

# **CENTRAL GOVERNMENT MANAGEMENT OF THE FRESHWATER UNDER THE RESOURCE MANAGEMENT ACT – AN RMA PRACTITIONER'S PERSPECTIVE**

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## **Abstract**

The Resource Management Act (RMA) has been New Zealand's key environmental legislation since its enactment in 1991. It accorded wide ranging functions and powers to the regional councils and the Minister for the Environment to manage natural and physical resources. Freshwater is one of the critical natural resources locally and globally hence its sustainable management is critical. Since 1991, much of the freshwater management has been by the regional councils under their regional rules whose performances have been monitored by the Officer of the Auditor-General (OAG) on several occasions involving selected regions with recognitions for performance and recommendations for improvements.

Since 1991, whilst freshwater quality has been reported as improving in some polluted catchments, the overall trend has been declining water quality and increasing water allocation/use owing to intensifying urban and rural activities. Being much more effective and powerful than the regional councils in managing freshwater sustainably, how did the central government perform in the past 28 years? In the absence of a similar regional councils' audit by the OAG, there has been little or no reporting of the central government performance in the freshwater management. In this policy research paper, the author who has been implementing the RMA since its enactment provides his perspective of the central government management of the freshwater resources since 1991.

## **Introduction**

In the history of New Zealand, the period between 1987 and 1991 was most critical from the perspective of the local governance and the environmental management. Resource Management Act (RMA or the Act) was enacted in October 1991 shortly following the historical and the largest 1989 local government reform and the creation of the 12 regional councils (currently 16 with the inclusion of the unitary authorities Nelson, Marlborough, Tasman, Gisborne district councils and Auckland Council). Among the key central government reasons for the enactment of the RMA were absence of consistent resource management objectives, arbitrary differences between land, water and air, focusing on activities than end results and the monitoring of the law was uneven (MfE, 1997). The Act accorded substantial powers to the regional councils (functions listed under s30 of the RMA) and the Minister for the Environment (sections 24-27 of the RMA) to implement the RMA.

Of the natural resources managed under the RMA, arguably, the freshwater is the most critical natural resource globally and locally. How effective has been the freshwater management by

the central and local governments under the RMA to date? The performances of the regional councils in freshwater management have been audited by the Office of the Auditor-General (OAG) in 2005, 2011, 2018 and 2019 on selected regional councils, of which the 2018 audit involved irrigation water management. To my knowledge, there has been no OAG or a similar audit of the central government performance in freshwater management.

In the central government system, the Ministry for the Environment (MfE) has been empowered to advise the Minister for the Environment on all aspects of environmental administration under s31 of the Environment Act 1986. The State Services Commissioner (SSC) has been assessing the performance of various Ministries including that of the MfE every four years. However, SSC assessments consider wider functions of the MfE hence may not deal specifically and extensively with the performance on freshwater management effectively.

I was among the few privileged technical professionals who had the opportunity to implement the RMA hands-on since its enactment with my inaugural appointment as the council groundwater chemist by the Waikato Regional Council in 1992, later as Programme Manager, Waikato Regional Council (1994-2000) and Director Resource Management, Otago Regional Council (2001-2013). I believe I have been an active implementer of the RMA. Being outcome focused, I was involved in substantial regional industrial/sewage wastewater discharge (Selvarajah, 2012) and boiler upgrades (Bell and Selvarajah, 2013) and farm dairy effluent discharge improvement by regulations (Selvarajah, 1998 and 2010). My 21 years of working for the two regional councils in both Islands and still being involved actively with the RMA implementation as a consultant, trainer and author of numerous reports, papers and presentations related to the RMA, I believe I can provide an authoritative perspective of the central government's management of the freshwater resources.

### **Method of assessment**

In this paper, I have assessed any legislative changes, the use of the central government tools such as the National Policy Statements (NPSs), National Environmental Standards (NESs), regulations under s360 of the RMA and any actions and their timeliness, appropriateness, rigour, effectiveness and Minister for the Environment's duties, functions and powers under the Act and the use or lack of use of those powers with regard to freshwater management. I have also included the central government consideration of the principles of the Treaty of Waitangi under s8 of the RMA in freshwater management. I did not attempt to compare our central government performance with that of the other developed overseas nations or the OECD (The Organisation for Economic Co-operation and Development) countries since I believe the New Zealand environmental legislation (i.e. the RMA) and the framework within which it is implemented are significantly different. Because this is a conference paper not an audit, my assessment should be referred to as a perspective.

Given many of the participants of this conference or the readers of this paper may not be familiar with the legislative framework within which the freshwater resources are managed in New Zealand, I have attempted to synthesise essential information relevant to the legislative framework. Understanding at least the basic legislative framework is crucial in assessing the effectiveness in implementing the RMA in the context of the freshwater management. For the above reason, I have accorded a significant proportion of my paper to explaining the legislative framework (i.e. functions, powers, duties of the Minister for the Environment and the available central government instruments and how they operate under the RMA), followed by my perspective of the central government management of the freshwater resources since the enactment of the RMA (i.e. 1991).

## **The central government functions, powers and duties under the RMA and the legislative processes**

The central government functions and powers under the RMA with the freshwater management perspective have been accorded largely to the Minister for the Environment. Since its enactment in 1991, the Act has undergone many significant changes hence the central government functions and powers under the Act have been dynamic and fluid to date.

