The Institute for Governance and Policy Studies, School of Government at Victoria University of Wellington

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Marine Governance

The Institute for Governance and Policy Studies, School of Government at Victoria University of Wellington

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VICTORIA UNIVERSITY OF WELLINGTON TE HERENGA WAKA O TE ĪPUKAPUNGA O TE IKA A MĀUI

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Editorial Note

This issue of *Policy Quarterly* explores the governance of the least governed reaches of our planet, the open ocean. Our oceans are notoriously difficult to govern and even harder to manage for several reasons. First is their sheer scale – they cover more than two-thirds of the planet. Second is ownership – they are both everyone's and no one's. Social science scholarship has many bright ideas about governing common pool resources. But when the grandmother of this research, Nobel laureate Elinor Ostrom, visited New Zealand in 2011, she said straight out that her models do not work in rivers or oceans.

When formal governance structures fail to fill the cracks, informal 'soft law' can step into the breach. This is where the International Union for Conservation of Nature (IUCN) fits in. IUCN has little formal power over the oceans, but great moral influence over the nations that govern the ships traversing and extracting from those oceans. Improving the governance of the ungovernable treasures that belong to everyone and no one at once is IUCN's *raison d'etre*. New Zealand is one of 83 State members of the IUCN. The New Zealand Committee of IUCN consists of New Zealand members and representatives on expert commissions. The guest editors of this issue serve on the executive board of the IUCN national committee.

This special issue of *PQ* on marine issues contributes to the New Zealand national committee of IUCN's efforts to advance the national conversation about oceans governance, addressing a range of current and future law and policy issues. Raewyn Peart leads off with New Zealand's first marine spatial plan. This resulted from an innovative collaborative process and established an innovative governance structure for the collective resource of the Hauraki Gulf. It promises to reverse the ongoing ecological degradation of the Hauraki Gulf, where traditional management approaches had failed.

Tom Stuart and Catherine Iorns examine the conundrum of adaptive management under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act), illustrating it with the application by Trans-Tasman Resources Limited to mine iron sands from the seabed in Taranaki. The Act adds an extra layer of complexity to adaptive governance within the already tricky environment of a global commons.

Toni Love addresses the creation of the Kermadec Ocean Sanctuary. The opposition to the Kermadec Ocean Sanctuary Bill illustrates the need to follow proper processes, even for what is ostensibly a widely-recognised public good.

Morgan Watkins discusses some of the amendments to the EEZ Act that are contained in the Resource Legislation Amendment Bill currently in front of Parliament. While those concerning marine waste are reasonable, it is not entirely clear that sustainable management will be protected by the reforms to the marine consenting process. It is particularly unfortunate that such contentious reforms are being made through the use of omnibus legislation.

Greg Severinsen looks to the nature of the law needed in the future, with an examination of the treatment in law of the injection of CO_2 beneath the seabed: should it be classified and handled as a form of pollution or dumping of waste, or as a beneficial tool to help mitigate climate change? Severinsen addresses these issues clearly and provides a helpful prod to regulate for such emissions mitigation tools in advance of needing them.

Oceans serve the planet as a food source, carbon sink, and biodiversity repository. Perhaps more importantly, they feed our imagination of life beyond what we know. But oceans face multiple threats – from climate change-related acidification, plastics, shipping pollution, bioinvasions, industrial fishing, and non-point source pollution from land use. Without careful governance, the services oceans offer humanity might not persist. We hope that this special issue of *Policy Quarterly* contributes to this conversation, and ultimately to the long-term health of the oceans.

We are also pleased that other excellent papers relevant to wider environmental policy and to regulation were selected and included in this special issue.

Catherine Iorns,
Victoria University of Wellington
Ann Brower, Lincoln University
Guest editors

Raewyn Peart

A 'Sea Change' in Marine Planning

the development of New Zealand's first marine spatial plan

Introduction

Marine spatial planning is a well-established approach internationally, and has been used to assist in the application of an ecosystem-based management approach to the marine environment (Ehler and Douvere, 2009; Ehler, 2014).

New Zealand's first marine spatial plan was completed in December 2016. It was the result of a three-year Sea Change Tai Timu Tai Pari project which focused on addressing the growing spatial resource conflicts and ecological degradation associated with the Hauraki Gulf. The project was innovative in a number of respects, including: establishing a co-governance structure; tasking a group of Mana Whenua (Hauraki Gulf iwi) and stakeholder representatives with producing the plan on a collaborative basis; addressing both catchment and marine issues in an integrated manner; and integrating mātauranga Māori and Western science. The plan, which is non-statutory, was designed to be bold. This was in order to provide a more effective response to the ongoing ecological degradation of the Hauraki Gulf which decades of traditional management approaches had failed to reverse.

Raewyn Peart is Policy Director for the Environmental Defence Society, was a member of the stakeholder working group which prepared the Hauraki Gulf marine spatial plan, and is the author of *The Story of the Hauraki Gulf*, an environmental, cultural and social history of the marine space.

This article reviews the background to the marine spatial planning project, the process used to develop the plan, and the issues likely to arise during implementation. It probes the question of whether New Zealand's institutional framework is likely to be adequate to support the successful implementation of the marine spatial plan going forward.

Contextual background to the gulf

The Hauraki Gulf Marine Park is a shallow coastal sea comprising some 13,900 km^2 (Hauraki Gulf Forum, 2011a). It is a highly productive marine system which supports a major spawning and nursery area for snapper and other finfish (Zeldis and Francis, 1998). The gulf is also a seabird biodiversity hotspot, with over 70 species being sighted in the area, 20% of the world's total number of seabird species. At least 23 species breed in the Hauraki Gulf (Gaskin and Rayner, 2013). The Hauraki Gulf supports a year-round population of around 50 Bryde's whales, the main-stay of a nationally critically threatened population of fewer than 200 (Constantine, Aguilar de Soto and Johnson, 2012; Constantine et al., 2015). Common and bottlenose dolphins appear to use the gulf as a calving and nursery area, possibly due to the year-round abundance of food (Stockin, 2008; Dwyer et al., 2014).

The Hauraki Gulf might have been one of the earliest places in New Zealand to be settled by eastern Polynesians, possibly around AD 1300 (Furey et al., 2008; Sewell, 1984), although oral tribal histories extend back further. Today there are multiple and overlapping Māori interests in the gulf spanning more than 20 tribal groupings. Auckland, New Zealand's largest (1.6 million people) and fastest growing city, is located on the shores of the gulf, resulting in multiple and increasing pressures on the marine system, including through sewage overflows and heavy metal contamination from storm water. The gulf also supports a large commercial fishing and aquaculture sector, as well as over 200,000 recreational fishers (Hartill, 2014). Some of New Zealand's most productive dairy land is located on the Hauraki Plains within the gulf's catchments, resulting in elevated nutrient discharges. There are also extensive exotic forestry plantations in the Coromandel ranges, and dotted elsewhere around the region, that are regularly clear-felled, increasing erosion and sedimentation risks (Peart, 2016).

Unlike other marine parks in New Zealand at the time, such as Tāwharanui and Mimiwhangata, no restrictions were explicitly placed on any activity within the gulf, ...

Governance of the Hauraki Gulf

The concept of managing the Hauraki Gulf as a single entity had its inception in 1967 with the establishment of the Hauraki Gulf Maritime Park and associated Maritime Park Board (under the Hauraki Gulf Maritime Park Act 1967). The focus of the park was on the islands and coastal land rather than the marine area. Before its disestablishment in 1990, the board had accumulated 27 maritime park reserves.

Calls for the establishment of a marine park in the Hauraki Gulf, during the late 1980s and early 1990s, were eventually realised when the Hauraki Gulf Marine Park Act was passed into law in 2000 (Waitangi Tribunal, 2001). It established the Hauraki Gulf Marine Park, including the seabed, seawater, coastal and island reserves, and conservation land. The legislation set out a set of clear purposes for the marine park, including recognising and protecting its international and national significance, recognising the special relationship of tangata whenua with the park, and sustaining its life-supporting capacity. Unlike other marine parks in New Zealand at the time, such as Tāwharanui and Mimiwhangata, no restrictions were explicitly placed on any activity within the gulf, although a common set of management objectives were to apply to statutory decision making (Hauraki Gulf Marine Park Act 2000, s33).

The legislation also established a new entity, the Hauraki Gulf Forum, to oversee the management of the Hauraki Gulf and its catchments. Instead of having direct management responsibilities, the forum was conceived as an integrating body, bringing together the myriad of agencies that now played a role in the gulf, so its membership largely consists of central and local government representatives. In addition, six tangata whenua representatives are to be appointed by the minister of conservation, thereby recognising the strong cultural linkages between tangata whenua and the gulf. The appointees are from a range of different iwi/hapū, but due to the large number of tribal groupings with interests in the gulf (more than 20) they collectively represent tangata whenua interests more generally (Sea Change Tai Timu Tai Pari, 2016).

The Sea Change Tai Timu Tai Pari process

The Sea Change Tai Timu Tai Pari project had its inception in the Hauraki Gulf Forum's 2011 *State of Our Gulf* report, which indicated that current management approaches were not sufficient to reverse the ongoing environmental decline of the marine system (Hauraki Gulf Forum, 2011a, p.13). At the same time, there was growing awareness that marine spatial planning was becoming increasingly popular overseas. In order to understand what such an approach might contribute to the Hauraki Gulf, the forum commissioned an international review of marine spatial planning. The report concluded that 'Marine spatial planning is a well-accepted strategic planning process which could help achieve the purposes of the HGMPA [Hauraki Gulf Marine Park Act] including integrated management and the protection and enhancement of

the life-supporting capacity of the Gulf' (Hauraki Gulf Forum, 2011b, p.40).

The report generated considerable interest. With the encouragement of the Hauraki Gulf Forum and the Environmental Defence Society, Auckland Council and the Waikato Regional Council agreed to lead a marine spatial planning project. The Department of Conservation and Ministry for Primary Industries subsequently joined (Aguirre et al., in press). A 16-member project steering group was established to oversee the project, with members consisting of eight representatives of the statutory bodies involved in managing the gulf and an equal number of Mana Whenua representatives, thereby putting in place a co-governance structure. The steering group was led by Mana Whenua and agency co-chairs.

The project steering group approved the terms of reference for the stakeholder working group which was to do the work, and was to receive and adopt the plan. It defined the purpose of the project as being

> to develop a spatial plan that will achieve sustainable management of the Hauraki Gulf, including a Hauraki Gulf which is vibrant with life and healthy mauri, is increasingly productive and supports thriving communities. It aims to provide increased certainty for the economic, cultural and social goals of our community and ensure the ecosystem functions that make those goals possible are sustained. (Sea Change Tai Timu Tai Pari, 2013)

The plan itself was developed by the stakeholder working group, which consisted of representatives from commercial and recreational fishing, farming, aquaculture, infrastructure, community and environmental interests. Four positions on the working group were made available to Mana Whenua. The balance of the members was determined through public meetings, where the sector groups were asked to put forward their preferred representatives. These initial selections were tested with other sector groups to ensure that the people nominated were able to work across sectors in a collaborative manner.

The role of the stakeholder working group, as set out in the terms of reference, was to

> compile information and evidence, analyse, represent all points of view, debate and resolve conflicts and work together as a group to develop a future vision for a healthy and productive Hauraki Gulf. This includes identified preferences for the allocation of marine space. The future vision will be manifested as a physical document – the Hauraki Gulf Marine Spatial Plan.

A high degree of trust developed between the working group members and by the end of the process the group operated as a tight team.

The group was to operate on a consensus basis, which means that 'every member either supports or does not actively oppose (can live with) the decision' (ibid., pp.2-4).

The stakeholder working group first convened in December 2013, and met approximately monthly up until late 2016 when the plan was completed, with a break of several months during mid-2015. A high degree of trust developed between the working group members and by the end of the process the group operated as a tight team. The collaborative approach enabled the working members, to become well informed about the issues affecting the gulf and possible solutions, helped develop social capital between the sectors, and encouraged members to provide sector information that would normally be withheld under an adversarial process. An independent chair, who was not a member of the working group or the project steering group, was appointed by the latter to facilitate the group. Two people held this position during the course of the project. Neither were professional facilitators, but were senior members of respectively the accounting and legal professions.

During the early stages of the project, six 'roundtables' were established to focus the plan development work on key elements of the overall picture, as well as to involve a broader range of stakeholders. The topics for the roundtables were fish stocks, water quality and catchments, aquaculture, biodiversity and biosecurity, accessible gulf (the ability of people to access and experience the gulf) and gulf infrastructure. Two co-chairs were appointed for each roundtable, both of whom were stakeholder working group members.

The roundtables met for approximately one day a month for six months and operated on a broad consensus basis. Members endeavoured to agree on a vision and problem definition, and then focused on developing solutions to the problems identified. The timeframe for the operation of the roundtables was short, particularly for the development of trust between members required for collaboration to work. This meant that, in most cases, only high-level solutions were developed; controversial issues, such as marine protection, were put on hold. The reports prepared by the roundtables were not formally agreed to by all members and were not publicly released. They formed the building blocks of the plan, with the material further developed by the stakeholder working group.

Early on in the process, the working group members agreed that the plan would be science-based as well as incorporating mātauranga Māori. Scientists from a range of research institutions presented their work directly to the group and roundtable meetings and their presentations were uploaded onto

the project website (www.seachange.org.nz). It was also agreed that the plan would be based on existing scientific knowledge, as there was not the time nor budget to commission new work. This proved largely to be the case, although one new piece of research was commissioned to examine benthic recovery in the cable protection zone. In addition, during the project the Waikato Regional Council and DairyNZ commissioned work to review and synthesise current knowledge about the impacts of sediment and nutrient flows into the Firth of Thames (Green and Zeldis, 2015).

Mātauranga Māori was incorporated into the plan through several mechanisms. A mātauranga Māori roundtable was established, comprising Mana Whenua members of the project steering group and the stakeholder working group, to focus on developing plan material with specialist support. A Mana Whenua writer and spatial information expert were incorporated into the plan-writing team to ensure effective integration of the material as the plan was developed. In addition, the plan structure and presentation were informed by a specialist Māori designer to encapsulate a Māori world view. The process was complicated by ongoing Treaty of Waitangi settlements that had not been resolved for the Hauraki tribes. A collective redress deed between the Hauraki Collective (representing 12 Hauraki iwi) and the Crown was signed only in December 2016, after the marine spatial plan had been completed (Hako et al., 2017). In addition, negotiations had yet to commence on any treaty claims over the marine space in the Hauraki Gulf.

An extensive public process was undertaken alongside the stakeholder working group. This involved public meetings, 25 'listening posts' (Sea Change Tai Timu Tai Pari, 2014), a web-based use and values survey (Jarvis et al., 2015), a survey on roundtable topics and a second one on priority issues identified by roundtables (Perceptive Research, 2015), and an active website (www.seachange.org.nz) and email updating programme. In addition, a Love Our Gulf event and social media campaign (www.facebook.com/loveourGulf) were undertaken. This public engagement effort connected with more than 14,500 people overall, with 9,350 actively contributing their views to the project (Sea Change Tai Timu Tai Pari, n.d., p.2). The results of the engagement were summarised and made available to the stakeholder working group members to inform plan development.

The fish stocks chapter was based on two broad strategies: first, to apply an ecosystem-based approach to harvest management; and second, to put in place mechanisms to protect and enhance marine habitats, thereby increasing the ecological productivity of the gulf.

A group of community stakeholders who had been present at meetings held to select the working group members, called the Hauraki 100+, were convened every few months so that the working group could provide an update on progress, discuss key issues and obtain feedback from the broader community. The group was intended to act as a 'sounding board' for the stakeholder working group during the preparation of the marine spatial plan.

Central and local government agencies, led by the Department of Conservation, assembled spatial data sets on a web-based tool called SeaSketch (www.seasketch.org). SeaSketch had been developed by researchers and software developers based at the University of California Santa Barbara (Pohl, n.d.). A technical team, consisting of agency staff, was assembled to support the stakeholder working group and topic roundtables and to access science as requested. This was later refined to a core group focused on plan writing, headed by an independent lead writer and two science advisers.

