⁱ S30(1)(ga).

^{iv} S3.

^v S30(1)(c)(iii) and (iiia).

^{vi} S30(1)(e)(i) and (ii).

^{vii} S30(1)(fa)(i)

^{viii} S30(1)(ga).

^{ix} *Fleetwing Farms v Marlborough District Council* [1997] 3 NZLR 257 (CA).

^x *Aoraki Water Trust v Meridian Energy* [2005] NZRMA 251 (HC).

^{xi} *Aoraki Water Trust v Meridian Energy* at [32].

^{xii} *Aoraki Water Trust v Meridian Energy* at [41].

^{xiii} *Aoraki Water Trust v Meridian Energy* at [51].

^{xiv} *Aoraki Water Trust v Meridian Energy* at [52].

^{xv} *Aoraki Water Trust v Meridian Energy* at [63].

^{xvi} *Aoraki Water Trust v Meridian Energy* at [64].

^{xvii} *Aoraki Water Trust v Meridian Energy* at [65].

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- ^{xviii} *Central Plain Water Trust v Ngai Tahu Properties* (2008) 14 ELRNZ 61; [2008] NZRMA 200 (CA).
- ^{xix} *Central Plain Water Trust v Ngai Tahu Properties* at [92].
- ^{xx} *Central Plain Water Trust v Ngai Tahu Properties* at [97].
- ^{xxi} *Central Plain Water Trust v Ngai Tahu Properties* at [97].
- ^{xxii} *Central Plain Water Trust v Ngai Tahu Properties* at [58].
- ^{xxiii} *Central Plain Water Trust v Ngai Tahu Properties* at [59], [78].