From the freshwater management perspective, the key functions and powers of the Minister for the Environment under s24-27 of the RMA are as follows:

- the recommendation of the issue of the NPS, NES and water conservation orders
- to decide whether to intervene or make a direction on a matter or proposal of national significance
- the monitoring of the effect and implementation of the RMA, NPS, NES and water conservation orders and the relationship between the functions and powers of the regional council and the Ministry
- the monitoring and investigation of any matter of environmental significance
- the consideration and investigation of the use of economic instruments to achieve the purpose of the Act
- to investigate the exercise or performance by a regional council of any of its functions and powers under the Act and if needed appoint one or more persons to perform those functions and powers
- to direct regional councils to review, prepare or change regional plans and
- to require information on powers, functions and duties or any other relevant information from regional councils

Under the New Zealand environmental management framework and the Environment Act 1986, the Ministry for the Environment (MfE) assists the Minister for the Environment in exercising much of the above.

New regulations and legislative changes are powerful tools to compliment the RMA effectiveness. Specific processes related to introducing or modifying regulations under the RMA are prescribed under ss43-55. The prescribed processes must be followed by the MfE in assisting the Minister during the entire process. Any recommendations for *regulations* (e.g. the NPSs and NESs) by the Minister (which are referred to as *national directions* in the RMA) following extensive public consultation may be decided by a delegated parliamentary committee and once decided by the committee the Executive Council (comprises of all Ministers of the Crown) will advise the Governor-General to give effect to the regulations by Orders in Council. The above process is different to amending or forming Acts of Parliament (e.g. amending or removing the RMA) where the entire parliament (i.e. Committee of the whole house) will be involved with the following processes: Introduction → First reading (including vote of approval) → Select Committee → Second reading (i.e. considering the Select Committee report and vote of approval) → Third reading (including vote of approval) and upon decision Royal assent (i.e. signing a bill into law) by the Governor-General.

## **A brief on available central government instruments to manage the freshwater resources *National Environmental Standards (NES)***

The National Environmental Standard (NES) is one of the most powerful national directions which under s43 of the RMA has evolved from being a quarter page provision in 1991 to 7-8-page provision between 2003 and 2017. The NESs may be developed for land use (s9), subdivisions (s11), coastal marine area management (s12), lake and river bed management

(s13), water take, use, damming and diversion (s14) and discharges to air, land, to land in circumstances contaminant can enter water and water (s15), regulating contaminants, air and water quality, water level and flow, soil quality in the context of discharge, noise and monitoring methods and standards. Unlike the policies and objectives promoted in the National Policy Statements (NPS), in my opinion, properly developed NES is the most powerful and effective central government tool to implement the RMA effectively.

An NES can permit, prohibit or consent an activity. It can apply nationally or be confined to one or several regions. It can be more stringent than the regional rules, bylaws and the water conservation orders (WCOs) but if lenient, the regional rules and the conservation orders prevail. Existing resource consents and designations prevail over an NES until lapsed/cancelled or reviewed. Under s44 of the RMA, the Minister has several steps to recommend the NES and must prepare an evaluation report under s32 of the RMA and publicly notify the proposed NES. Section 32 of the RMA (*Requirements for preparing and publishing evaluation reports*) is same for both the regional councils (for preparing or changing regional plans) and the central government.

The requirements of the evaluation report (which is known as the 'section 32' or 'cost-benefit analysis' report by the New Zealand planners) are extremely challenging and stringent. The report must specify the reasons for introducing the NES and its appropriateness and effectiveness in comparison to other alternative options, detailed cost-benefit analyses including any impacts on the economy, assessment of any risks of considering or not considering the chosen option when there is uncertain or insufficient information. The s32 report must be made available to the public at the time of notifying the proposal. If the proposal changes following the public notification or consultation of the NES, s32 report must be rewritten to correspond to the scale and significance of the changes and be made available to the public at the time of releasing the changed proposal.

Whilst the s32 requirements appear to be stringent and sensible, unfortunately, they are not enforced rigorously judging by the poor quality of most s32 reports to date. According to s32A of the RMA (*Failure to carry out evaluation*) the only opportunity to challenge the quality or absence of the s32 report is through submission to the Board of Inquiry which is appointed by the Minister under s47 of the RMA. Any legal challenges in relation to the central government process can be considered at the High Court. To my knowledge, no cases have been litigated in the High Court challenging the failure to carry out s32 evaluation or poor quality of the evaluation or the use of ill-prepared s32 report by the Board of Inquiry.

### ***National Policy Statement (NPS)***

The NPS being another national direction, under s45 of the RMA, the purpose of the NPS is to provide objectives and policies on matters of national significance. Policies can apply to a single region or the whole or part of the nation. The NPS objectives and policies must be regarded or included in the Regional Policy Statements or Regional Plans and must be considered when making decisions on resource consents under s104 of the RMA. An NPS can also provide direction to the regional councils on collection and publication of information to achieve the NPS objectives and monitoring and reporting on matters relevant to the NPS. The central government processes related to introducing or amending an NPS are same as that of the NES.

### ***Regulations under s360 of the RMA***

The regulations provision (s360) under the RMA has evolved into one of the largest in the RMA, from one page since the enactment to in excess of four pages currently. Regulations

under s360 of the RMA are significantly different to that of the regulations created under the national directions such as the NESs and NPSs. The original purpose of the s360 regulations was to introduce forms, fees (e.g. coastal occupation and consents), require resource use recording and provide any exemptions in the discharge provision (s15) of the RMA without extensive bureaucratic process. Recently, in addition to the above provisions, prescribing offences, infringement fees up to \$2000 for stock access to waterways offences and up to \$1000 for other offences, measures to exclude stock from waterways, the removal or amendment of the stock exclusions rules, environmental monitoring, environmental monitoring indicators and methods, hazardous or ship waste discharges to sea and the requirements that apply to the use of catchment/farm models have been added.