The work of the stakeholder working group was overseen by an independent review panel comprising five experts in various fields, including Paris-based Charles Ehler, who was the co-author of the UNESCO guide to marine spatial planning. The panel provided three reports and the recommendations helped guide the further development of the plan (Independent Review Panel, 2014, 2015, 2016).

Content of the marine spatial plan

The resultant plan is structured around four parts, or kete (baskets) of knowledge: Kaitiakitanga and Guardianship; Mahinga Kai – replenishing the food baskets; Ki Uta Ki Tai – ridge to reef or mountains to sea; and Kotahitanga – Prosperous communities (Sea Change Tai Timu Tai Pari, 2016). The front end of the plan consists largely of objectives and actions, and is supported by a summary of the scientific basis underpinning the plan provided in the appendices. The plan is wide-ranging and detailed. Some key features are described below but the reader is encouraged to read the plan proper.

The fish stocks chapter was based on two broad strategies: first, to apply an ecosystem-based approach to harvest management; and second, to put in place mechanisms to protect and enhance marine habitats, thereby increasing the ecological productivity of the gulf. Restoration of marine habitats focuses on a nested approach. Large benthic areas are to be protected through the retirement or mitigation of key stressors, such a fishing gear impacts, to allow natural regeneration. Smaller areas within these zones will be the focus of passive restoration (through the establishment of marine reserves) and active restoration through the transplanting of species or

establishment of new habitat patches (ibid., p.71).

The chapter also included a proposal to remove seabed-damaging fishing methods from the gulf, including bottom trawling, Danish seining and dredging. This was to prevent any further habitat damage, reduce sediment resuspension, and allow natural or assisted recovery of the three-dimensional benthic habitats which are of critical importance to the survival of many juvenile fish. Fishers will be assisted to transition to methods such as long-lining, which produce higher-quality fish, achieve a higher market price and have less environmental impact (ibid., pp.74-5).

A novel proposal in the plan is the creation of ahu moana co-management areas. These will be located in nearshore areas extending one kilometre seawards. They will be co-managed jointly by Mana Whenua and local communities, to mobilise and focus the energy and knowledge of these parties towards improving the management of local fisheries and inshore coastal waters. This will help strengthen customary practices associated with the marine space, as well as more effectively control harvest levels, particularly in areas under increasing pressure from the growing Auckland population (ibid., pp.52-4).

The plan identifies 13 new aquaculture areas and 13 new protected areas, as well as an extension in size of two existing marine reserves. In addition, an extensive area is identified as being unsuitable for aquaculture due to its proximity to the Auckland metropolitan area, where there are many potentially conflicting uses of the water space.

The provision of marine protection was one of the more difficult issues to reach consensus on, and in some cases this could not be achieved in the time available. As a result, two alternative proposals are included for some specific sites. Provision has been made for customary harvest and the adverse effects on commercial fishers will need to be addressed. In addition, there is to be a 25-year review of the protected areas, and co-governance and management of them once established (ibid., pp.124-6).

The impact of poor water quality on the ecological health of the Hauraki Gulf was one of the greatest areas of concern, with the main stressor being sediment (ibid., pp.133-4). Sediment is a difficult issue to effectively address, due to the large number of diffuse sources that contribute, including conservation land, forestry, agriculture, earthworks and stream bank erosion. In addition, a large amount of sediment has already reached the marine area, and is retained in the gulf for long periods of time, being regularly resuspended by wave action. The approach set out in the plan is wide-ranging and includes measures to reduce soil erosion, to minimise sediment entering waterways and to stabilise sediment once it has reached the marine environment. Some of the key features of the strategy are to develop catchment management plans (starting with four high-priority catchments), establish catchment sediment limits, increase sediment traps through reinstating natural or engineered wetland systems, ensure the adoption of good sediment practice by all land users, and retire inappropriate land use on highly erodible land. Emphasis has also been put on scaling up one-on-one interaction with farmers through doubling resources to employ additional land management officers (ibid., pp.134-41).

Nutrient enrichment was an emerging water quality issue in the Firth of Thames. The rivers discharging into the area have high nutrient loadings, primarily as a result of intensive dairying within the catchment. The Firth of Thames is not well flushed and the water becomes stratified in late summer and early autumn. Water quality monitoring in the outer Firth has identified oxygen depletion and seawater acidification during these times (Green and Zeldis, 2015, pp.40, 49). The plan places a cap on nitrogen discharge levels, which are to be kept at or below current rates until sufficient scientific work has been completed to enable an appropriate nutrient load limit to be put in place (Sea Change Tai Timu Tai Pari, 2016, pp.145-6).

There were varied reactions to the plan when it was publicly launched on 6 December 2016. The three key ministers, of environment, primary industries and conservation, welcomed the plan in a joint press statement (New Zealand Government, 2016). The Environmental Defence Society chairman called it 'a major achievement not to be underestimated' (Taylor, 2016). The *New Zealand Herald* headlined its article on the plan's release 'Revealed: the bold plan to save Hauraki Gulf'. Science reporter Jamie Morton went on to write: 'The plan – the first of its kind in New Zealand – sought to help stem the flow of sediment and other pollutants into the Hauraki Gulf, ease pressures on wildlife, fish stocks and kaimoana and restore the health of crucial ecosystems' (Morton, 2016).

Some other responses were less positive. The plan has been criticised as being undemocratic due to the adoption of a collaborative, stakeholder-led process for its development instead of the normal process whereby the plan is developed by a statutory body and undergoes wide public consultation (Fox, 2016). The chief executive officer of large fishing corporate

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Sanford Limited expressed concern about the proposed phase-out of bottom-impacting fishing methods, being reported as stating: 'some areas just consist of sand really and bottom trawling doesn't really have a negative impact'. In response, project steering group co-chair Paul Majurey, who is also chair of both the Hauraki Collective of iwi and Tāmaki Makaurau Collective of iwi, was reported as stating: 'For too long we have complained about the indiscriminate, bulk harvesting, benefit-destroying methods being used to harvest fish commercially, to have those phased out over time is a huge win for the environment' (Bradley, 2016).

New governance structure to implement the plan?

Although the stakeholder working group members have reached consensus on the plan's content, and agencies have committed to implementing the plan in principle, it is uncertain whether an integrated plan can be effectively implemented through the existing fragmented institutional structures that apply to the gulf. One of the key principles agreed to by the working group members was that 'The Plan is developed as an integrated package to be implemented as a "whole"' (Sea Change Tai Timu Tai Pari, 2016, p.25). Achieving such integrated implementation will require a cohesive response from the four main implementing agencies, Auckland Council, Waikato Regional Council, the Ministry for Primary Industries and the Department of Conservation.

The Hauraki Gulf Forum currently serves as an integrative body for management roles of these agencies in the Hauraki Gulf. But a recent independent review of the performance of the forum after 15 years concluded that, although '[t]here have been notable successes from the Forum including its leadership role in creating the preconditions and guiding Sea Change', it was 'failing to adequately promote the objectives of the Act, and will not do so without significant change'. The report compiled a number of recommendations on how the current situation could be addressed, including: 'Governance should be reformed and the current structure replaced with a smaller, more agile Forum membership that provides a peer group of politically aware and strong leaders committed to promoting the objectives of the Act', and that it 'needs greater representation of tangata whenua to reflect the nature of the Crown–Iwi partnership' (Bradley, 2015, pp.4-5).

The marine spatial plan itself expresses a view on 'some attributes of future governance of the Hauraki Gulf Marine Park that we believe are essential for the implementation of this Plan'. A key element of this is 'strong, effective co-governance', with a new governance entity having 'membership from Mana Whenua and the community at large'. Fourteen functions of such a new entity are identified in the plan, including leading strategic gulf-wide initiatives, overseeing the design of a detailed implementation plan, providing recommendations to the minster for primary industries on fisheries sustainability measures and regulations applying to the park, and helping to establish the network of marine protected areas identified in the plan (Sea Change Tai Timu Tai Pari, 2016, pp.187-8). This new governance entity could take the form of a reconfigured Hauraki Gulf Forum, which would require legislative amendments to the Hauraki Gulf Marine Park Act 2000.

Conclusion

The Sea Change Tai Timu Tai Pari project has successfully delivered New Zealand's first marine spatial plan through a novel co-governance process. This is a notable achievement in itself, but the effectiveness of the plan will rest on the extent to which it can be successfully implemented. This is likely to require some institutional changes in order to embed this new approach into marine management in New Zealand.

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Catherine Iorns and Thomas Stuart

Murky Waters

adaptive management, uncertainty and seabed mining in the exclusive economic zone

Introduction

In 2012 the Exclusive Economic Zone and Continental Shelf (Environmental Affairs) Act (EEZ Act) established a discretionary consenting regime for resource activities and development in New Zealand waters beyond the territorial sea – the exclusive economic zone.[1] The act sought to strike a balance between economic development and environmental protection by obliging the Environmental Protection Authority (EPA) to consider adaptive management when deciding whether to grant consent to applications with uncertain effects. Adaptive management was seen as a way to temper a precautionary approach to environmental management and to allow for flexible decision making (Adams, 2012); it was initially welcomed by industry submitters , who have since reversed their views (Ministry for the Environment, 2016).

This article explores the reversal in industry attitudes towards the use of adaptive management in EEZ seabed mining applications. It discusses the concept of adaptive management and its application in New Zealand, before examining the different provisions in the EEZ Act that both encourage and

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proscribe the use of adaptive management in different situations. It will use the most recent application by Trans-Tasman Resources Limited (TTRL) to mine ironsands from the seabed in Taranaki to illustrate the difficulties of applying adaptive management in the EEZ. This article argues that the current legislative provisions have caused adaptive management an identity crisis, and left applicants and decision makers navigating murky waters.

The theory of adaptive management

Adaptive management is a resource management tool that involves systematically testing assumptions about the environment in order to adapt and learn. It enables development activities to be undertaken in the face of uncertainty while more is learnt about the resources being managed, and has been described as 'structured learning by doing' (Department of Conservation, 2000). The use of adaptive management was formally recognised as a resource management technique in the 1970s and was predicated on the belief that the management of resources must proceed even if all of the desired information is unavailable or the effects are uncertain (Holling, 1978).

Today adaptive management is read in light of the precautionary approach and applied only where the two concepts are in harmony. While precaution can be exercised with much more clarity in the absence of adaptive management, the converse is not true. Adaptive management without precaution amounts to 'permissive regulation' and results in negative environmental outcomes (Iorns Magallanes and Severinsen, 2015, p.213). Ecosystems are vulnerable and ecological harm caused by human activities can be unpredictable, significant and irreversible (Folke et al., 2004, p.559). If adaptive management cannot be made to sufficiently reduce associated risk, acting in the face of uncertainty can be a foolhardy and potentially catastrophic endeavour.

Adaptive management can be seen as one way to implement a precautionary approach, beyond simply refusing consent. Its 'learn as you go' method enables management techniques to be adapted as environmental and other effects become clearer. As stated in Harding and Fisher's leading text, *Perspectives on the Precautionary Principle*:

> Recognizing the extent of uncertainty in many areas, it may be necessary to implement a step-wise or adaptive management approach, whereby uncertainties are acknowledged and the area affected by a project or policy is expanded as the extent of uncertainty reduced. The approach is essentially one of reserved rationality where decision-makers 'proceed cautiously – to safeguard initially against the possibility of unexpected severe future costs'. (Harding and Fisher, 1999, p.140)

Its 'learn as you go' method enables management techniques to be adapted as environmental and other effects become clearer.

Adaptive management functions to decrease levels of uncertainty that would otherwise necessitate a precautionary ban on an activity. By proceeding cautiously, more is able to be determined about the given effects of a particular activity than if it were prohibited outright. It provides a way to test a given activity in a real-world context, to determine the level of harm caused and to adjust an activity in the light of new site-specific information. Of course, the caveat is that, before such a trial can be undertaken, it must be determined that associated risks can be adequately managed and that reliable and timely information can be obtained and used to inform future decisions as to the discontinuation, or continuation (with or without amendment), of the activity in question.[2]

Adaptive management, while useful, is not always appropriate. It is likely to be of use where the resources in question are under stress only on an occasional basis, where temporally connected monitoring information is easy to obtain and where any effects caused are reversible. Conversely, it will not be appropriate where there is a likelihood of irreversible or significant adverse effects, or where effects are hard to detect or temporally disconnected (Wright, 2011, p.11). A critical question will always be whether an adaptive management regime can sufficiently reduce associated risk and uncertainty. This will depend on the degree of risk that exists and the gravity of the consequences if that risk is realised. As articulated by the New Zealand Supreme Court in *Sustain Our Sounds v New Zealand King Salmon:* 'a small remaining risk of annihilation of an endangered species may mean an adaptive management approach is unavailable. A larger risk of consequences of less gravity may leave room for an adaptive management approach' (p.139).

Adaptive management applied in New Zealand

Since 2001 adaptive management has been employed by decision makers when giving effect to plans or drawing up consent conditions under the Resource Management Act 1991 (RMA) since 2001. The RMA is New Zealand's principal environmental and resource management statute and contains a consenting process broadly comparable to that of the EEZ Act. Although adaptive management is not defined in the RMA, the term is now in common parlance and there is an extensive body of case law discussing the concept (see discussion in *Sustain Our Sounds*, 2014 (pp.105, 133). In particular, the courts have focused on identifying the indicators or elements that ought to be present before an adaptive management approach can be utilised. These factors include:

(a) a level of uncertainty about the potential adverse effects of the activity in question, coupled with a risk that the activity will do real (and potentially irreversible) damage to the environment;
(b) adequate baseline information about the state of the environment, which would allow the effect of the activity on the environment to be assessed. In some cases … provision is made for baseline information to be bolstered … before the activity is commenced;
(c) certainty as to the desirable environmental outcomes or … a clear understanding of what effects … would be unacceptable;
(d) [effective] monitoring of the state of the environment, and the effect that the activity is having on the environment[, before, during, and/or after the activity has commenced];
(e) provision for the results of the monitoring to be analysed, and for the consented activity to be adjusted, [conditional on those results]. The intention will generally be that any adjustment can occur before the activity results in irreversible and unacceptable effects on the environment;
(f) that adjustment will often be formally 'triggered' by quantitative thresholds [or limits];
(g) the possible adjustments … will be some combination of the following [three alternatives]:
    (i) for the consent to be … cancelled, if pre-commencement monitoring indicates the baseline state of the environment renders the activity inappropriate;
    (ii) for the activity to be either halted, or reduced, if post-commencement monitoring shows it is having an unacceptable effect on the environment; and
    (iii) for the activity to be expanded if post-commencement monitoring indicates that doing so would be appropriate. (Haden and Randal, 2017, pp.18-19)

Adaptive management and EEZ marine consents

Adaptive management appears in the EEZ Act as part of a suite of provisions designed to manage the risk of uncertain effects from economic development activities in the EEZ. Section 61 of the EEZ Act concerns the information-gathering obligations that burden the EPA when it is considering whether to grant a consent. It requires the EPA to make full use of its powers to obtain information, to base its decisions on the best information available, and to take uncertainty or the inadequacy of available information into account when making its decisions.

Section 61(2) places an additional burden on the EPA, obliging it to 'favour caution and environmental protection' when faced with uncertain or inadequate information. This shifts the decision-making balance in favour of environmental protection where information regarding the effects of an activity is uncertain or inadequate. Although framed in 'undefined legal language', section 61(2) has the effect of encumbering the EPA with an obligation akin to the precautionary approach (Local Government and Environment Committee, 2012, p.9). It is, however, qualified by section 61(3). This section requires decision makers to consider adaptive management before refusing consent on the basis of precaution. Adaptive management can contribute to the purpose of the precautionary approach in that it 'encourages caution and prudence because the activity will only be allowed to continue if its effects are addressed as they become apparent', but it also carries a higher degree of risk and may be used to water down precautionary measures (Wright, 2011, p.11).

The inclusion of adaptive management in section 61 reflects Parliament's desire to ensure that the precautionary approach does not have a burdensome, chilling effect on economic development.

The inclusion of adaptive management in section 61 reflects Parliament's desire to ensure that the precautionary approach does not have a burdensome, chilling effect on economic development (Smith, 2012). By providing decision makers with an alternative to outright refusal, while still giving effect to the precautionary principle, adaptive management assists the government's objective of enabling New Zealand to better 'pick up economic opportunities … in an environmentally responsible way' (Adams, 2012).

Adaptive management is defined broadly in the EEZ Act. Section 64 provides that an adaptive management approach includes (though it is not limited to):

a) allowing an activity to commence on a small scale or for a short period so that its effects on the environment and existing interests can be monitored:
b) any other approach that allows an activity to be undertaken so that its effects can be assessed and the activity discontinued, or continued with or without amendment, on the basis of those effects.

On a plain reading of section 64, it includes – but is not limited to – allowing small-scale or trial activities aimed at monitoring the environmental and other effects of a proposed activity. It also includes allowing an activity to proceed at full capacity, uncertainty notwithstanding, on the basis that such uncertainty might be reduced with careful monitoring, periodic reviews and systematic adjustments.

The broad definition in the act is indicative of the fluid nature of adaptive management as a concept and its wide

range of uses (Fabricius and Cundill, 2014). It also recognises the overarching goal of the principle: to reduce information gaps and inform future decision making through knowledge accumulation. The key benefit of the broad definition, along with the obligation contained in section 61, is that it provides the EPA with considerable leeway when ruling on marine consent applications. It can employ adaptive management in any way it sees fit, but must bear in mind that adaptive management 'does not negate the need to exercise caution in situations where there is a threat of serious or irreversible environmental damage occurring'. The Ministry for the Environment has recognised that 'adaptive management cannot compensate for a lack of baseline environmental data or inadequate modelling. In the words of the King Salmon Board of Inquiry, some information gaps cannot "be simply filled by invoking adaptive management"' (Ministry for the Environment, 2016, para 48)

Adaptive management and marine discharge consents

Adaptive management was envisaged as a flexible tool to overcome the uncertainty inherent in marine consent applications. However, a 2013 amendment that prohibits the EPA from considering adaptive management in marine discharge applications has muddied the waters. While adaptive management may still be used for marine consent activities, it is now prohibited for marine discharges and dumping. The conundrum is what to do when a development proposal requires both a marine activity consent and a marine discharge consent.

Section 87F(4) was introduced into the EEZ Act as part of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Amendment Act 2013 (EEZ Amendment Act). This amendment was part of a wider marine legislation overhaul that sought to transfer regulatory authority from Maritime New Zealand to the EPA (Williamson, 2013). The amendment brought marine discharges and dumping under the ambit of the EEZ Act and introduced an auxiliary purpose to the act, namely 'protecting the environment from pollution by regulating or prohibiting the discharge of harmful substances and the dumping or incineration of waste or other matter' (EEZ Amendment Act, s7). Consistent with this purpose, it adopted a separate, stricter consenting process with respect to marine discharge and dumping applications, one that explicitly ruled out the use of an adaptive management approach as a response to uncertain or inadequate information (s33). Section 87F(4) provides that if the EPA grants a marine discharge consent, 'it may issue the consent subject to conditions under section 63, but not … [conditions] that together amount or contribute to an adaptive management approach'.

While commentary on section 87F(4) is limited, this shift in focus can be explained by the political climate at the time. The amendment act was designed to give effect to international conventions related to dumping of waste, and it followed one of New Zealand's worst marine disasters in recent history, the Rena oil spill. Its spirit reflects a public desire for better protection of New Zealand's marine environment and the exclusive economic zone: 'What New Zealanders want ... is a guarantee from the industry and the Government that we will not see a spill' (Hughes, 2013). Discharges from seabed mining activities were included along with the dumping of other waste, and it is clear that 'Parliament can be assumed to have deliberately chosen to treat all harmful substances … in a consistent way' (Haden and Randal, 2017). The no-tolerance approach to adaptive management is clear and acknowledges the higher degree of risk associated with marine discharges and dumping.

When considering marine discharge consent applications, the EPA must therefore be extremely careful to ensure that any conditions imposed fall outside the definition of adaptive management. This is no easy task, noting the broad definition of 'adaptive management approach' in section 64. It is arguable that any effects monitoring that has a bearing on the future continuation, alteration or discontinuation of a discharge activity 'amounts or contributes' to an adaptive management approach and is therefore prohibited.

Adaptive management and TTRL's ironsand mining application

Where consent applications are for activities that are wholly one or other type of consent – i.e., either a marine consent or a marine discharge consent – then the task of the EPA is clear. In respect of marine consent applications, adaptive management can be applied broadly, as another string to the EPA's bow. It can implement adaptive management through staged development processes, timed trials, or the imposition of responsive conditions that allow an activity to be amended in light of new information. Whether or not a given condition or set of conditions contribute or amount to adaptive management is relatively unimportant. What is important is responding to risk and uncertainty in a way that is consistent with the purposes of the act.

On the other hand, where marine discharge consents are concerned, it is vital that decision makers demonstrate that any conditions do not resemble adaptive management in name or nature. Thanks to the explicit exclusion of adaptive management in section 87F(4)

However, a 2013 amendment that prohibits the EPA from considering adaptive management in marine discharge applications has muddied the waters.

of the act and its broad statutory definition, granting discharge consent subject to any conditions that resemble adaptive management risks invalidating the consent (Iorns Magallanes, Stuart and Scott, 2017). The line between general conditions and adaptive management conditions is likely to be a battleground for opposing parties in any marine discharge consent application.

It has certainly been a critical issue at the crux of the application lodged by Trans-Tasman Resources Limited to mine seabed ironsand in the South Taranaki Bight (TTRL, 2016). The proposed activity involves 'vacuuming' ironsand from the seabed of the EEZ, magnetically extracting the iron from the sand on board a processing vessel and discharging the remaining sediment back into the ocean. Due to the nature of the activity, both a marine consent and a marine discharge consent are required, and one cannot be approved without the other. At the time of writing, the decision-making committee appointed by the EPA had not yet given its verdict on whether to grant consent to TTRL, nor whether such consent would be subject to any conditions. What had been confirmed was that, due to the mixed-nature of the application, the decision-making committee was bound by the more restrictive of the two consenting processes and therefore subject to section 87F(4).[3] Consent cannot be granted subject to adaptive management conditions.

This leaves the decision-making committee with few options. It can either decline the application (on the basis that the effects on the marine and existing environment are too severe or too uncertain), or approve the application, unconditionally or subject to consent conditions that do not amount or contribute to an adaptive management approach. Unconditional approval is the least likely of these options, particularly in light of the high degree of uncertainty in the marine environment, the novelty of seabed mining, and the uncertain effects of a sediment plume on marine life – e.g. marine mammals and benthic environments (Torres, 2016; Philips, 2017; Barbara, 2017). Some parameters must be placed around the activity to ensure that its effects are not greater than anticipated and that any risks are adequately managed. However, as soon as such parameters are proposed they quickly begin to resemble adaptive management conditions.

On a plain reading of section 64(2)(b), an adaptive management approach includes any monitoring designed to inform the continuation, amendment or discontinuation of a proposed activity.

Take, for example, the conditions offered by TTRL in support of its application.[4] TTRL has proposed conditions that require it to take sediment concentration and quality samples at seven different locations within the receiving environment, and to assess those samples against 'operational' and 'compliance' limits that have been predetermined on the basis of plume modelling and baseline monitoring (Environmental Protection Authority, 2017). It attests that, if sediment concentration or quality limits are exceeded at any point during mining operations, it will take operational action and, if the problem persists, halt mining operations (ibid., p.24). While TTRL claims that these conditions are simply routine safeguards against unlikely effects and do not amount or contribute to adaptive management, this claim is contentious given the broad definition of adaptive management in the EEZ Act.

On a plain reading of section 64(2)(b), an adaptive management approach includes any monitoring designed to inform the continuation, amendment or discontinuation of a proposed activity. The EPA may 'read down' this definition to some degree, and the legal advice offered to the decision-making committee has argued that a narrower interpretation might be possible, even if it is not clear on the face of the words (Haden and Randal, 2017). However, the conditions proposed by TTRL tread a very fine line between section 64(2)(b) adaptive management and routine monitoring assessments (Iorns Magallanes, Stuart and Scott, 2017). It is entirely possible, either at the initial consenting stage or on appeal to the courts, that conditions of this nature will be deemed unlawful on the basis that they contravene section 87F(4) of the act.

In order to fall outside the definition in the statute, the monitoring conditions must not be designed with amendment of the development or discharge activities in mind: i.e. they must merely create a benchmark against which to assess conduct and go no further. If the operational and response limits proposed by TTRL are environmental benchmarks, and it is known with a high degree of certainty that no unacceptable effects will occur (i.e. no significant or irreversible effects) within those limits, then they do not contribute to an adaptive management approach (ibid., p.28). No structured learning by doing is taking place and the trigger conditions are simply a routine assessment of the activity against predetermined thresholds – i.e. a safeguard against unlikely events.

However, if the response and operational limits are better interpreted as 'best guesses' – informed on the basis of the best available information but still subject to error – then they may contribute to an adaptive management approach. This is particularly the case if the activity's expansion, contraction or termination is conditional on whether or not those limits are met (Haden and Randal, 2017). According to *Sustain our Sounds v King Salmon* (p.125), where a decision maker is uncertain as to what level of activity can be tolerated by a receiving environment and adopts his or her best guess, in the

hope that more might be learnt about the environment, then an adaptive management approach has been undertaken. Taking a calculated risk on the basis that more might be learnt about environmental effects is a way of learning by doing and falls within a section 64(2)(b) definition of adaptive management; this is prohibited in respect of marine discharge consent applications.

It is not the intention of this article to offer an opinion on whether the conditions proposed by TTRL do or do not meet the statutory definition of adaptive management, but rather to demonstrate but one of the murky questions faced by decision makers when confronted with marine discharge consent applications under the EEZ Act. Adaptive management has been defined so broadly in the act that, where it is excluded, decision makers have very limited power to impose consent conditions. Perhaps this limitation is justified given the high-risk nature of marine discharges and dumping, and in light of the 'prevention of pollution' purpose imported by the EEZ Amendment Act. Yet it is doubtful whether the exclusion of a concept so broadly defined in other sections of the act is the best way to achieve such a purpose.

On the one hand, the explicit prohibition of adaptive management may incentivise decision makers to err on the side of caution and decline marine discharge consent applications whenever there is a degree of uncertainty as to the causal effects of a proposal. But, on the other, it may push decision makers to grant consent, subject to dangerously slim and routine conditions, where more robust and adaptable alternatives would have been appropriate. To put decision makers in the awkward position of having to choose between two extremes – outright refusal or approval subject to cursory conditions – is a risky way to engage in sustainable management of natural resources. It also appears particularly prone to unsubstantiated decision making and judicial challenge.

Conclusion

Adaptive management appears to offer an approach to resource management that takes away the guess work, that allows room for correction and that can be adapted in light of new information. It was argued for by industry submitters and included in the EEZ Act as a way to give effect to the precautionary principle without refusing consent and to enable more flexibility in decision making. Yet it has fallen far from the tree.

In light of the 2013 amendment act, adaptive management is not only excluded from decisions on whether marine dumping or discharging should be permitted (its original intention), but also whenever a broader marine consent application contains a marine discharge component that is inseparable from the application as a whole. As demonstrated by the TTRL consent application, section 87F(4) has the effect of putting decision makers in a tight position whenever they are faced with such an application. They must give full consideration to the benefits of a proposed activity but, as soon as the degree of uncertainty is sufficient to give them pause, there remains little option but to decline the application. While approval may be granted subject to consent conditions, those conditions can do little to address any underlying uncertainty. They must not regulate the course of future conduct or amount to learning by doing.

The inclusion of the adaptive management exclusion reflected an underlying intention to be particularly careful with pollutants and other discharges in the EEZ. However, Parliament has eroded the flexibility of decision makers to 'proceed cautiously' when deciding on mixed-nature activities in the EEZ (Harding and Fisher, 1999). The EPA and its appointed decision makers are, effectively, shackled to a broad-brush approach that fails to take into account the subtleties of individual applications. It seems that Parliament did not fully comprehend the effect that so strict an exclusion would have on seabed mining projects.

Whether Parliament will permit adaptive management to proceed in this precarious manner remains to be seen. In the meantime, the TTRL application may find its way to the courts, whether the decision-making committee decides to grant the consents or not. It will then fall to the judiciary to provide the final word on how to apply adaptive management in mixed-nature applications in New Zealand's EEZ.

Adaptive management has been defined so broadly in the act that, where it is excluded, decision makers have very little power to impose consent conditions.

1 The United Nations Convention on the Law of the Sea states that a state has special rights regarding the exploration and use of marine resources in the sea zone that stretches from the baseline out to 200 nautical miles from its coast. That zone is called the exclusive economic zone. See United Nations Convention on the Law of the Sea, article 56 for more information.

2 *Sustain Our Sounds Incorporated v The New Zealand King Salmon Company Limited and Ors* [2014] NZSC 40 [at 114].

3 Minute 28, February 2017, http://www.epa.govt.nz/EEZ/EEZ000011/DMC_Minute_28_Updated_Minute.pdf.

4 The authors note that the conditions proposed by TTRL have changed during the application consideration process; the conditions referred to here are those at the time of writing.

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Toni Love

The Kermadecs Conundrum

marine protected areas and democratic process

Introduction

Marine protected areas (MPAs) are on the increase. Their creation is heralded as a significant response to severe marine degradation caused by fishing, mining, pollution and climate change. However, MPAs are highly controversial as they can override other competing interests, and their creation has become fraught. Sometimes this is about historic or ongoing disenfranchisement; often it has to do with a lack of transparency in the development processes (Warne, 2016).

New Zealand's recent move to establish a large marine protected area in the Kermadec region exemplifies these problems. The Kermadec Ocean Sanctuary Bill, if passed, will establish an MPA in New Zealand's exclusive economic zone around the Kermadec Islands (Ministry for the Environment, 2016a, p.3). It would be one of the world's largest and most significant fully protected ocean areas (New Zealand Government, 2016a). However, it will also potentially extinguish property rights of the fishing industry and Māori. Compensation to affected parties is expressly extinguished in the bill, and it was developed in the absence of consultation; both of these factors have resulted in strong opposition to the bill.

This article considers the conundrum of the bill. It first outlines the Kermadec region and its history, and the intended effect of the bill. It then examines the main issues raised by interested parties, considers the Treaty of Waitangi impli-

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cations of the bill, and notes some particular observations not considered explicitly in the current dialogue. Overall, the sanctuary proposal demonstrates the importance of transparency in the establishment of MPAs and the need for standardised processes. It also demonstrates the inherent conflicts in plural societies with differences in world views. Ad hoc approaches to MPA establishment undermine their effectiveness and result in unnecessary conflict.

The Kermadec Ocean Sanctuary

The Kermadecs lie within New Zealand's exclusive economic zone, located 1000 km north-east of the North Island. Globally, the region is important because of its rich biodiversity and geology. It is home to over six million seabirds of 39 different species, includes the second deepest ocean trench in the world, and up to 35 species of dolphin and whales migrate through the area. Many of the species that live in and migrate through the region exist only there, or are critically endangered elsewhere in the world. With these characteristics, and as a migration route and safe haven for far-ranging species, the region plays a crucial role in ocean ecosystems. The region is valuable scientifically because of its potential to enhance understanding of marine ecosystems. Culturally, the region is significant to a number of iwi. Ngāti Kuri and Te Aupōuri have statutory acknowledgements relating to Te Rangitāhua/Kermadec Islands and are recognised as mana whenua (Ministry for the Environment, 2016c, pp.6-9).

The Kermadec Islands Marine Reserve was created in 1990, establishing a no-take marine reserve from the shoreline out to the 12-nautical-mile territorial sea boundary, which means that no extractive activity is allowed. The exclusive economic zone surrounding the islands has a benthic protected area (BPA) that prohibits certain fishing activities in the territorial sea and surrounding seabed out to 200 nautical miles. New Zealand's marine environment is divided into ten fisheries management areas (FMAs) under the quota management system: the proposed sanctuary covers most of FMA10 (Ministry for the Environment, 2016c, pp.15-17).