The RMA is not clear about the processes of making regulations under s360 of the RMA. Given the regulations under s360 are not considered as national directions, s32 evaluation process and the Board of Inquiry submissions and hearing process may not be involved. On the above basis, the Minister is expected to make recommendations to the Governor-General who will consider those recommendations by the Order in Council and give force to the proposed regulations. Once the regulations are in force, under s360C of the RMA the regional councils must make necessary amendments to their regional plans by public notification and without using the submissions, hearings and decisions process prescribed under Schedule 1 of the RMA (i.e. *Preparation, change, and review of policy statements and plans*).

The only occasion where s32 evaluation report may be required under the s360 regulations is when the regulation directs the regional councils to remove or amend regional rules under s360D of the RMA to avoid duplication, overlaps or any confusion because of the new regulations. Such new regulations could be related to s360(1)(hn) or (ho) (which are stock access to waterways regulations) which could be incorporated into the respective regional plans by the regional councils by public notification and by not using the Schedule 1 including the submission and hearing process under the RMA.

In the above process of requiring regional rules removal or amendments, under s360E of the RMA, in addition to the preparation of the s32 report, the Minister must also consult with the regional councils and iwi and notify the new regulations and receive recommendations from the affected parties before recommending to the Governor-General. The notable difference between giving national directions and the above regulations process is the absence of Board of Inquiry input in the s360 regulation process. In addition to the above processes, regulation tool can also be used to determine or require administrative charges related to consent process and permitted activities under s360F, require fast tracking of resource consents under s360G and require specifying consented activities for public notification and specifying affected party status in the consent process by the regional councils.

### ***RMA amendments***

To manage the freshwater resources efficiently and effectively, if needed, the central government can also amend the RMA to enable or promote better freshwater management. The RMA amendments involve public participation by notification and submissions. There has been persistent lobbying from the developers and resource users to amend the RMA to reduce red tape caused by regional/district planning and consenting. Consequently, many of the RMA amendments have been motivated politically to satisfy the resource users or voters. Judging by the frequent amendments of the RMA to date, successive governments had little or no hesitation in amending the RMA whenever warranted compared to introducing regulations or national directions.

Since 1991 in excess of 16 amendments have been made to the RMA including, aquaculture marine area provisions (2002 and 2004), energy and climate change (2004), foreshore and seabed (2004), simplifying and streamlining (including the Environment Protection Authority process of the nationally significant applications and the Environment Court process of the notified consents) (2009), consent discounting regulation (2010) and Resource Legislation Amendment Act 2017 (RLAA17) which came into effect on 18 October 2017. Of the above amendments the 2009 simplifying and streamlining and the 2017 RLAA amendments had direct or indirect effect on the management of the freshwater resources. Despite these amendments, the advocacy for further RMA amendments has not abated.

### ***Central government monitoring and reporting***

Monitoring and reporting are powerful central and local government tools. Obviously good reporting requires good monitoring. Central government monitoring can involve self-monitoring (i.e. monitoring its own performance) or monitoring the performance of the local government. In my view, monitoring can be process based or outcome focused. Central government process-based monitoring of the regional council will be oriented towards monitoring the efficiency and quality of the consents, compliance and planning processes. Outcome based monitoring should monitor or investigate the effectiveness of the regulatory processes and tools in synergy with that of the state of the environment and pressure.

The following monitoring and reporting functions, powers and duties have been assigned to the Minister for the Environment under the RMA:

- the monitoring of the effect and implementation of this Act (including any regulations in force under it), national policy statements, national planning standards, and water conservation orders (s24f of the RMA),
- the monitoring of the relationship between the functions, powers, and duties of central government and local government under this Part (s24g of the RMA),
- the monitoring and investigation, in such manner as the Minister thinks fit, of any matter of environmental significance (s24ga of the RMA), and
- require information from regional councils by writing and the councils must supply it within the timeframe specified by the Minister (s27 of the RMA).

Under s45 of the RMA, the Minister can direct the regional councils in the NPS to collect and publish information to achieve the NPS objectives, to monitor and report on NPS matters/progress and how giving effect and to specify standards and methods to monitor/report. Under s360(1) of the RMA, the Minister can also direct the regional councils to request data from water/discharge permit holders, prescribe water/discharge permit forms and conditions and state of the environment (SOE) indicators, standards and methods and require SOE under prescribed content and timing.

### **Environmental Protection Authority (EPA)**

After 20 years of the RMA enactment, the Environmental Protection Authority was founded under the Environmental Protection Authority Act 2011 by annexing the Environmental Risk Management Authority whose main function was implementing the Hazardous Substances and New Organism Act 1996. Any proposal of nationally significant planning (e.g. new plans or plan changes) or consent application arousing wider public concern or interest can be managed by the Minister for the Environment. Such proposals can be lodged with the EPA for the Minister to determine whether the proposal meets the thresholds of the national significance (under s143(3) of the RMA) and to determine the option of the EPA or the Environment Court

process of the proposal. If the Minister determines the proposal is nationally significant, he/she can call-in the proposal to a regional council to be managed by the EPA. The proposals dealt by EPA or Environment Court can only be appealed at the High Court on question of law.

## **Central government performance since the enactment of the RMA in exercising its duties, functions, powers and the use of national instruments**

### ***Performance reviews in the context of the freshwater management***

The MfE is the administrator and the engine of the Minister for the Environment in undertaking much of the strategic, operational and process work on behalf of the Minister. In addition to the MfE, others such as the Officer of the Auditor-General (OAG) under Public Audit Act 2001 and the Parliamentary Commissioner for the Environment (PCE) under the Environment Act 1986 can also audit processes and performances and assess any environmental issues respectively. The PCE and the OAG report their findings or assessment to the Parliament rather than to the Minister(s).

It is noteworthy that the PCE has wide ranging functions in the context of the freshwater management under the RMA under s16 of the Environment Act 1986 as summarised below:

- with the objective of maintaining and improving the quality of the environment, to review from time to time the system of agencies and processes established by the Government to manage the allocation, use, and preservation of natural and physical resources,
- to investigate the effectiveness of environmental planning and environmental management carried out by public authorities, and advise them on any remedial action,
- to investigate any adversely affected environment by request from the Parliament or its committee or voluntarily and advise, preventive measures or remedial action,
- to undertake and encourage the collection and dissemination of information relating to the environment, and
- to encourage preventive measures and remedial actions for the protection of the environment.

Except for several water quality reports and reports/reviews on environmental reporting including the *Environment Aotearoa 2019*, to my knowledge, there has been no comprehensive investigation of the effectiveness of the central government freshwater management under the RMA by the past PCEs. Some water quality reports explicitly state that the reviews were held under s16(1)(a) and (b) (the first two bullets in the summary PCE functions stated above) (e.g. PCE, 2013), but only provided scientific information on the status of the water quality and factors affecting water quality without reviewing the processes or effectiveness of the environmental planning. The few occasions where the PCEs reviewed central government systems were when advocating for better environmental reporting, science and monitoring (e.g. PCE, 2004, 2007 and 2019) from the central government.

As stated before, the MfE's overall performance itself has been assessed by the State Services Commissioner (SSC) every four years under the 'Performance Improvement Framework' (PIF), same as the assessments performed by the SSC on other Ministries. To my knowledge there have been three PIF reviews conducted on the MfE by the SSC in 2012, 2014 (interim review) and 2018. The above reviews involved performance reviews on delivering government priorities (e.g. building natural resources), and core business (e.g. policy, implementation, monitoring and evaluation and regulatory stewardship) and organisational management (e.g. leadership & direction, customer delivery, relationships, people development and financial &

resource management). Whilst there is very useful information in the context of the freshwater management which can be extracted from such audits, the central government performance review in the context of the freshwater management has been sparse.

### ***The use of the NPS***

It took in excess of 15 years since the RMA enactment for the central government to consider providing policy directions to manage freshwater resources under the NPS framework around 2007. However, since the process was slow, the first NPS on freshwater management (NPSFW) came into force after two decades only in 2011 with objectives and policies on water quality & quantity and integrated management. The national direction for the implementation of the NPS by the regional councils was by 2030. There was no target water quality/quantity in the above NPS. It was superseded with a replacement in 2014 with water quality targets. Such a delayed replacement could have been costly and disruptive if the regional councils had already initiated regional policy statement/plan change processes to comply with the 2011 NPSFW.

The 2014 NPSFW reduced the deadline for its implementation to 2025 but retained 2030 under certain circumstances. It promoted the establishment and management of the freshwater management units (FMU) to manage water quality and quantity and the National Objective Framework (NOF) to establish and manage water quality values (i.e. ecosystem health and human health for recreation) and attributes (e.g. indices such as total nitrogen, total phosphorus and periphyton). The attributes had five states with descending water quality of A, B, C, national bottom line and D with corresponding water quality standards or attribute levels with annual medians and maxima/95<sup>th</sup> percentiles.

The 2014 NPSFW caused considerable confusion and in many cases failure to add value to the regional council promoted standards, much of which were based on the Australian and New Zealand Environment and Conservation Council (ANZECC) 2000 levels. For example, the 2014 NPSFW promoted nitrate-N as toxicity index with national bottom line annual median level of 6.9 mg/L and State A median level of  $\leq 1$  mg/L. The above target was not compatible with the widely used trophic index level of 0.4 mg nitrate-N/L for rivers to avoid algal blooms. Despite the significance of the N and P levels in rivers to manage algal blooms proactively, the above indicators were absent as trophic indices for rivers. On the other hand, the blanket N and P level targets for lakes are not sensible and practical owing to each lake's widely varying responses to N and P levels. The use of the reactive attribute such as periphyton as the sole trophic index for rivers indicated clearly that the NPSFW failed to promote precautionary principles to manage river water quality. The above NPS was amended in 2017 to include amended water quality limits and targets for *E.coli* which caused further confusion when the State A 95<sup>th</sup> percentile was relaxed from  $\leq 260$  to  $\leq 540$  E.coli/100 mL.

The recently proposed NPSFW 2019 had no changes to the attributes promoted in 2014/2017 but with substantial addition of new attributes such as dissolved inorganic-N, dissolved reactive-P, macroinvertebrates (both QMCI and ASPM), fish, suspended and deposited sediments and ecosystem metabolism (which requires 7-day automated dissolved oxygen monitoring) and submerged plants (native and invasive) and lake bottom and mid-hypolimnetic dissolved oxygen for lakes. The proposed suspended fine and deposited sediment for rivers has 12 classifications based on River Environment Classifications (RECs) which in turn are based on climate, topography and geology hence are very complex and academic to implement and monitor by the regional councils. Sediment (deposited or suspended) is a significant contaminant hence should be dealt with. If so, promoting simple indicators and regulating best



practice management of sediments at the sources should be of high priority rather than costly, complex and laborious monitoring, data collection and interpretation.

The proposed 2019 NPSFW has a single objective with multiple policies which is simple hence commendable. However, the single objective 2.1 contradicts directly with the purpose of the RMA (i.e. s5 of the RMA) and prioritises the resources management in the descending order of the health and wellbeing of waterbodies and freshwater ecosystems → the essential health needs of people → the ability of people and communities to provide for their social, economic, and cultural wellbeing, now and in the future. The purpose (s5) of the RMA promotes “...*managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment...*”. From a policy/planning perspective the proposed NPS objective is flawed until the RMA purpose is modified significantly to suit the NPS objective. Despite numerous changes to the RMA, the purpose of the RMA remains unchanged since its enactment. If so, why introduce an NPS objective which is contrary to the long-standing purpose of the RMA and an objective which cannot be implemented under the RMA?