New Zealand has voluntarily undertaken international obligations to protect the marine environment and meet the requirements of international maritime law. Under the United Nations Convention on the Law of the Sea, New Zealand's sovereign right to exploit natural resources must be exercised in accordance with its duty to protect and preserve the marine environment.[2] In addition, under the Convention on Biological Diversity New Zealand has obligations regarding the establishment of protected areas for the conservation and sustainable use of biological diversity (Ministry for the Environment, 2016c, p.54).[3] New Zealand subscribes to this convention's Aichi target 11, which sets the global goal of '10 per cent of coastal and marine areas to be conserved by 2020', and emphasises areas of particular importance for biodiversity and ecosystem services (ibid.). Less than 1% of New Zealand's marine area is currently protected. This would jump to 15% if the sanctuary is created (ibid., p.55). Scientific research demonstrates that at least 30% of the world's marine area should be protected for the sake of conservation of marine biodiversity (B. Golder, personal communication, 2 September 2016).

Under the United Nations Convention on the Law of the Sea, New Zealand's sovereign right to exploit natural resources must be exercised in accordance with its duty to protect and preserve the marine environment.

The bill is the (intended) outcome of an eight-year campaign that began in 2008 and was led by the Pew Charitable Trusts, the World Wide Fund For Nature (WWF) and Forest and Bird. Mana whenua, scientists, artists, business leaders, international ocean ambassadors, politicians, the Royal New Zealand Navy and non-governmental organisations were involved in that campaign. The core of the campaign focused on the scientific value of the region and was delivered through a range of media (ibid.).

The bill was announced at the United Nations in September 2015. Subsequently introduced into Parliament in March 2016, it is still awaiting its second reading. The government originally aimed to have the sanctuary in place by 1 November (Ministry for the Environment, 2016b, p.3); however, it is now being delayed in an attempt to resolve the ongoing conflict.

The purpose of the legislation is to preserve the region in its natural state (clause 3) by establishing this new MPA (Ministry for the Environment, 2016b, p.3). The resultant sanctuary will comprise the waters, and underlying seabed and subsoil, extending from the boundary of the current Kermadec Islands Marine Reserve to the 200-nautical-mile limit of the exclusive economic zone (ibid.). Fishing, mining and seismic surveying for non-scientific purposes will be prohibited (clause 9).

Issues

During the select committee process, submissions for and against the creation of the sanctuary came from three main interest groups: conservation groups, iwi and fisheries companies. Among these groups three main issues were identified. These were: whether the proposal extinguished property rights; whether the proposal was a sustainability measure; and the inability to claim compensation.

Property rights

Submitters to the local government and environment select committee raised

concerns about the potential loss of property rights. There are two types of rights at issue here: commercial fishing rights allocated under New Zealand's quota management system, which include commercial fishing rights granted to Māori under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, and Māori customary fishing rights guaranteed by the Treaty of Waitangi and the 1992 settlement (Te Ohu Kai Moana Trustee Limited, 2016, p.36).

Commercial fishing rights

Quota held under the quota management system are a form of transferable property right. Iwi and the fishing industry claim that the bill's proposed no-take zone will extinguish their commercial property rights because they can no longer fish in FMA10 (Te Ohu Kai Moana Trustee Limited, 2016, p.4; New Zealand Fishing Industry Association, 2016, p.3). Although it appears that removing the right to fish in FMA10 effectively extinguishes property rights, a further consideration of the evidence suggests that that may not be the complete answer.

Forest and Bird, the Pew Charitable Trusts and WWF claim that no rights would be extinguished by the sanctuary. The reason for this is that all of the quota management species currently caught in the proposed sanctuary area are highly migratory species. The quota management area of these stocks is the entire exclusive economic zone. As the total allowable catch for highly migratory species has not been reduced by this bill, quota holders can continue to harvest their quota elsewhere in the zone. Further, over 97% of relevant quota is taken outside FMA10. Thus, access to the Kermadec region is not critical to the harvesting of the species concerned and does not remove the right to fish these species elsewhere in the exclusive economic zone (Forest and Bird, Pew Charitable Trusts and WWF, 2016, p.6).

The select committee did not explicitly decide whether the bill would extinguish commercial fishing rights. However, its overall discussion seems to suggest that it accepted that no such rights would be extinguished. This can be seen in its emphasis on the evidence that suggests minimal impact, such as the absence of stocks caught in FMA10, as well as it noting that highly migratory species can be caught elsewhere in New Zealand (Local Government and Environment Select Committee, 2016, p.7). Further, despite expressing sympathy with those who had expressed concern about the loss of rights because the sanctuary would, in effect, prevent the utilisation of quota within the area of the sanctuary, it considered that the inability to claim compensation should remain (ibid., p.8).

Māori customary fishing rights

The bill's no-take zone effectively removes Māori customary rights and is thereby claimed to be inconsistent with the Treaty of Waitangi, as well as the 1992 settlement (Te Ohu Kai Moana Trustee Limited, 2016, p.4). The issue is less than clear cut and the government itself has identified the need to determine whether the bill does in fact extinguish Māori customary rights (Cabinet, 2015, p.9). However, WWF contends that the sanctuary is consistent with the 1992 settlement act because only commercial quota settlement assets are affected by the creation of the sanctuary (Forest and Bird, Pew Charitable Trusts and WWF, 2016, p.6). This is because there are no recognised customary fishing rights being exercised within the sanctuary area to extinguish.

Although attractive, this argument is inherently flawed. First, it requires us to accept that not using a right means there is no right (to extinguish). Second, it is not consistent with tikanga. Rights according to tikanga are not absolute. Rights are relational and are determined according to whakapapa (ancestral lineage) and other relationships. Use of a right may cease but the connection to a place can never be severed. Thus rights, sourced in whakapapa, are inalienable. Importantly, this means that rights of use can always be reasserted (Jackson, 2010). To assess Māori customary rights so narrowly is inconsistent with the principles of the treaty and the Māori world view.

The committee did emphasise that customary rights or interests in the Kermadec area would not be extinguished by the bill (Local Government and Environment Select Committee, 2016, p.8). However, it is not clear what evidence the committee was relying on to conclude in this way, and they did not explain this point further. Overall, whether the bill extinguishes commercial or customary fishing rights is still a live issue, and hopefully subsequent assessment will conclude the matter before the bill is enacted.

> The justification [for extinguish[ing] the right to compensation] is that the government, in principle, should not have to compensate for sustainability measures taken to protect the marine environment ...

Compensation and sustainability measures

The bill extinguishes the right to compensation (schedule 1). It is generally accepted that legislation should not take a person's property without good justification and that compensation should be paid (Legislative Advisory Committee, 2014, schedule 1, clause 1). The bill's approach is considered consistent with the creation of no-take reserves and justified because the sanctuary is a sustainability measure. The policy justification is that the government, in principle, should not have to compensate for sustainability measures taken to protect the marine environment (Local Government and Environment Select Committee, 2016, p.11).

There are two main issues here: whether the sanctuary is a sustainability measure, and whether quota allocated to Māori under the 1992 settlement was always subject to the Crown's right to create reserves without compensation. In support of the latter point, it is argued by some that settlement quota held by Māori is not distinguished from other quota under the Fisheries Act 1996 (Forest and Bird, Pew Charitable Trusts and World WWF, 2016, p.6). All commercial quota is subject to the management measures provided for under that act, including the adoption of sustainability measures such as no-take areas, and thus includes Māori settlement quota (part 3). Some committee members did not accept this argument. If this were so, then the Crown would not need to legislate away quota holders' ability to claim compensation through the courts (Local Government and Environment Select Committee, 2016, p.9). While this may be technically correct from a purely doctrinal point of view, such a justification sits uncomfortably in the context of treaty settlements. It raises the question of what 'full and final' means in the light of parliamentary supremacy, a matter that extends beyond the scope of this article.

The second issue concerns whether this is even a sustainability measure such that removing the right to compensation is justified. Industry stakeholders claim that this is not a sustainability measure for a number of reasons. First, they claim that the area is adequately protected because of the presence of a benthic protected area and a mineral reservation in FMA10. Second, the commercial total allowable catch for FMA10 is low and the stocks are caught using methods that pose no threat to fragile benthos. Further, there is no evidence that this level of fishing poses a threat to marine biodiversity in the Kermadec exclusive economic zone (Paua Industry Council and New Zealand Rock Lobster Industry Council, 2016, p.11). However, the industry's claims may be overstated. Benthic protected areas (BPA) only protect the seabed and the water column up to 100 metres above the seabed (Ministry for Primary Industries, 2009). Further, BPAs are recognised as having limited conservation value and the government does not consider them to meet the definition of marine protected areas in New Zealand policy or legislation because they do not meet sufficient biodiversity conservation values (WWF, 2016, p.5). In addition, the mineral reservation in place does not exclude petroleum (New Zealand Petroleum and Minerals, 2016). These factors suggest that the sanctuary is indeed justifiable as a sustainability measure.

The issues raised at select committee concerning property rights, compensation and sustainability measures demonstrate the inherent complexity of the creation of the sanctuary. However, the complexity may reflect the procedural failings. As highlighted by the WWF, the concerns expressed and the misinformation generated demonstrate a need for more systematic, transparent and efficient processes for developing marine reserves in other parts of the exclusive economic zone (WWF, 2016, p.7).

The government's engagement with iwi did not meet the standard of consultation required by Treaty principles or consultation generally.

Duty to consult with Māori

One of the key issues surrounding creation of the sanctuary has been the lack of consultation with Māori on the proposed bill. The Treaty of Waitangi obliges the Crown to consult with Māori on any matter that a responsible treaty partner would consult on.[4] The treaty principle of partnership is at the heart of consultation, and the good faith owed to each party to the treaty 'must extend to consultation on truly major issues'.[5] In *Ngai Tahu Maori Trust Board v Director-General of Conservation* the granting of whale-watching permits was so linked to taonga and fisheries that a reasonable treaty partner would recognise that treaty principles were relevant.[6] Consultation was required in that instance. As the bill directly concerns commercial, and potential customary, fishing rights, it is likely that consultation would have been triggered in this case. Further, given the significance of the 1992 settlement, a responsible treaty party should have realised – and the Crown did in fact realise – that such a situation required proper engagement with Māori (Cabinet, 2015, p.9).

However, there was in fact no consultation with industry stakeholders or iwi on the proposal to establish the sanctuary (Fisheries Inshore New Zealand, 2016, p.26). The government only engaged with iwi after Cabinet had made the decision. Te Ohu Kaimoana, who manage Māori fishing quotas, were advised by telephone the evening before the government's announcement of the intention to establish the sanctuary (Te Ohu Kaimoana Trustee Limited, 2016, p.16).[7] Attempts to engage with government following the announcement were unsuccessful. A letter sent to the prime minister seeking the opportunity to work towards a marine protection initiative that would meet the needs of government, iwi and the seafood industry was declined by the minister for the environment (Fisheries Inshore New Zealand, 2016, p.30).

The government's engagement with iwi did not meet the standard of consultation required by Treaty principles or consultation generally.[8] Further, the government's approach is inconsistent with section 12 of the Fisheries Act. That section requires consultation with interested parties where sustainability measures are to be introduced (s12(1)). Sustainability measures include setting the total allowable catch to zero (ss11, 13-15). Section 12 does not directly apply to the present matter; however, it specifies situations that require consultation when implementing measures that have the

same effect as the establishment of the sanctuary under the bill (Fisheries Inshore New Zealand, 2016, p.29).

Lack of consultation with Māori is also inconsistent with the United Nations Declaration on the Rights of Indigenous Peoples, which includes the right to consultation.[9] Interestingly, the Crown has used consistency with international obligations as an argument in support of the sanctuary (Cabinet, 2015, p.5). However, in the process it has neglected other relevant international law. Although the Declaration on the Rights of Indigenous Peoples is non-binding, there is still domestic authority for looking towards international documents New Zealand has signed as a guide to interpretation of domestic legislation.[10] Overall it appears that the government has simply proceeded to follow a chosen policy irrespective of opposition.

Observations

Motive

The Kermadecs discourse shows that beneath the rhetoric of sustainability, it appears the government's key motive is for New Zealand to be lauded as a pioneer in marine conservation. This is evident in the many statements made during the bill's first reading. Almost every member referred to the importance of this sanctuary to New Zealand's pioneer status as a 'world leader' in marine conservation, while the sanctuary was repeatedly referred to as the 'gold standard' (New Zealand Government, 2016b). However, research demonstrates that protection and sustainability goals can be achieved through a range of different protection regimes, which can accommodate other social interests. The International Union for the Conservation of Nature (IUCN) top level of protection (category Ia) contemplates some extractive activity (IUCN, n.d.b). The Kermadec Cabinet paper categorises the Kermadec sanctuary as an IUCN Ia category marine protected area (Cabinet, 2015, p.5.). Allowing for Māori customary fishing rights would mean the sanctuary would not be the gold standard; however, it would still meet the criteria to be an IUCN category Ia. Thus, it appears that pioneer status has unduly influenced the government in its pursuit of gold.

Reform

The government has identified the need to reform the current approach to the creation of marine protected areas. In particular, the government highlights the inadequate consultation processes in the current regime, which provide few mechanisms for Māori participation in decision making (Ministry for the Environment, 2016a, p.12). However, these issues are not new. Two bills introduced and subsequently dropped sought to address inadequacies of the current regime, as well as provide for consultation (Marine Reserves Bill, 2002; Marine Reserves (Consultation) Bill, 2006). Further, marine protected areas already have comprehensive policies in place that include a number of implementation principles that guide their establishment (Department of Conservation and Ministry of Fisheries, 2005, 2008). Three principles of note are: the special relationship between the Crown and Māori will be provided for, including kaitiakitanga and customary use; MPA establishment will be undertaken in a transparent and participatory manner; and adverse impacts on existing users of the marine environment should be minimised in establishing MPAs (Department of Conservation and Ministry of Fisheries, 2005, pp.18, 19). Although the bill is not subject to this policy, the calls for a consistent approach to MPA establishment suggest that such a document is particularly relevant. Further, the principles contained in the document reflect those in the MPA reform consultation document, as well as the IUCN MPA programme (IUCN n.d.a).

Conclusion

The Kermadec Ocean Sanctuary Bill provides an illuminating case study. It demonstrates the importance of transparency in government processes and the subsequent risks where this is absent. It also illustrates the inherent problems within pluralistic societies where we have opposing world views, such that one – often Maori's world view – is subordinated to the other. If the government wishes to eliminate unnecessary conflict it could reassess the processes it follows, or simply follow the ones that are ostensibly already in place.

1 The title must be credited to Kennedy Warne, *NZ National Geographic* writer: see Warne, 2016.
2 United Nations Convention on the Law of the Sea, 1833 UNTS 3 / [1994] ATS 31/21 ILM 1261 (1982) arts 192–3.
3 Convention on Biological Diversity, 1760 UNTS 79 (opened for signature 5 June 1992, entered into force 29 December 1993).
4 *Ngai Tahu Maori Trust Board v Director-General of Conservation* [1995] 3 NZLR 553 (CA).
5 *New Zealand Maori Council v Attorney-General* [1989] 2 NZLR 142, 513 (CA) (Forestry Asset case) at 152.
6 At 558.
7 Announced at the United Nations General Assembly, 29 September 2015.
8 *Wellington International Airport Ltd v Air New Zealand* [1993] 1 NZLR 671 (CA).
9 United Nations Declaration on the Rights of Indigenous Peoples, A/Res/61/295 (adopted 13 September 2007), article 32(2). Resolution of and adopted by the United Nations General Assembly in 2007, endorsed by New Zealand in 2010.
10 *Tavita v Minister of Immigration* [1994] 2 NZLR 257 (CA) at 266.

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Morgan Watkins

Under New Management
marine consents in the exclusive economic zone

> Under any system of regulation, the quality of the decision makers and trust in their competence and integrity is a paramount factor. — Kenneth Palmer

Introduction

Mineral resources and energy are central to the level of technological sophistication that we have come to expect in our everyday lives. Yet the availability and use of these finite resources is unsustainable, almost by definition, and particularly so when considering fragile ecosystems. This raises the 'super-wicked' policy issue, negotiated through resource management legislation, of trying to balance necessary resource use with not irreparably damaging the natural environment (Levin et al., 2012).