As usual, groundwater quality/quantity management has been addressed poorly by all successive NPSFWs. Whilst all NPSFWs identified the link between groundwater and surface water, all NPSs have failed to introduce target groundwater quality to provide for human drinking and ecosystem management, the latter being more complex yet essential. Given many groundwater aquifers have been rendered unsuitable for human drinking and have been impacting much of the surface water quality, such a direct approach would have provided impetus to minimise the impacts caused by non-point sources such as intensive agriculture.

Overall, the central government performance in using the NPS to manage our freshwater system has been poor because the national direction by NPS has been too slow, lenient and not decisive and despite the 3<sup>rd</sup> attempt, the quality, simplicity and the effectiveness of the NPSFW still remain poor. With the new single objective directly contradicting the purpose of the RMA, I would argue the proposed 2019 NPSFW is worse than the predecessors, being legally defective and containing unusable water quality targets/attributes.

### ***The NES***

As I mentioned before, the NES is the most powerful of all instruments available. Technically, water quality targets in the NPSFW should have been promoted through the NES. The probable reasoning for central government using NPS to promote water quality targets is to avoid imposing set target timeframes under the NES. The first freshwater related NES, *Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations* was enacted in 2007, which was 16 years after the enactment of the RMA. The purpose of the above NES was to avoid or minimise the effects of discharges on community water supplies from regional council allowing poor discharges upstream of the takes. Since its introduction and to my knowledge, there has been no monitoring of the implementation of the above NES by the central government. Since 2019, the central government has been considering a review of the above NES.

In 2008 under the *Sustainable Water Programme of Action* a new NES on *Ecological flows and water levels* was proposed and later abandoned. In the same year, another NES was proposed on *Onsite wastewater systems* which was abandoned as well. In 2018 an extensive rule based 74-page NES on *Plantation Forestry* came into force whose primary focus was land use and specific forestry operations related to afforestation, earthworks, river crossings, quarrying, mechanical land preparation, replanting. I have reviewed the above NES fully from the freshwater management perspective and found it as a blunt tool to reduce the impacts of plantation forestry on ground/surface water quality and quantity.

In 2019 through *Essential Freshwater* programme, central government has proposed a range of rule-based NESs on wetlands and earthworks and water takes affecting wetlands, fish passage, winter grazing, feedlots, irrigation, farm-land use changes and nitrogen leaching capping for farming in specific catchments. The proposed NESs are similar in style to that of the *Plantation Forestry* which was heavily rules based and left the discretion to the regional councils to manage a range of activities and their impacts largely by costly consent process. One of the key purposes of the NESs is to provide national consistency hence a valuable opportunity has been lost. Consent notifications under consented activities remain ambiguous and given wetland restoration can be a discretionary activity, it can be processed under public notification which can be a new impediment to useful wetland restorations, which is one of the many perverse outcomes of the proposed NESs.

The proposed NESs appeared to have been drafted in haste with inconsistent and poor wording ('nitrogen discharges' and 'nitrogen losses', probably referring to discharge of nitrate-N). The catchment-N NES is a great opportunity for the central government to provide clear and decisive leadership, which has been a missed opportunity. The best practice options required in the Freshwater module of farm plans (Subpart 3- FM-FP) were not specified which could cause inconsistent enforcement of the NES. Much of the 'alternative' catchment nitrogen management promoted in the proposed NES (under Subpart 4- Nitrogen cap) appeared to have been from the proposed Waikato Regional Council (Healthy Rivers Plan Change) rules, which is lazy and surprising given the PCE (PCE, 2018) in his detailed and well-articulated report and recommendations on the use of *Overseer* in regulatory settings stated, "...more generally, I am recommending that the Minister for the Environment task his officials to develop guidance on the development, evaluation and application of environmental models in a regulatory setting. *Overseer* is by no means the only model being used by regulators. Models are essential tools and it is vital that when they are used, the wider community can be confident that development, maintenance and use meet appropriate standards..."

As for the PCE's *Overseer* report (PCE, 2018), owing to *Overseer*'s confinement to 60 cm depth soil cover, effective catchment management may require looking beyond *Overseer* with catchment scale databases and models. If the above models are *empirical* (data verifiable by observation, similar to *Overseer*), the officials must convince the respective ministries to inject millions of dollars to collect/assess robust national data to build the models, which may take 5-10 years with intensive and focused research. Even if we succeed in developing such robust models, since they are subject to calibration with ongoing research and data refinement, the use of such models in regulatory setting could be problematic with version changes affecting catchment-N estimates. There may be other issues associated with the use of models. To date, no one has challenged whether a 'hypothetical' discharge (discharge is defined under s2 of the RMA as "...includes emit, deposit, and allow to escape...") from a model can be considered as a discharge under the RMA.

In short, as same as the poor use of NPS as national direction, the use of NES to manage the freshwater resources have been in non-existent (except for the 2007 NES with narrow scope) between 1991 and 2018 and when introduced recently, poorly executed in haste. As stated before, the 2007 NES process indicates the absence in monitoring and implementation.

### ***Regulations under s360***

Regulations under s360 are not as powerful as the NPSs and NESs. However, they can be used effectively to manage the freshwater resources. The legislative processes are much faster. Unfortunately, the use of the regulation tools was not realised until 2010. In 2008 it was realised that the NES was not the appropriate instrument to promote the use of water measuring devices to monitor water takes for consumptive use. In the same period, I was fortunate to be involved in advising the MfE officials that the regulation under s360 was the appropriate mechanism to require water measuring devices as endorsed by a legal advice obtained from my then council's (ORC) legal counsel. Despite such a timely advice, the *Resource Management (Measurement and Reporting of Water Takes) Regulations* came into force only in 2010. Since then s360 became the most used RMA tools as stated in my previous section on the s360 process.

The implementation of the water meter regulation by the regional councils have been very slow. The reluctance in introducing telemetered/digital data acquisition in the regulation has resulted in unusable data for freshwater management purpose. Despite the significance of the above regulation to water allocation and freshwater quantity management, the central government's hands-off implementation meant no regular monitoring of the water meter regulation implementation and any remedial action via further regulation. The most notable insertions to s360 were the regulations on stock access (s360(1)(hn) including prescription of fines (s360(1)(ho) and the prescription of any farm or catchment models to regional councils or consent holders (s360(1)(hp) in 2017 through the Resource Legislation Amendment Act (RLAA). Unfortunately, the speed at which the above regulations were introduced did not materialise into any actions. In short, like the national direction tools, the central government capitalising on this efficient tool has been slow and if new regulations were introduced, they were not used or implemented and if used, not monitored for implementation and effectiveness.

### ***Environmental monitoring***

As stated before, the Minister for the Environment has extensive powers to monitor the implementation of the RMA, national directions, performance of the regional councils and environmental trends and direct regional councils to collect suitable information. Monitoring can be the monitoring of the efficiency and effectiveness of the RMA, national directions, regulations, use of economic instruments, consents, compliance, planning and enforcement processes of the regional councils and the monitoring of the environmental outcomes including trends. With a wide array of monitoring requirements in the RMA, it is sensible for the MfE to develop and maintain a robust national monitoring strategy or framework. I am surprised, to date, the central government has been able to function in the absence of such a strategy since the enactment of the RMA.

The MfE developed a detailed National Monitoring System (NMS) in 2015 to gather data on consents, compliance, planning and enforcement in spreadsheet format. Since the councils use a wide-ranging data bases, the data acquisition by the MfE has been laborious and by spreadsheets. A common and shared database between the central and local government would have resulted in efficiency and the avoidance of laborious data acquisition by archaic and potentially erroneous spreadsheets. The NMS data request by the MfE has been annual and I have not seen any reporting of the assessment of the extensive data collected and any

consequential operational improvements. The only MfE commissioned report which partially used the NMS data was on compliance, monitoring and enforcement (CME) in 2016 (MfE, 2016) was collated by consultants by direct survey of the selected councils. The above report concluded “...*there is a lack of data on council CME practices. As a result, it is difficult to assess the effect of CME on environmental outcomes...*”.

As for the data collection for national scale environmental reporting, there was a clear lack of leadership from the MfE which simply relied on regional council monitoring and collection of data. Another report commissioned by the MfE to Beca on the RMA monitoring (MfE, 2012) stated “...*the current approach has not been informed by a comprehensive framework which coordinates and consolidates the full range of monitoring... reflection of a lack of monitoring strategies that stretch across the functions and roles of a council.*”. The PCE report on the recent *Environment Aotearoa 2019* stated “...*Ours has been a passive system that has harvested whatever data is there and done the best it can to navigate what’s missing...*”. The Beca study was also conducted concurrently on several central government agencies such as the Department of Conservation, Environmental Protection Authority, MfE, Ministry for Primary Industry and it was reported, “...*there are no commonalities in relation to systems for any of the central government agencies despite the government’s Open Government Information and Data Re-use Work Programme. There are however commonalities and networks for sharing the data across SOE programmes...*”.

There have been considerable and commendable collaborative work (e.g. regional councils, NIWA, electricity companies and the MfE) under the National Environmental Monitoring Standards (NEMS) to improve quality data collection and analysis by prescriptive and widely acceptable methodologies. Developing prescriptive data gathering methodology for a wide-ranging indicator is laborious hence work in progress with several more years of voluntary input by the parties involved. Despite the above sensible work, the data are stored and interrogated by a wide-ranging system, which is problematic to share and interpret quality data. Another initiative between the regional councils and the MfE, Environmental Monitoring and Reporting (EMaR) is envisaged to provide public access to data through the regional council-initiated Land, Air, Water Aotearoa (LAWA) system. It has been 29 years since the enactment of the RMA and there is considerable work still to be done to strategize, collect, store and access quality environmental data.

In short, the lack of central government environmental monitoring strategy has resulted in ad hoc, poor quality and sparse environmental reporting and poor management of the freshwater management resources. More lately, the NPSFW has been used as a tool to promote environmental indicators and monitoring. Until a robust and binding national environmental monitoring system with sensible and comprehensible national indicators legislated and implemented with compatible or shared databases, the national environmental reporting and the effective management of the freshwater system will remain ad hoc and chaotic.

### ***Environmental reporting***

National environmental reporting is critical in providing environmental information in the national context including trends. Since the enactment of the RMA, only three SOE reports have been released by the MfE in 1997, 2007, and 2019. From the freshwater management perspective, there have been ad hoc MfE commissioned reports on water quality, but such reports merely became library collections and failed to achieve any tangible changes in central government directions on freshwater management. Such an ad hoc and infrequent reporting, in part must have resulted in environmental reporting becoming a legislation in 2015. Under the

above legislation, Government Statistician and Secretary of the MfE are required to provide domain report every 6 months and synthesis report every 3 years. The PCE under his/her discretion can review and provide report on the SOEs.