This article primarily concerns the effects of the Resource Legislation Amendment Bill (2015) on management of the exclusive economic zone (EEZ) and continental shelf area. Omnibus bills that contain non-technical and contentious amendments continue to challenge civil society's ability to fully consider the implications of reform. Despite that limitation, the

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government strengthens requirements for marine dumping and disposal consents contrary to fears expressed in some select committee submissions. It also argues that management powers will be further concentrated in the responsible minister by implementing a board of inquiry process for marine consents, building on already extensive regulatory powers in the EEZ and continental shelf area. Although its effects are mixed, the bill may be a retrograde step for genuinely consistent, sustainable management of the marine environment, as too much will depend on the government of the day.

Legal and economic context

Possessing sovereign rights over the EEZ and continental shelf area to seabed mineral resources, among other things, New Zealand is effectively obliged to implement a marine consent regime. Extra-territorial seabed mining is currently governed by the Environmental Protection Authority (EPA), under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act). The EEZ Act applies from the edge of the territorial sea (12 nautical miles from the low tide mark) to 200 nautical miles from shore and, beyond that, where a continental shelf factually exists to a maximum distance of 350 nautical miles (Salmon and Grinlinton, 2015). New Zealand's marine estate is over six million square kilometres in size.

The EEZ Act's purpose is to 'promote the sustainable management of natural resources' in the exclusive economic zone and continental shelf area (s10). It 'continues' implementation of New Zealand's international marine obligations: notably, the United Nations Convention on the Law of the Sea (1982) and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Convention, 1972).[1] Section 12 protects certain Māori interests by emphasising aspects of the act which concern Treaty of Waitangi interests in EEZ and continental shelf area. Generally, sections 10–12 of the act roughly analogise with the 'heart' of the Resource Management Act 1991 (RMA) as contained in sections 5–8 (Grant, 2015, p.40).

Recent applications for seabed mining consents by Trans-Tasman Resources and Chatham Rise Phosphate have stimulated public interest in the marine consent regime.[2] As the EEZ Act mandates a precautionary approach (s61(2)), both applications were rejected largely because of their uncertain environmental effects. From a perspective of promoting sustainable management, this suggests the act is working.

> Omnibus bills are frequently complex in nature, with many consequential amendments, and are thus typically less likely to meet the exacting standards of quality that we should expect.

Resource Legislation Amendment Bill

The Ministry for the Environment states the Resource Legislation Amendment Bill amends the EEZ Act to maintain the current balance between enabling economic activity and protecting environmental features, while reducing regulatory burdens on regime users (Ministry for the Environment, 2015, p.9). In particular, it seeks to avoid costs disproportionate to likely environmental harms from proposed activities. Main amendments include: strengthening of information requirements for marine waste consents; new ministerial powers to make EEZ policy statements, which consent authorities must have regard to; and a change in the marine consent process for notifiable activities under section 20 from an EPA assessment to a proposed board of inquiry process (Resource Legislation Amendment Bill, explanatory note). These amendments seek to harmonise the EEZ Act process with the RMA process as much as possible. Later parts of this article address the cumulative effects of these amendments.

Procedurally, the Resource Legislation Amendment Bill is disappointing. Omnibus bills should not be used for contentious, non-technical amendments (Watkins, 2016). They suppress meaningful debate in a manner that is analogous to the overuse of urgency, by giving MPs and civil society a comparatively large amount of information to review in a shorter period of time. This is why omnibus bills were, historically, typically reserved for implementing non-contentious amendments.[3]

Environmental policy matters are hotly contested by non-governmental organisations and industry representatives. To illustrate, this bill received hundreds of submissions at select committee. Substantial, sustained controversy around the bill's effects on the RMA wrenches scrutiny away from the EEZ and continental shelf to land resources instead. The distraction is enough to raise the question of whether the bill, notwithstanding its policy goals, misuses the omnibus procedure. A stand-alone bill would have been preferable because it would improve the transparency and publicness of EEZ reform.

The point is not purely academic. Overuse of omnibus legislation can lead to technical mistakes, which may have disproportionately consequential effects. For example, the EPA is required under section 45(1)(c) to directly notify iwi of consent applications that affect their interests 'in order to recognise and respect' the Crown's treaty obligations (EEZ Act, s12). Awkwardly, section 45 was repealed in the initial draft. Were the obligation not re-enacted (clause 188, proposed section 47(1)(b)(ii)), the Crown could conceivably have fallen short of the behaviour expected of a model treaty partner. Section 12's reference to a section that will no longer exist but whose content is preserved elsewhere is a minor technical

error that was corrected at select committee. Nonetheless, this error demonstrates that mistakes can and do arise through inadequately scrutinised amendment procedures. Not all will be harmless or noticed in a timely fashion.

The bill's omnibus nature limits the extent to which changes to the marine consent regime face adequate public and parliamentary scrutiny. Omnibus bills are frequently complex in nature, with many consequential amendments, and are thus typically less likely to meet the exacting standards of quality that we should expect. These two factors mean omnibus amendment procedures are not to be preferred for contentious programmes of reform.

Regulating marine wastes

This article has been written in part because some submitters at select committee argued that the bill's change to the definition of dumping would loosen domestic requirements for marine dumping consents, in violation of the London Convention and the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Nouméa Convention, 1990).[4] However, New Zealand's domestic regulation meets international obligations and appears to be strengthened by the bill, especially in relation to adaptive management and decommissioning offshore installations.

International marine waste obligations

Signatories to the London Convention's 1996 protocol, including New Zealand, are obliged to ban unauthorised dumping and may choose to consent to dumping of certain 'Annex 1 materials' – relevantly, 'inert, inorganic geological material' that is not radioactive (London Convention, annex 1). Consents must meet certain requirements under annex 2. The EEZ Act bans dumping and disposal and regulates marine consents. Therefore, the government initially appears to meet its obligations to prevent and reduce dumping. To show otherwise would require arguing that the consent regime is defective by, for example, not adequately assessing environmental impacts in terms of the convention. This argument was not advanced in the selection of submissions reviewed and would require specific and in-depth evaluation.

General prohibitions of dumping and discharges are not amended. The bill merely alters the definition of 'dumping' to reflect the protocol's definition, rather than the original definition (cause 184). Additionally, the London Convention explicitly excluded seabed mineral mining wastes from the definition of 'dumping' from the beginning. Accordingly, the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharge and Dumping) Regulations 2015 have regulated seabed mineral mining wastes as 'discharges' at least since February 2014 (regulations 7–11). Discharges from industrial mining continue to be defined as discretionary activities in regulations, meaning that a marine discharge consent is still required (regulations 10, 33).

It is not legally significant that the Nouméa Convention's definition of 'dumping' fails to include the exemption of seabed mining wastes included in the London Convention (article 2(b)). The Nouméa Convention explicitly regulates seabed mineral exploitation in article 8, which only creates an obligation to 'take all appropriate measures to prevent, reduce and control pollution' caused by seabed mining. Taken with the provision that the Nouméa Convention is not intended to alter interpretation of the London Convention (articles 4–5), article 8's relatively permissive obligation is likely satisfied by the EEZ Act and an attendant precautionary approach.

Article 8's existence in itself suggests seabed mining wastes are not captured by article 10's ban on the dumping of harmful substances. Further, article 10 gives effect to the 1972 London Convention by only banning dumping of harmful substances, which is less restrictive than the 1996 protocol's general ban on dumping. This is to be expected given that the Nouméa Convention predates the protocol, but it also shows that suggestions that the Nouméa Convention treats dumping more stringently than the EEZ Act regime does are not sustainable.

In this light, New Zealand's regulatory regime seems to comply with the Nouméa and London conventions. Although the bill would have understandably looked concerning to interested members of the public, more direct consideration suggests that allegations that it breaches New Zealand's obligations under the conventions are not credible, at least on the reviewed arguments advanced before the select committee.

> Adaptive management is a form of management ethic designed to overcome inadequate information by permitting novel activities to proceed under intense scrutiny …

Regulation of marine wastes improved

Ecological sustainability requires understanding the consequences of human activity. This observation underpins the EEZ Act's information principles, supporting the precautionary principle. The act's information principles and precautionary approach constitute the 'mind' of our marine consent regime (Grant, 2015, p.40).

The EEZ Act presently requires consent authorities, when refusing consents by reason of inadequate information as to environmental effects, to consider whether applying adaptive management principles would allow the activity to begin (s61(3)). Adaptive management is a form of management ethic designed to overcome inadequate information by permitting novel activities to proceed under intense scrutiny (s4(2)). The bill will continue to exclude adaptive

management principles from the consideration of marine dumping and disposal consents (clause 195).[5]

Removing adaptive management practices strengthens precaution by requiring applicants to demonstrate in advance, with sufficient evidence, that proposed activities will have limited environmental consequences. It is appropriate to require that one-off or similarly limited activities be justified on their faces because, unlike more prolonged activities, the prospect for monitoring ongoing environmental effects through adaptive management is restricted.

Despite being reorganised, the bill retains the requirement that an application for a dumping permit must be refused if the waste can be reused, recycled or treated in a way that does not have a more than minor effect on human health or cost more than the consent authority considers reasonable, or if the consent authority believes dumping is 'not the best approach' to waste disposal (clause 193). This may suggest, rather than approaching marine wastes from perspectives endorsing 'weak sustainability', a continued sensitivity in the overall scheme of the EEZ Act to the idea that 'environmental capital' and financial capital are not fully interchangeable.

Further, new requirements for offshore installation operators to prepare decommissioning plans will be captured by the above changes to dumping rules (clause 217). Laws of the sea already permit offshore installation structures to be dumped (abandoned) provided that navigation of the seas and other similar matters are not infringed (United Nations Convention on the Law of the Sea, article 78(2)). Subject to these requirements, dumping regulations are the primary, currently existing environmental requirements governing decommissioning of offshore installations.

Currently the government has no power to force decommissioning of an installation (Ministry for the Environment, 2015, p.21). If a marine dumping consent were rejected for whatever reason, installation owners could theoretically 'fake' the continued operation of the rig. This enables operators to avoid compliance with environmental standards. Current applicable penalties are too low, compared to the potentially massive costs of decommissioning, to incentivise compliance (ibid., pp.21-3). Fortunately the bill rectifies this regulatory gap by requiring decommissioning plans, requiring plans to comply with applicable regulations, and requiring owners to actually apply for consents for any discretionary activities included within the plans. Thus, the bill ensures that owners of installations can be compelled by government to meet their legal obligations at the end of an installation's life. Stewardship of the marine environment is notably enhanced.

Because disposal of wastes is integral to mining operations, applications for marine disposal consents will be heard by boards of inquiry while considering the main marine consent ...

Overall assessment

Although some changes to the marine wastes regime arguably cut both ways, the bill strengthens environmental protection. In particular, marine waste consents should be more difficult to obtain. However, neither the regulatory impact statement nor the explanatory note of the bill emphasise this change in environmental policy. Full and effective regulatory impact statements are important because they enable civil society and parliamentarians to undertake due diligence before participating in the legislative process. It may turn out that the analysis was incomplete or in some other way unsatisfactory for this educative purpose.

Possibly these amendments are mere clarifications of the existing intended position under the EEZ Act, but a failure to seize potential political capital seems odd. Because disposal of wastes is integral to mining operations, applications for marine disposal consents will be heard by boards of inquiry while considering the main marine consent.[6] A potential explanation for this silence is that the government anticipates that boards of inquiry, guided by ministerial policy statements, will be less stringently protective of the environment despite apparently more onerous legal considerations.

Marine consent process new, not necessarily improved

Clause 188 of the bill replaces sections 35–58 of the current EEZ Act regime. In particular, it provides that consent applications for publicly notifiable activities otherwise prohibited by section 20 are to be heard by boards of inquiry (clause 188, proposed sections 53-8). Boards are composed of three to five members, appointed by the minister (proposed section 53). Boards replace the EPA in substantive decisions on such applications, with the intention to harmonise marine consents with the RMA's scheme for 'projects of national significance' (explanatory note).

Non-notified activities, defined in regulations under the act, will still be determined by the EPA (proposed sections 51–2). However, non-notifiable consents relating to notifiable consents (for example, disposal of mining wastes stemming from mining operations covered by section 20) would be heard by a board when considering a notifiable consent (proposed section 45). This avoids a situation where, for example, a board permits a mining operation but the EPA does not permit associated waste disposal.

All section 20 activities are publicly notifiable unless regulations provide otherwise (EEZ Act, ss20, 29D). However,

not every marine activity captured by section 20 of the EEZ Act is likely to be significant in its effects. Even industry partners are concerned by the breadth of the new process's application and its potential to raise costs for non-contentious section 20 consent applications (Petroleum Exploration and Production Association of New Zealand, 2016, p.7). This suggests that the board of inquiry model may be miscalibrated in its scope. Alternatively, the responsible minister may intend to increase the number of activities deemed non-notifiable, but this would be to exclude public participation in the consent process. Neither option is ideal.

In the light of industry concern, scepticism about the bill's aims is justified. If boards of inquiry come to decisions otherwise identical to an independent EPA's, then the differentiation must be by cost. Yet cost is presumably tied to the processes which confine decision makers rather than to their identities. If the problem with the status quo is cost, it is not clear a board of inquiry will be inherently cheaper than consideration by the EPA. Implementing a process the minister will have more control over, rather than simply 'fixing' the EPA's process, suggests that more ministerial control – resulting in substantively different decisions – is one of the bill's true aims.

This intention to centralise power is demonstrated by introducing sections 37A–G, which create a planning tool called an 'EEZ policy statement' (proposed sections 37A–G). Section 37C outlines mandatory relevant considerations for issuance of a policy statement; namely:

(a) the actual or potential effects of the use, development, or protection of natural resources; and
(b) New Zealand's obligations under any international conventions that relate to the marine environment; and
(c) the matters in subpart 2 of Part 1; and
(d) any submissions received on the proposed EEZ policy statement; and
(e) any other matter that the Minister considers relevant.

Subsection (c) is referring to sections 10–12 of the EEZ Act, the 'heart' of the regime. Despite some concerns expressed at select committee by the Environment and Conservation Organisations of New Zealand (Environment and Conservation Organisations of New Zealand, 2016, p.21), nothing whatsoever is affected by the fact that the minister merely 'may' (rather than 'must') have regard to these considerations when conducting initial policy work on EEZ policy statements (proposed section 37A). An elected government has the privilege to determine their own policy agenda free of legal fetters, so different treatment between sections 37A and 37C is manifestly justifiable. Section 37C sets hard obligations on the executive before policy statements will have any planning effect (clause 190(6)). These are legally binding criteria for executive discretion, and bring a needed additional degree of certainty into the consent process for applicants (Resource Management Law Association, 2016, p.315).

However, '[u]nder any system of regulation, the quality of the decision makers and trust in their competence and integrity is a paramount factor' (Palmer, 2013, p.145); ministerial control over the policy statement process could therefore be more concerning to some. Ministers determine processes for issuing policy statements, provided 'adequate time and opportunity' is allowed for comments from those affected (proposed section 37B). The bill gives wide discretion. It is non-prescriptive about the process, suggesting limited prospects for judicial review oversight. Moreover, it is unclear that an expedited process will involve adequate consultation with iwi.[7] Similarly, it is instructive that the Ministry for the Environment consulted with industry and the EPA, but not community groups, when preparing the bill (Ministry for the Environment, 2015, pp.52-4). With an arguably applicant-focused record, whether the minister and Ministry for the Environment will be seen as good custodians of non-industry interests after the bill is passed is an open question. If not, the new regime will not inspire confidence among environmental and other community groups or iwi.

Being able to trust the executive is especially important because the purpose of EEZ policy statements is to state objectives and policies to 'support decision-making on applications for marine consents' (proposed section 37A(1)). This purpose is narrower than its RMA cognate's focus on 'matters of national significance that are relevant' to statutory purposes (RMA, s45(1)). Because policy statements thus designed are effectively instructions to consent authorities,[8] often minister-appointed boards, on how to approach decisions, that the minister makes effective policy without also overreaching is critical.

> As protection of the seabed has been vigilant to date, one possible interpretation of the proposed reforms is that the bill is designed to massage decisions more favourable to industry.