As the PCE correctly pointed out in his review report (PCE, 2019) of the 2019 SOE report *Environment Aotearoa 2019*, "...The fact that we enacted an environmental reporting statute that seems very orderly and structured with regular domain and synthesis reports didn't change the essentially passive, opportunistic nature of our reporting. A conscious choice was made to make do with what there was. In my judgment, what there is, is clearly inadequate...". The PCE recommended several changes to the existing reporting regulation by requiring clear purpose, longer intervals between SOE reports and the Ministers to respond to the SOE reports. I hope the central government can consider the well-articulated and sensible recommendations and the essence of the recent PCE report (PCE, 2019) on *Environment Aotearoa 2019*.

In closing this section my conclusion remains monotonic, which is, the central government performance in environmental reporting of the freshwater management has not been with conviction. The reporting neither had a clear purpose nor contributed constructively to effective central government management of the freshwater resources. The environmental reporting to date has been ad hoc and based on cobbling regional environmental data which have not been collected for national environmental reporting purposes.

#### ***Make direction on a matter or issue of national significance***

Unfortunately, in the absence of decisive national policies and national directions the use of this tool has been reactive, costly and counterproductive. The ongoing/past frictions between land uses in highly significant landscapes such as dairy conversions in the Mackenzie District or the abandoned Meridian Energy (a state owned enterprise) large-scale windfarm development in the Maniototo Lammermoor Range will continue until the central government takes decisive steps in identifying and managing *nationally* significant landscapes. The same applies to *nationally* significant outstanding waterbodies. The proposed NPSFW 2019 direction for the regional councils to identify outstanding water bodies is sensible. However, regionally significant water bodies may or may not be significant nationally. Therefore, the central government must still identify, recognise, and manage collaboratively *nationally* significant waterbodies and landscapes to avoid any reactive and costly consent or planning direction on a matter of national significance. On the above basis the central government leadership in managing our nationally significant freshwater resources has been very poor.

#### ***Investigating regional council's performance***

Whilst my current assessment is on central government management of the freshwater resources, it does not imply that the regional councils' management of the freshwater since 1991 has been ideal. There have been significant differences in managing the freshwater resources between the 16 regions. Regional differences are not always considered as negative since the differences promote regional innovations and local solutions. However, one of the main reasons for regional differences in the management of the freshwater has been the hands-off central government management of the regional councils and the absence of timely, decisive and clear national directions and leadership. To my knowledge, there are two known occasions where regional councils have been investigated by the Minister for the Environment in the management of the freshwater resources. Environment Canterbury (ECan) was investigated when the local districts collectively laid complaint with the central government about the Canterbury freshwater management. Consequently, the controversial *Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010* initiated significant

structural changes to Canterbury's freshwater management (Kirk, 2015). The Act substituted ECan's elected councillors with the appointed commissioners. Many argued at that time the investigation and ensuing actions were too late, reactive and process focused. The question is, have the above steps assisted in improving the water quality and availability in the Canterbury region in the past decade under the central government regional governance? More recently, the Otago Regional Council was investigated for its management of the historic mining privileges referred to as water permits under the RMA, which again appears to be process focused and reactive.

### ***Taking into account the principles of the Treaty of Waitangi***

Under s8 of the RMA and in the context of the freshwater management when exercising functions and powers the central government (and the regional councils) shall take into account the principles of the Treaty of Waitangi. The Maori grievances regarding freshwater management has been long and ongoing. The central government responses have been reactive, ad hoc, slow and not decisive. Consequently, it has become a Treaty of Waitangi issue and had been heard by the tribunal. A detailed assessment of the issues associated with Maori and freshwater and the tribunal recommendations are in the Waitangi Tribunal Report (2019). The above report also sums up the degrading water quality issues as "...*In terms of the active protection of freshwater taonga, we found that the RMA has allowed a serious degradation of water quality to occur in many ancestral water bodies, which are now in a highly vulnerable state. It was clear to the Crown by 2003–04 at the latest that the RMA was failing to deliver the sustainable management of many water bodies in urban and pastoral catchments...*".

### **Conclusions**

During my review of the central government management of the freshwater resources, few keywords remained resonating such as, 'reactive', 'costly', 'slow', 'passive', 'reckless', 'ad hoc' and 'hands-off'. The opportunity cost of lack of, slow, reckless, reactive and ad hoc actions has been enormous to New Zealand and its freshwater resources. From the outset the central government failed to establish strategies to implement the newly enacted RMA in 1991 effectively. At the outset of the RMA enactment the required central government leadership tasks were overwhelmingly numerous and complex, which would have been the very reason to develop and manage an implementation strategy. After 28 years of the enactment of the RMA, the central government still operates without any robust strategy to implement the RMA effectively.

In the absence of a national freshwater monitoring framework, the environmental reporting has been piecemeal and ineffective. The PCE's (PCE, 2019) comments on the most recent environmental reporting (*Environment Aotearoa*) resonates with my own sentiment, "...*This is what a passive approach to reporting has meant in practice. There are costs and they are not just environmental – they have real consequences for the economy and for society. How can we make economically efficient or socially fair environmental rules if we can't measure authoritatively what's happening to the physical resource base on which our wellbeing ultimately depends?*".

Despite being ad hoc, since 1991, the central government, external and regional councils' reporting has been indicating emerging freshwater issues with deteriorating trends. There were many opportunities for the central government to use the powers under the RMA at the onset of the emerging issues. The NPSs have been too slow to introduce and ineffective. The most recent NES to deal with the non-point discharges has taken 28 years. The Ministerial Message in the recently proposed *Essential Freshwater* sums up the central government freshwater

management performance “...*Freshwater quality has deteriorated seriously over recent decades. We have known about this since 2004 when the then Parliamentary Commissioner for the Environment Dr Morgan Williams published the Growing for Good report highlighting that water pollution was getting worse. Sadly, the problems are not yet under control and urgent action is needed...*”.