While the 'heart' and 'mind' of the EEZ Act regime are relatively unamended by the bill, introducing boards of inquiry and EEZ policy statements will hand increasing power of the 'limbs' to sitting governments (Grant, 2015, p.40). Three key features of the current regime are public participation in the consenting process, comprehensive and impartial consideration of matters under section 59 when granting consents, and the removal of power from the minister to the EPA (Palmer, 2013, p.142-5). Each feature, but particularly the last, is pared back by the bill.

When trying to determine the effects of this bill, a lot depends on the specific minister responsible for sustainable management of the EEZ. But, as above,

the minister may be tempted to regulate to make more section 20 activities non-notifiable, to issue potentially intrusive policy statements to force certain consenting outcomes, and to stack boards of inquiry with like-minded decision makers. These are all reasons the EPA is the presently responsible consent authority. In a context requiring rapid protection of the environment, it is perhaps undesirable in principle to expose marine consents to political contestation that will limit sustained action. Allowing EEZ management to be tied so closely to governmental objectives may destabilise cross-party consistency in the marine management regime. Such exposure would mark a sea change in policy settings which may be seen as sufficient to undermine the EEZ Act's scheme.

Conclusion

The net effect of the bill's amendments is difficult to precisely quantify in advance. There is a seemingly clear improvement in marine waste regulations, as outlined above. However, this may or may not be offset by increased ministerial control over consenting authorities and processes. Additional governmental control of the consenting regime undermines at least one key feature of the status quo, and potentially others if ministerial authority is eagerly exercised. The precise effects depend on the minister in question.

As protection of the seabed has been vigilant to date, one possible interpretation of the proposed reforms is that the bill is designed to massage decisions more favourable to industry. The EPA held that rejecting applications by Trans-Tasman Resources and Chatham Rise Phosphate was exactly what sustainable management demanded because adaptive management practices were inadequate at the time to mitigate unknown environmental costs. That position was defensible and the applicants had the right to resubmit their applications with updated proposals if they disagreed. If these decisions spurred the present reforms, leaving aside questions of economic value, then to see a functioning statutory regime undermined might not suggest to casual observers that sustainable management will be protected by these reforms. If so, it is fair to ask whether the best interests of the exclusive economic zone and continental shelf area are indeed served by this bill.

1 Convention on the Law of the Sea, opened for signature 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994); Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, opened for signature 29 December 1972, 1046 UNTS 138 (entered into force 30 August 1975).

2 The decisions on their applications can be found on the Environmental Protection Authority's website.

3 The standing orders of the House of Representatives 2014 contemplate omnibus bills as part of a wider reform programme (SO 263), but see Geoffrey Palmer as cited in Dinsdale,1996, p.19.

4 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, adopted 24 November 1986, [1990] NZTS 22 (entered into force 22 August 1990).

5 See the article in this issue of *Policy Quarterly*, 13 (2), pp.10-16 on this topic by Catherine Iorns and Thomas Stuart.

6 Clause 188, at proposed section 45. The current application by Trans-Tasman Resources Limited for both a marine (activity) consent and a marine discharge consent for seabed ironsands mining illustrates this requirement: see epa.govt.nz.

7 See generally concerns expressed in the Te Ātiawa o Te Waka-a-Māui Trust's submissions to the local government and environment select committee.

8 Straterra sees them as such: see their submission to the committee, p.19.

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Greg Severinsen

Injecting Carbon Beneath the Seabed

dumping, pollution, waste ... or something else?

Introduction

In a tiny fraction of Earth's history, humanity has induced climate change on an unprecedented scale. Despite widespread consensus that a changing climate threatens the very existence of the human species, even now effective measures are not in place to prevent it. Reducing CO_2 emissions to safe levels, bringing with it real or perceived reductions in development capacity, is proving extremely difficult to achieve.

It is in this context that people are increasingly turning to technology and science for solutions that soften the impact of the carbon-intensive activities seen to be crucial to continued economic growth. One measure that has gained particular credence in recent years is carbon capture and storage (CCS). This involves the capture of CO_2 emissions at point sources (such as power stations or industrial plants) and the injection of compressed CO_2 streams into deep and secure subsurface formations. CCS has been occurring beneath the North Sea for over 20 years, and large-scale operations are now appearing across the globe. The focus of this article is on marine CCS – where injection occurs under the seabed.

Technological developments such as CCS do not exist in a normative legal or policy vacuum. Legal frameworks have generally not contemplated CCS specifically, so lawmakers must choose how and where it is to be regulated. Overseas, it has been common for regulatory and policy responses to CCS to be driven by industry or public perception of the technology rather than by well-considered or principled normative positions. For example, negative community perception of land-based CCS in Europe has proved fatal to large-scale projects in recent years, and essentially forced future deployment offshore. In some countries, CCS has captured the public imagination as a measure perpetuating the extraction of coal, with the substantial normative baggage that this framing brings (Global CCS Institute, 2015a, p.3). Some

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jurisdictions have also chosen to regulate CCS as an extension of petroleum legislation rather than an activity in its own right, because of pragmatic considerations (new legislative schemes are hard to create) or fears of petroleum proponents that an independent CCS industry will threaten their interests (Barton, Jordan and Severinsen, 2013, p.342). Among a raft of normative questions such as these, one stands out as being particularly important for the future of marine CCS deployment, and is the subject of this article: should the injection of CO_2 beneath the seabed be treated in law as a form of pollution, waste, dumping or other similar concept?

Carbon capture and storage: the process

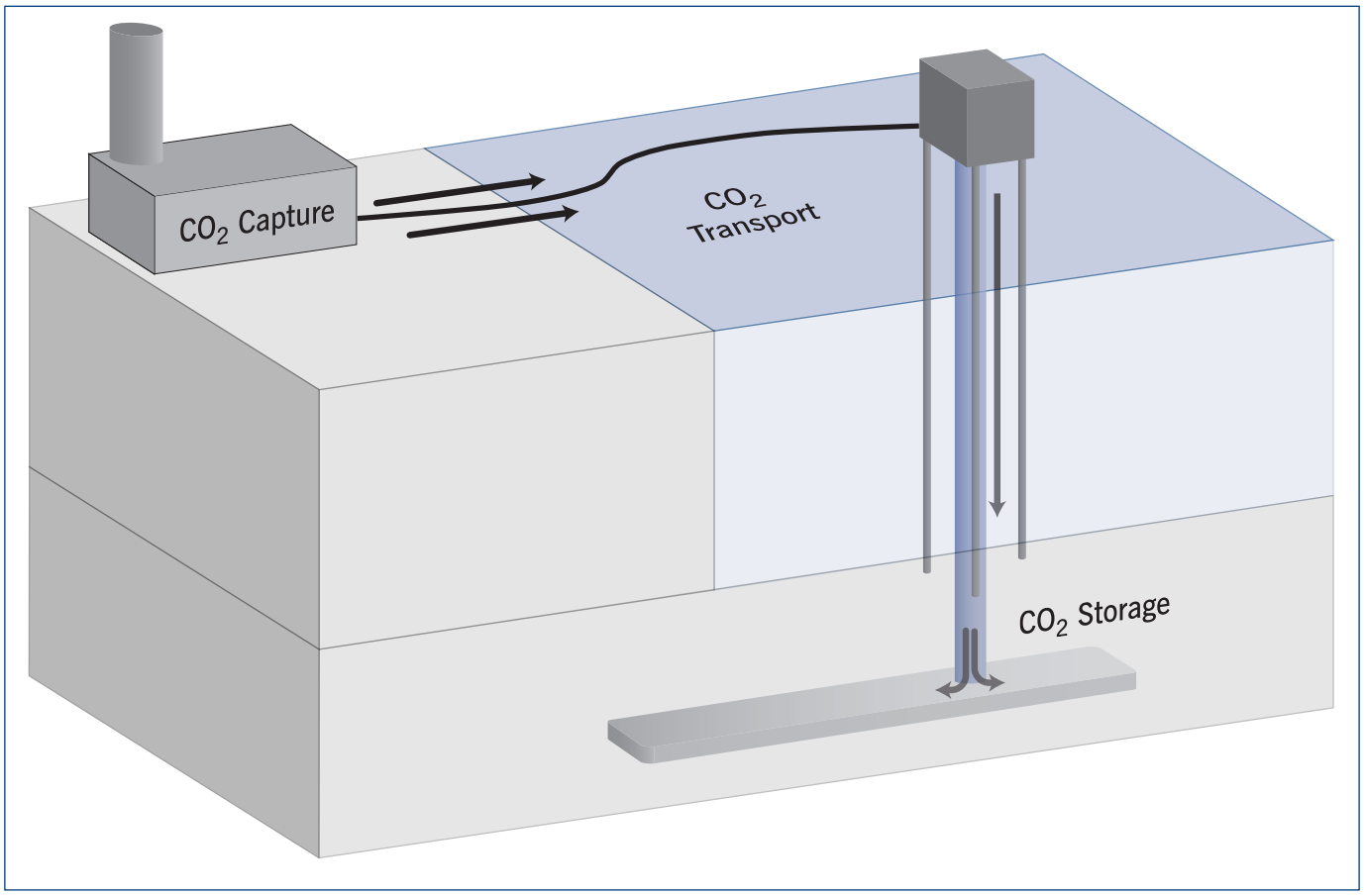
Before turning to this question specifically, it is worth outlining the process of CCS. Technically, CCS is feasible, and has been used for many years overseas with few issues.

First, CO_2 is captured from a point emission source such as a fossil fuel-fired power plant or heavy industrial facility. This is known as the capture phase. Many emitters are compatible with capture technology. Special mention can also be made of bioenergy CCS (BECCS), which involves coupling CCS with the combustion of biofuels (sourced from plant materials that have themselves removed CO_2 from the atmosphere) to produce energy. The result in such cases is net negative emissions.[1] The capture phase involves considerable expense, because it generally requires large amounts of electricity – an 'energy penalty' of about 10–40% (IPCC, 2005, p.4). However, some have stressed that CCS is actually a cost-effective measure when a wider view is taken, because short-term mitigation is bound to be cheaper than future mitigation or adaptation measures (Global CCS Institute, 2014, p.9).

Second, captured CO_2 is purified, so as to remove reactive and corrosive substances such as water. It is cooled and compressed (generally into a supercritical state to improve flow)[2] and transported to a storage site (the transport phase). Third, CO_2 streams are injected deep into the sub-seabed for permanent storage (the storage phase). Site selection is crucial: a formation must be able to sequester CO_2 effectively and permanently. Injection is most likely to occur in either partially depleted or dry petroleum reservoirs or into (usually much deeper) saline aquifers. Sites must have adequate confinement (to prevent vertical migration of pressurised CO_2) and capacity to store CO_2 (including sufficient depth). The period of injection is likely to last many years.

Once CO_2 is injected it diffuses into the geological pore space to form a plume. As the plume disperses, the pressure in the complex dissipates and, from this point, the stored CO_2 can be trapped in a variety of site-dependent ways. Physical or structural trapping is the dominant form during and immediately after injection, where a plume is physically blocked by an impermeable geological structure such as a cap rock. As time passes, this changes from physical to residual (capillary) trapping, which involves the isolation of CO_2 in increasingly small pores. Over the course of several thousands of years CO_2 is expected to dissolve completely in formation fluids (dissolution or solubility trapping) and finally react with rock to form solid, stable carbonate minerals (IPCC, 2005, p.206).

Figure 1: The carbon capture and storage process



Once injection has ceased the well is sealed and the behaviour of the plume is monitored. Given that storage must be secure for tens of thousands of years for the technology to be effective, it is important to prevent post-closure leakage. The Intergovernmental Panel on Climate Change (IPCC) has stated that a leakage rate of over 0.1% is unacceptable (IPCC, 2005, p.197). However, the risk of a more than negligible rate of leakage has been assessed as very low if a storage site is selected and managed well, and that risk declines steadily over time (ibid.).

CO_2 can also be injected to enhance the recovery of underground oil and gas. Where CO_2 used for this purpose remains securely stored after injection, it is one example of a concept called carbon capture, utilisation and storage (CCUS), represented in Figure 2. However, not all reservoirs suitable for storage are compatible with the use of such techniques. Storage of CO_2 can sometimes result in the degradation of subsurface mineral resources (World Resources Institute, 2008, p.82).

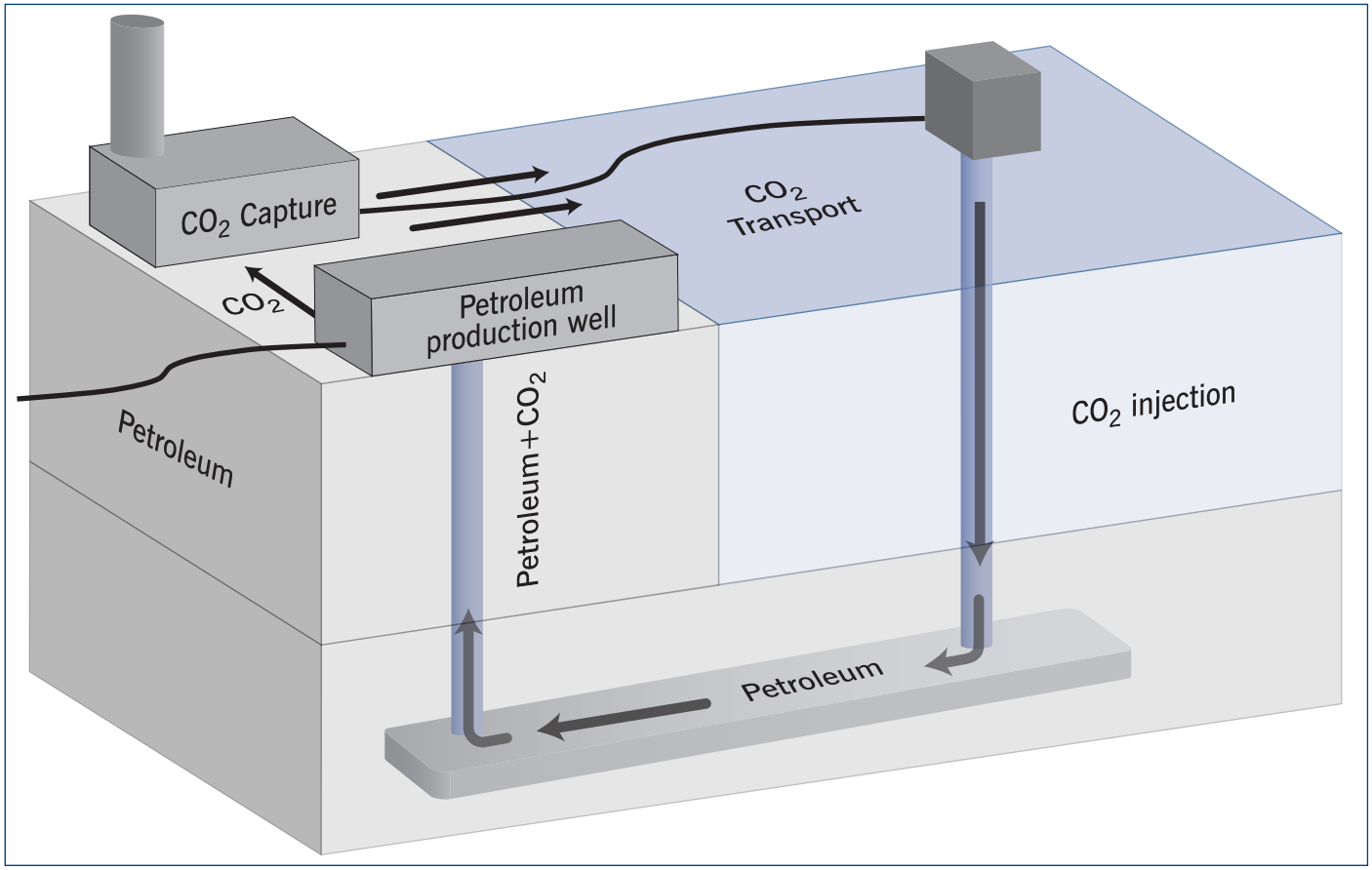
The geological storage of CO_2 poses a number of other environmental risks, although overall these have been considered to be low and similar to those of petroleum activities (IPCC, 2005, p.12). Excessive injection rates or seismic activity could fracture an overlying seal, producing potential leakage pathways out of a storage site (Swayne and Phillips, 2012). Excessive pressures can force subsurface brine into overlying potable groundwater reservoirs and mobilise harmful metals and minerals (International Energy Agency, 2010, p.91). Unintended leakage also poses risks to the local surface environment. Perfect containment cannot be guaranteed, but significant leakage is unlikely (IPCC, 2006, 5.12). Experience has corroborated this conclusion: no unintended leakage has been recorded at the oldest marine sites, at Sleipner and Snøhvit off the Norwegian coast (Havercroft, Macrory and Stewart, 2011, p.29). If a leak occurred, high CO_2 concentrations could adversely affect marine life by causing acidosis (lowering of PH in body fluids), hypercapnia (increased blood concentration of CO_2) and asphyxiation (impaired oxygen transport) (OSPAR, 2007, 4.5). The magnitude of effects depends on the rate of leakage, the chemical buffering capacity of the receiving environment, and patterns of local dispersion. In other words, risks are context-specific. Induced seismicity and ground heave on a minor scale is another potential effect of storage, as it is of other activities involving the pressurisation of the subsurface (International Energy Agency, 2010, p.91).

The global context of carbon capture and storage

The feasibility of CCS has been demonstrated by its deployment in a number of places around the globe over the last two decades. Incentives for doing so have been varied. In a minority of cases a sufficiently high 'carbon' price has provided an economic incentive to deploy CCS,[3] and in places substantial state subsidisation has led to investment (McCoy, 2014, p.21). A stronger incentive (particularly in North America) has been the potential for CO_2 to enhance petroleum recovery, with storage a secondary consideration (Global CCS Institute, 2014, p.11).

However, broad commercial deployment of CCS remains limited.

Figure 2: Carbon capture, utilisation and storage



Primarily this is because the cost of the technology remains higher than the price of emitting CO_2, and there are few regulatory requirements to invest. One representative of the oil and gas industry in New Zealand has even spoken of CCS in current conditions as 'commercial suicide' (Coyle, 2014, p.56). An uncertain and unsupportive legal and policy environment has been cited as another key hurdle to commercial interest in CCS, and New Zealand has been ranked poorly on this score (Global CCS Institute, 2015b, p.9).

In New Zealand, the price of carbon under the emissions trading scheme currently falls far short of that needed for commercially viable CCS projects (Barton, Jordan and Severinsen, 2013, p.241). Moreover, enhanced petroleum recovery appears not to be a significant driver for future CCS deployment in New Zealand. That said, interest has been shown in CCS by both government and industry. CCS is envisaged to form a limited – but viable – part of mitigation efforts (Ministry of Business, Innovation and Employment, 2016), and investigations have been undertaken that suggest CCS is achievable within New Zealand's geological context and emissions profile. Potentially suitable formations have been scoped (Field et al., 2009) and several point emission sources have been identified (Gerstenberger et al., 2009). At the international level CCS is more emphatically recognised as an integral part of a global response to climate change. Indeed, in the most recent assessment report of the IPCC, CCS deployment is built into all predictive models that have a meaningful impact on the global climate (IPCC, 2014, pp.23, 28, 89, 99).

The prospect of CCS deployment in New Zealand in the future suggests that considering its environmental regulation is an exercise well worth undertaking in advance. The International Energy Agency has specifically recommended that states review and develop legal frameworks for the technology, and that uncertainties in regulation be avoided (International Energy Agency, 2002, p.6). Yet a common experience internationally has been for regulators and policymakers to be led by industry, and for legal regimes subsequently to be developed under pressure. In New Zealand, in contrast, there is a valuable window of opportunity to design a legislative framework for CCS that is well considered and normatively defensible.

The definition [of waste] is ... partly circular, and there remains an inherent subjectivity in how we define waste (and terms like pollution) in any given case.

The normative treatment of marine CCS

Now that the technology has been placed in its technical and global context, let us turn directly to the core question of this article: should marine CCS be treated in law as a form of dumping, pollution, waste or similar concept? In New Zealand's environmental law we can observe a strong aspiration to reduce the generation and disposal of waste and pollution, particularly in the marine environment.[4] This is more ambitious than simply responding to the adverse effects of waste/pollution once it occurs. The idea of dumping is also viewed through a particularly negative normative lens (Doody, Becker and Coyle, 2012, p.12). Whether CO_2 should fall into these morally charged categories, and be regulated under frameworks with such concerns at their core, deserves close attention.

'Waste' is conceived of broadly in New Zealand's legislation, and includes anything disposed of or discarded (essentially, abandoned).[5] Yet 'disposal' requires that a 'waste' be deposited for the long term in a place set apart for that purpose (or incinerated).[6] The definition is therefore partly circular, and there remains an inherent subjectivity in how we define waste (and terms like pollution) in any given case. An acceptance that we should minimise waste and pollution does not in itself determine whether a particular class of activity actually amounts to waste or pollution (Pike, 2002, p.207). It is, in fact, possible to classify CCS in a range of ways, which can be negative, positive or neutral. It can be seen as the dumping, discharge or disposal of a waste, pollutant or contaminant (Campbell, James and Hutchings, 2007–08, p.181), as the use of a geological resource (McCoy, 2014, pp.18, 22), as the prevention of climate harm, or as the storage of a resource or by-product (Gerstenberger et al., 2009, p.37).

Other jurisdictions continue to grapple with similar issues of classification (Robertson, Findsen and Messner, 2006, p.8). The commonly used international moniker 'carbon capture and storage' is itself notable, in that it has not captured the global imagination as carbon 'dumping' or 'disposal'. However, the movement of gaseous or liquid substances into an uncontained receiving environment – as with CCS – has historically been perceived as a matter of pollution control. This tends also to be the initial perception of the layperson (IPCC, 2005, p.257). Indeed, storage bears many similarities to more conventional forms of waste disposal such as landfilling. Some scholars have supported the 'orthodox view' of CO_2 as a waste that contributes to climate change (Barton, Jordan and Severinsen, 2013, p.379) and a report on CCS in South East Asia has recommended that CO_2 needs to be classified as waste or pollution in order to make use of existing regulations (Asian Development Bank, 2013, p.63).

However, this is by no means the only view. Western Australian law does not consider CO_2 to be a 'pollutant' (Robertson, Findsen and Messner, 2006, p.28). Similarly, the European Union has developed a targeted directive for the technology, despite many member states being parties to international maritime treaties that characterise it in a negative way as dumping. A New Zealand study

has shown that the public may in fact conceive of storage rather paradoxically as both the disposal of waste and the use of a resource (Coyle, 2014, pp.68, 106-7), and a UK study concluded that public perceptions of the technology can change once it is placed firmly within its climate change context (IPCC, 2005, p.257). The IPCC has also left the question open, pointing out that analogues could be as diverse as nuclear waste disposal and temporary natural gas storage (ibid., p.69).

At the global level, parties to the London Dumping Protocol have accepted that CCS offshore is a form of dumping, to be regulated under a regime aimed squarely at controlling the adverse effects of pollution, rather than one emphasising the need for climate outcomes to be realised (Havercroft, Macrory and Stewart, 2011, p.145). However, this has been more the product of accident and convenience than a conscious choice to characterise it in a negative way. CCS was actually prohibited under the protocol until specific amendments were made to it in 2006. This is because the protocol takes a precautionary approach whereby all dumping is deemed prohibited unless specifically included in a 'white' or 'reverse' list in annex I. CO_2 streams were added to that list to allow it to occur. Consequently, the London protocol has become the de facto location for the most detailed international regulation on marine CCS. Best practice guidelines have been developed under its auspices, which contain considerations that are vital in issuing permits (such as site selection, CCS stream characterisation, risk assessment, and ongoing monitoring and maintenance).[7]

To some extent, and somewhat ironically, the adoption of the London regime as the 'home' for CCS-specific guidance is because it has historically presented the most substantial regulatory obstacles to the technology (Langlet, 2009, p.298). To give a hypothetical comparison, it would be conceptually similar to regulating for the success of the mining industry within conservation legislation. The protocol's normative roots are in the reduction of marine pollution, not in the facilitation and regulation of a climate change mitigation technology. The key reason for the choice has been pragmatism: it is much easier and faster to amend and build upon existing international legal frameworks through existing institutional structures than it is to negotiate and ratify entirely new frameworks. No existing regimes other than the London protocol have been suitable for doing so (Langlet, 2015, p.401). We would do well to remember that such difficulties do not exist to the same degree in domestic legal systems, where choices of legislative design are much freer.

The international siting of CCS within the London dumping regime illustrates that the choice of legal framework has more than just academic significance. In that case it has generated significant legal questions, tensions and uncertainties, because CCS does not fit the traditional model of dumping. For example, article 4(1) of the protocol provides that, in granting permits, particular attention must be paid to opportunities to avoid dumping in favour of 'environmentally preferable alternatives'. It reflects the assumption that, ordinarily, the dumping of waste in the oceans is seen as a last resort. That position is not beyond debate for marine CCS. What exactly a 'preferable' alternative would be in the case of storage is not made clear, although presumably the secure storage of CO_2 below ground may be justified as environmentally preferable to an atmospheric discharge (Langlet, 2009, p.293). A similar issue arises from the wording of annex 2(6), which provides that:

> A permit to dump wastes or other matter shall be refused if the permitting authority determines that appropriate opportunities exist to re-use, recycle or treat the waste without undue risks to human health or the environment or disproportionate costs.

'Re-use' and 'recycling' would be largely inapplicable considerations in the context of storage, unless large-scale uses for captured CO_2 became common. Yet on occasion it might be possible and cost-effective to 're-use' anthropogenic emissions as fluid for enhanced petroleum recovery, and the London protocol's explicit preference for re-use over storage is curious. Without some guarantee that enhanced petroleum recovery would result in permanent storage, it may be more harmful to the global environment than CCS.

Some may contend that [carbon capture and storage] by its very nature is a form of pollution, dumping or waste disposal, and should be treated as such.

Recommendations for New Zealand

Fortunately, the London protocol does not *require* New Zealand law to define storage as a form of dumping. It simply requires parties to implement the standards and considerations contained within it. But the examples above show that there are many different normative brushes with which we can paint CCS in New Zealand. The most important lesson must be that the choice of brush is significant, and therefore worth paying close attention to before legislating. By siting regulation and policy within particular legal frameworks, we are (potentially inadvertently) predetermining the appropriate normative direction for the technology. That should not be done lightly.

Some may contend that CCS by its very nature is a form of pollution, dumping or waste disposal, and should be treated as such. However, the story of such CCS opposition can equally be seen as a marketing or communications failure, not a fundamental flaw or characteristic of the technology itself (Doody, Becker and

Coyle, 2012, pp.54, 60). As some commentators have put it, CCS has effectively been picked as a climate 'loser' compared to energy efficiency and renewable electricity measures, and 'has undermined its own credibility' because of how it is perceived (ENGO Network on CCS, 2013, pp.4, 7).

Yet a positive narrative around storage is not out of reach (Heiskanen, 2006, p.15). After all, this has been the experience with 'clean, green' – but also environmentally harmful – renewable energy projects.[8] Terms such as 'waste' and 'disposal' (as with terms such as 'harm' and 'risk') are ultimately human constructs rather than inherent features of particular substances or actions. They describe our attitudes towards something and its effects rather than a thing or action itself (Havercroft, Macrory and Stewart, 2011, p.186). Many legal regimes simply assume we will recognise waste when we see it.[9] Biological sequestration of CO_2 (in trees) is certainly not perceived or treated as the dumping or disposal of carbon, although it arguably *could* be if we defined it by action rather than outcome (Doody, Becker and Coyle, 2012, p.29). Classifying CCS streams negatively based on their origin, commercial valuation, or an abstract assessment of the nature of CO_2 is therefore not helpful unless that classification assists in achieving the results that we, as a society, desire. Negative public perceptions are often based on misunderstandings of the climate role of storage and exaggerations of its risks rather than well-considered ethical positions (Gerstenberger et al., 2009, p.32). The law must respond to principle, not perception.

Do we wish to discourage, minimise and reduce the use of CCS through a negative normative classification? Legal principle suggests that we do not. For one, the principles of intergenerational equity (that basic interests of future people need to be safeguarded) and subsidiarity (that decisions ought to be made according to the community of interest most affected) suggest that weight be given to the global, atmospheric and intergenerational impacts of the technology relative to its local, geological and short-term effects. The climate imperative is to increase deployment of CCS, especially BECCS (Global CCS Institute, 2015a, p.3). In contrast, deep geological change from storage is, at worst, normatively neutral (as long as it does not impact on resources we value, such as potable water). These factors come out in favour of a positive normative classification of CCS.

This is consistent with the conclusions of Macrory et al. that CO_2 streams used for enhanced petroleum recovery are not waste under EU law because they serve a useful function (Macrory et al., 2013, p.23), and Marston and Moore's prediction that pure storage streams may have value in the future (Marston and Moore, 2008, p.428). It is also essential that the climate benefits of CCS are realised. Regimes concerned with dumping, discharges, pollution and waste are invariably focused on the prevention of adverse effects rather than the achievement of positive effects, so CCS should not be classified in this way or assumed to be harmful as a blanket normative position. The literature is replete with exhortations to provide a supportive legal environment for the technology.

Given this conclusion, the next logical step is to assess how marine CCS would be treated under New Zealand's existing environmental laws, and therefore whether reform is required to achieve our aims and support CCS. This is not the place for a detailed analysis of those laws. However, it is fairly clear that, at present, marine CCS is classified as a form of marine dumping under section 15A of the Resource Management Act 1991. The same position is more clearly spelt out in the context of the exclusive economic zone, where regulations refer to CCS specifically as a form of dumping.[10] As under the London Dumping Protocol before its 2006 amendments, it appears that CCS is prohibited outright under the RMA, by virtue of pollution regulations.[11] Although CCS is not subject to a blanket prohibition in the exclusive economic zone legislation, it is provided for as a discretionary activity and thus exposed to the negative normative direction embedded in the purpose of the act when decisions are being made on applications.[12] These outcomes illustrate the normative dangers of locating CCS in frameworks concerned with inherently harmful activities like dumping, waste and pollution without expressly considering its implications. The more normatively sound approach would be to remove CCS from such regimes, and instead locate its regulation in more neutral laws that target both its specific environmental risks and ensure that its positive (climate) impacts are realised.

1 As long as such biomass is replanted at the same or higher rate than it is used.
2 A state having characteristics of both gas and liquid.
3 Being the Snøhvit and Sleipner projects: see Global CCS Institute (2014).
4 See Resource Management Act, ss.15A-15B; Waste Minimisation Act 2008, s3; Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, s10(1)(b).
5 Waste Minimisation Act 2008, s5; Climate Change Response Act 2002, s4; Carter Holt Harvey v North Shore City Council [2007] NZCA 420, [2008] 1 NZLR 744 at [749].
6 Waste Minimisation Act 2008, s6; Climate Change Response Act 2002, s4.
7 London Dumping Protocol Risk Assessment and Management Framework for CO_2 Sequestration in Sub-Seabed Geological Structures (CS SSGS, LC/SG–CO_2 1/7, annex 3).
8 Maniototo Environmental Society Inc v Central Otago District Council EnvC Christchurch C103/2009, 28 October 2009 from [386].
9 Waste Minimisation Act 2008, s.6; Climate Change Response Act 2002, s4.
10 Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharges and Dumping) Regulations 2015, regulation 33(d).
11 Resource Management (Marine Pollution) Regulations 1998, regulation 4.
12 Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, s10(1)(b).

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Marie A. Brown

Last Line of Defence
a summary of an evaluation of environmental enforcement in New Zealand

Introduction

In 2016 the Environmental Defence Society embarked on an analysis of compliance monitoring and enforcement of environmental law in New Zealand (Brown, 2017).[1] The responsibilities for ensuring that the aspirations of law and policy are met with respect to the environment are shared across a wide range of acts and several agencies. Different agencies operationalise compliance in different ways, affording it different priority and thus achieving different outcomes. This article summarises the key findings of the project and briefly canvasses the primary groups of solutions. New Zealand's environment would benefit from a far more robust approach to achieving regulatory outcomes and this requires injections of resourcing and capability into our enforcement agencies and dissolution of prevailing political influences.