It could be argued that the central government’s freshwater resources management to date has largely been the result of the MfE’s own lack of performance. Whilst the SSC PIF report (SSC, 2018) acknowledges the improvements had been made on its previous PIF recommendations, the report identifies the MfE is still lagging in developing and managing a national monitoring framework, environmental leadership, evidence-based reporting, agile legislative responses to emerging environmental issues and experiential resources at the Executive level.

### **Way forward**

The starting point for the MfE is to adopt and implement the recent and well researched articulated recommendations in the PCE (2018 and 2019) reports and the SSC PIF (2018) report. A strategy to implement the RMA under the functions, powers and duties of the Minister for the Environment is well overdue and essential to function effectively given the wider responsibilities in dealing with the complex issues associated with the TLAs and regional councils, natural hazards, climate change and the EPA process. Under the strategy, dedicated teams must be responsible and be accountable to implement and monitor the effectiveness of the RMA and its tools. If evaluation report has been used under s32 to give national directions, the monitoring of the implementation of the directions must include the assessment of all predicted and perverse outcomes/costs/benefits under the evaluation reports. If the outcomes are significantly different, consideration must be given to amending or abandoning the instrument.

There is urgent need for a national monitoring framework including the development of key environmental indicators for the purpose of effective national environmental reporting and any potential actions. As I stated before to be effective in environmental monitoring and reporting a common database (or compatible databases) use is critical between the responsible government agencies (e.g. Statistics NZ and MPI), regional councils and TLAs. The NEMS work must receive the ongoing support and collaboration and be fast-tracked to completion.

The use of *Overseer* or any nutrient model as a regulatory tool by the central government must be discontinued and methods must be explored to regulate nitrate leaching without the use of nutrient models. If best practice methods are promoted, they must be identified and converted to be used in the regulatory settings. If catchment scale nutrient model is warranted for catchment scale nutrient management, suitable new model(s) fit for purpose must be developed from the bottom up with the full use of modelling principles and protocols, which should be accessible to the public. If the above models are empirical, the government must strategize and invest substantially on data gathering.

The MfE needs to improve its science capability with a dedicated science team or an advisory group as recommended by the PCE to use science effectively in the regulatory settings for monitoring/reporting and to develop research or advocacy for research strategy for emerging and already identified knowledge gaps in *Environment Aotearoa 2019*. At the Executive leadership level as recommended by the SSC PIF report (2018), new and experiential members must be appointed to improve the overall performance and the credibility of the MfE. I fully acknowledge that the MfE officials have the difficult tasks of navigating between a range of

stakeholders and the appointed groups who have wide ranging advocacies and desired outcomes. To be an active and effective partner in the management of our most valuable natural resource freshwater, the MfE must aspire to be a respected leader, rather than an administrator.

## References

- Bell, M and Selvarajah, S. 2013. Boiler discharge upgrades granted in the Otago Region between 2003-2013. <https://www.enviroknowledge.co.nz/assets/Uploads/Publications/Boiler-discharge-Otago-Regional-compilation-2003-2013.pdf>
- Kirk, N.A. 2015. Local government authority and autonomy in Canterbury's freshwater politics between 1989 and 2010. PhD Thesis, Lincoln University. [https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/6772/Kirk\\_PhD.pdf](https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/6772/Kirk_PhD.pdf)
- MfE. 1997. The State of New Zealand's Environment. Ministry for the Environment. pp 655.
- MfE. 2012. Stock take of RMA monitoring across selected agencies. A report by Beca Carter Hollings and Ferner Ltd (Beca) prepared for the Ministry for the Environment. pp 60.
- MfE. 2016. Compliance, monitoring and enforcement by local authorities under the Resource Management Act 1991. Ministry for the Environment. pp 47.
- PCE. 2004. Missing Links: Connecting science with environmental policy. Report by the Parliamentary Commissioner for the Environment. pp 120.
- PCE.2007. Outcome evaluation Missing links: Connecting science with environmental policy. Report by the Parliamentary Commissioner for the Environment. pp 59.
- PCE. 2013. Water quality in New Zealand: Land use and nutrient pollution. Report by the Parliamentary Commissioner for the Environment. pp 82.
- PCE. 2018. Overseer and regulatory oversight: Models, uncertainty and cleaning up our waterways. Report by the Parliamentary Commissioner for the Environment. pp 142.
- PCE. 2019. Focusing Aotearoa New Zealand's environmental reporting system. Report by the Parliamentary Commissioner for the Environment. pp 106.
- Selvarajah, N. 1998. Farm dairy effluent management regulations in the Waikato Region. *In* Land application of agro-chemical wastes, Proceedings of the Technical Session 17, NZ Land Treatment Collective (Ed. H Wang and JM Carnus, Forest Research Institute, Rotorua, New Zealand). <https://www.researchgate.net/publication/269337541>
- Selvarajah, N. 2010. Farm dairy effluent discharge regulation in the Otago Region. Keynote paper, New Zealand Land Treatment Collective conference, March 2010. <https://www.researchgate.net/publication/269337644>
- Selvarajah, S. 2011. Consent process to effect changes in wastewater discharges - a review of the past decade of consent process of key wastewater discharges in the Otago Region. *Water* (November): 31-38. <https://www.researchgate.net/publication/269338417>
- SSC. 2018. Performance Improvement Framework – Report for the Ministry for the Environment by the State Services Commissioner. pp 61.
- Waitangi Tribunal Report. 2019. The Stage 2 report on the national freshwater and geothermal resources claims. Pre-publication version. WAI 2358. [https://forms.justice.govt.nz/search/Documents/WT/wt\\_DOC\\_152208791/Freshwater%20W.pdf](https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_152208791/Freshwater%20W.pdf)