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Non-compliance with environmental protections has wide-ranging impacts. Our fragile biodiversity and ecosystems have undergone rapid environmental change, and the compliance gap amplifies the impact of human activities on nature. Closing or at least narrowing the compliance gap is a crucial task if the aspirations of law and policy are to be achieved. However, such endeavours bump up against normative views that environmental offending is a 'victimless crime' and hence it can be a struggle to muster the resources necessary to mobilise solutions (De Prez, 2000).

A range of prior reports have highlighted regulatory failure in New Zealand and the factors that contribute to it (see, for example, Black, 2014). The agencies and regimes that formed the subject of the Environmental Defence Society analysis are set out in Table 1.

Some definitions

Compliance, monitoring and enforcement are not necessarily well-understood terms to the general public. For clarity, and for the purposes of this research, they were defined as follows:

Compliance means adherence to the law.

Monitoring means the activities carried out by agencies to assess compliance with the law, and to respond to complaints from the public about potential breaches (i.e. compliance monitoring).

Enforcement means the actions taken by agencies to respond to non-compliance with the law (inclusive of formal and informal actions) with the aim of ensuring compliance (Ministry for the Environment, 2016).

The collective term for the function 'compliance, monitoring and enforcement' is abbreviated to CME henceforth.

Table 1: Agencies and regimes that formed the scope of the report

Agency	Regime
Ministry for the Environment and councils	Resource Management Act 1991
Department of Conservation	Conservation Act 1987, Wildlife Act 1953, Marine Mammals Protection Act 1978, Marine Reserves Act 1971, Native Plant Protection Act 1934
Queen Elizabeth II National Trust	Queen Elizabeth II National Trust Act 1977
Fish and Game New Zealand	Wildlife Act 1953, Conservation Act 1987
Environmental Protection Authority	Exclusive Economic Zone and Extended Continental Shelf (Environmental Effects) Act 2012
Land Information New Zealand – Crown Property	Crown Pastoral Land Act 1998 Land Act 1948
Overseas Investment Office	Overseas Investment Act 2005
Ministry for Primary Industries	Forests Act 1949 (Sustainable Forest Amendment Act 1993)

The methodology

Assessing the effectiveness of environmental regulators from the outside is challenging: data are often limited and many agencies appear to give limited priority to the function, thus retaining minimal staff with appropriate expertise to engage with external researchers. The assessment was undertaken using a bespoke methodology that could be scaled to the amount of information available within any one regime. The methodology recognised that the effectiveness of an environmental compliance regime depends on three key factors:

- the robustness of the underlying regulatory provisions for the compliance, monitoring and enforcement function;
- the operationalisation of the function by the agency, including how it relates to other roles they may have; and
- the practical implementation of the role, including the history of enforcement action taken.

Information was sourced from all regimes on these three dimensions and used to build an overall picture of the approach and its outcomes for the public interest. Compiling the information was achieved through semi-structured interviews with staff, Official Information Act requests and, in the case of councils, a nationwide ten-question survey carried out in the middle of 2016.

Some regimes had a significant amount of information. For example, since the advent of the Resource Management Act 1991 the Ministry for the Environment has collected data every year from implementing agencies (councils). While the data are of varying quality and have limited comparative value over time due to changes in questions year to year, there is a voluminous amount. By contrast, many regimes carried comparatively scant data due to a lack of robust recording systems. The research was naturally limited by that and by how much could be obtained. As such, the methodology required assembling as much data as possible to establish an understanding of the regime and build a narrative from there.

The next section outlines key learning across these three areas of inquiry, albeit in only limited detail. Readers are referred to the main report for more substantial information.

Gradual improvement evident

There is an observable general trajectory of improvement in all agencies towards better and more robust practice, even in the most politicised of contexts. Regional authorities have collaborated successfully in establishing a collective strategic direction towards risk-based compliance management (Compliance and Enforcement Special Interest Group, 2016). Central government innovations such as Crown Law's Public Prosecutions Framework and the Government Regulatory Practice Initiative (G-Reg) led by the Ministry for Business, Innovation and Employment also signal a wider appetite for continuous improvement of regulatory practice. This is consistent with international trends towards increasing professionalisation of environmental enforcement.

Agency overview

The ministry, the councils and the RMA

The Resource Management Act 1991 is the core legislation in New Zealand, not least because of the sheer breadth of the act and the number of agencies implementing it. The Ministry for the Environment has an oversight role and is charged with national-level reporting and thought leadership. It does not, however, take an operational role. That is left to the 78 councils dotted over the landscape, of which there are four main types: regional councils, charged with the majority of the protection of the natural environment; district and city councils which address vegetation controls and other more amenity-based aspects of local plans; and unitary authorities, which straddle both levels of policy. Seventy-eight different versions of RMA compliance practice have proliferated under the gaze of the Ministry for the Environment, who appear to have paid scant regard to the whole function of CME since the advent of the regime.

Councils afford CME varying priority, and encounter two key barriers in carrying

out this often adversarial function: resourcing and politics (which are, of course, interlinked). Councils are political entities, governed by a group of people elected by the local community to carry out their functions under the act and to further locally-based aspirations. Councillors sometimes take their place at the table thanks to the coordinated voting of vested interests, some of which may take umbrage at the council energetically carrying out its CME role. In the worst cases this creates an environment of politicised decision making, including the intentional underfunding of this crucial function lest it offend those who must not be offended.

Other conflicts exist. Councils are charged with an explicit economic development role; this too can see politicised decision making dribble down much further than the elected body and into the hearts and minds of management and staff, who have incentive to forget about concepts such as an appropriate separation of governance and operations. This separation is crucial for compliance: elected representatives should rightly set the policy and direction for CME through governance channels, and then they must stay out of day-to-day decision making. Unfortunately, our research found that separation to be a little murky in many councils: eight district councils need the approval of their elected representatives to prosecute; the majority of district and city councils do not have an enforcement policy (on what are they basing their decisions?); and there is strong evidence of informal political meddling in many regional councils. This simply cannot do.

DOC and wildlife enforcement

An enormous regulatory role has been bestowed upon the Department of Conservation, and it is straining underneath it. More than 25 pieces of legislation are largely DOC's alone to enforce and it attempts this with minimal resourcing. It has a strong national compliance team and a decent in-house training course, but the dogged determination of a few has not been enough to contest the 'business-friendly' face of the partnership transition and the overall dearth of resourcing. Compliance at present is generally devolved to local offices, resources being distributed at the discretion of the local operations manager. Given that three-quarters of its prosecutions arise from just 10% of its offices, it seems clear that compliance is afforded different priorities in different locations. Some of the legislation is enforced far more energetically than others too: take the Taupo trout fishery, Auckland marine reserve compliance and West Coast whitebaiting out of the picture and there are not a lot of prosecutions left to share around the remainder of the law. The effort is uneven and the strategy is unclear. To DOC's credit, a significant programme of improvement is under way, and hopefully a new era of more robust conservation law enforcement is imminent.

The dramatic revelations in 2016 about fisheries enforcement put the public on notice that MPI may not be being entirely even-handed in its decision making ...

MPI and indigenous forestry

The Ministry for Primary Industries is a super-ministry, juggling innumerable functions and inherent conflicts. The dramatic revelations in 2016 about fisheries enforcement put the public on notice that MPI may not be being entirely even-handed in its decision making (Heron, 2016). There is not a great deal of data around the administration of indigenous forestry on private land, and formal enforcement appears rare. Part of the reason might be that MPI has only two tools at its disposal when uncovering non-compliance in indigenous forestry, non-statutory goading and prosecution. The former is often ineffective, and the latter usually very costly. The absence of a middle-ground tool to address lower-level offending is an issue faced not only by MPI, but also by the Environmental Protection Authority (EPA) and DOC. An infringement fine regime would help here.

The EPA and the deep, blue sea

Far beyond the horizon, the Exclusive Economic Zone and Extended Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) kicks in. The 12-nautical-mile limit marks the beginning of an area of burgeoning economic activity. The relatively newly minted EPA has it within its powers to implement the act. The act applies to oil and gas operations and newer areas of economic development, such as the controversial seabed mining such as that proposed off the Taranaki coast and on the Chatham Rise. It is early days for both the act and the regulator, so we make no substantive assessment of the EPA; that would be premature.

Much work is under way internally developing systems and training to prepare the officers and the organisation for their growing role, which is good to see. An annual compliance plan is publicly available, as is a prosecution policy (Environmental Protection Authority, 2017, 2013), although senior staff advise of constrained resourcing limiting that roll-out. The report points out that a weakly resourced regulator and a powerful and small regulated community are the ingredients of regulatory capture, and that time will tell how effective compliance will be. There is also strong evidence that public interest is high: an earlier instance in which the EPA elected not to prosecute an offending party drew an impressive 15,000 emails from Greenpeace supporters – much pressure for a fledgling regulator; let us hope they get it right.

The QEII Trust and private land conservation covenants

In the 1970s visionary Waikato farmer Gordon Stephenson and others estab-

lished the Queen Elizabeth II National Trust, with legislation of the same name being passed by Cabinet in 1977. The trust now has oversight of nearly 200,000 hectares of covenanted private land, protected for its open space and conservation values. An important role for the trust is ensuring that the conditions set out within covenant agreements are adhered to. These conditions vary, but include requirement to do pest control and maintain fencing, and avoid grazing all or some areas. Field officers check the compliance of conditions and, while compliance rates are high, sometimes more serious enforcement action is needed. This demands that the Trust step back from a partnership approach and instead adopt a more stringent regulatory manner. Successful litigation against the errant Netherland Holdings in 2015 demonstrated its willingness to play this card, and it will need to do it more often over time to maintain that credibility.

Fish and Game New Zealand

The exotic species dimensions of the Wildlife and Conservation acts are primarily enforced by Fish and Game officers and their team of honorary rangers nationwide. The enforcement role of both acts is of course shared with the Department of Conservation, although the vast majority of prosecutions are carried out by Fish and Game. Fish and Game is a statutory entity, but is not a public prosecution agency like most of its peers in central government (as is the QEII Trust). Like MPI, Fish and Game and DOC struggle with the absence of a proper range of tools to carry out enforcement effectively. While DOC makes wide use of diversion processes through the courts, Fish and Game devised its own workaround: the national reparations policy (2016).

Land Information New Zealand

Housing both Crown Property and the Overseas Investment Office among other sub-entities, Land Information New Zealand is a less prominent environment regulator compared to many others. But its role in protecting our fragile high country and special values on land subject to overseas purchase is significant. What is not significant, however, is the degree of transparency as to how the CME function is managed in respect of both of these areas. Most compliance monitoring appears reliant on self-reporting, and the capacity from random and front-line audit is sparse.

The relevant regimes themselves are also highly discretionary. For example, in the event that appropriate permission is not sought prior to purchase, pursuant to the Overseas Investment Act 2005, the Overseas Investment Office can impose an 'administrative penalty' of up to $20,000 on the applicant – a large sum when compared with any other penalty an agency can unilaterally impose – and process approval retrospectively. Do these regimes strike an appropriate balance between regulator discretion and transparency for the public?

Unpacking the key issues

Casting one's eye across such a range of regulators and regimes, one might expect to find different key issues with each. But in fact there is remarkable convergence. Four recurring themes stood out and they are canvassed briefly here, along with some of the solutions proposed in the report.

Robust underlying law makes CME more effective and efficient

Much of our environmental law is old, out of date and lacking in the tools that enable behaviour change to be achieved at least cost in the shortest amount of time. This applies not just to the old acts either: the relatively new EEZ Act is also without an infringement regime, for example. Interestingly, many of the flaws in the legislation have also been long understood but just lain unaddressed, partly because compliance just hasn't seemed like an organisation priority; nor has Parliament afforded priority to said changes. Recent improvements to the Wildlife Act 1953 – and there are more in the pipeline – demonstrate the kind of changes needed to help the agencies do their job properly.

Modern and fit-for-purpose law is what is needed and this means much of our legislation is ripe for a makeover. The solutions set out in Last Line of Defence also include stronger national guidance on CME, most particularly from the Ministry for the Environment to the 78 councils operating nationally. While local determinism is acceptable on some fronts, there are areas where greater alignment and consistency could easily be achieved, and where statutory limits could be better clarified (e.g. cost recovery, thresholds for escalation, evidentiary tests, etc).

Compliance officers are usually born, not made: certain personality traits make for good officers, in addition to training that prepares them for the technical aspects of their role.

Boots on the ground, and the right kind of boots

Compliance officers are usually born, not made: certain personality traits make for good officers, in addition to training that prepares them for the technical aspects of their role. It is clear from many agencies that ensuring that the right person wears those boots is a relatively low priority. In fact, having such people at all seems low priority. For example, ten district councils report zero resources for CME, and more than 40 have fewer than one full-time equivalent to do the job (often shared with other tasks). Meanwhile, consents are issued and permitted activity standards are included in district and regional plans, pinning hope on people who simply don't exist to ensure that the behaviour change the policy aims for occurs.

The lack of resourcing is in part due to the politically unpalatable nature of the function, and the chronic underfunding of many public agencies, full stop. But the

lack of training and the limited recognition of compliance as a career choice are important too. High turnover and a predominance of weakly trained front-line officers are a major risk to a regulator. Our report recommends the development of far more effective training and express recognition of officers and agencies that demonstrate competence in this important field. We suggest a programme of agency accreditation (similar to that for consenting already in place) and a professional network to recognise and support this important career path, not unlike those already available for planners, lawyers and engineers.

Independent decision making

New Zealand has few pure regulators; most agencies carry regulatory roles alongside others. MPI juggles trade facilitation and trade regulation roles, DOC wrestles with partnership ambitions alongside its significant environmental enforcement role, and councils too have to reconcile economic development and environmental protection mandates with little guidance. The role of governance is to set strategy and policy directions, and the day-to-day decisions are not to be interfered with. A credible regulator makes individual enforcement-related decisions based on facts, and there is no room for politics. This is often not the case and this must urgently change.

Whether such change can be brought about by adjusting the people and the practice remains to be seen. Or are we asking too much and do we need to consider much bigger shifts in our institutional arrangements? At the very least it starts with making it crystal clear that such behaviour is inappropriate, and, further along, that there is a significant risk of sanction for those indulging in this deeply unfair meddling. All agencies should have clear and appropriate prosecution and enforcement policies that are publicly available and subject to quality control. The next challenge is to ensure that they are adhered to.

Audit and oversight

Part of the reason political interference in decision making can persist is that there exists a serious lack of oversight of the activities of environmental enforcement agencies. As a result, the public has little idea of what is happening and little assurance that this crucial role is being performed effectively. In one regime, voluminous data have been collected over an extended period of time (the RMA), and yet the Ministry for the Environment has not chosen to use that information in an evaluative way. Over and over, the same councils have reported zero prosecutions, zero fines and zero staff for CME, and nobody appears to have thought to question why. Is that a fair reflection of public expectations?

To facilitate greater transparency we recommend investment in information technology systems that track and validate compliance approaches. Many agencies do not record much information about their CME roles – some do not even have the IT infrastructure to do so (e.g. DOC) – and many annual reports barely mention the function. Without any data, laggards can prosper while good performers are ignored. But which data, and why?

The quality and relevance of that which is collected is highly variable. Often annual reports include one or two random figures that pertain to CME, but lack any context. It would seem that we have a limited notion of what success even looks like. As such, a major recommendation of our report is for the ministry (or another entity) to develop thought leadership on appropriate evaluation of environmental regulators, and to then establish a reporting framework around this. Making it common across environmental regulators would enable easy comparison, compared to the challenge of benchmarking that exists at present.

Summary

The difficulty of achieving the desired outcomes of environmental law due to the ever-present compliance gap is by no means unique to New Zealand. Globally, environmental offending struggles to attract the attention and resources needed to be effectively combatted. The evidence suggests that while our environmental regulators are on a trajectory of improvement, there are also some big issues to be sorted out. The resources poured into the promulgation of law and policy are enormous, and unless that energy is matched with the dogged process of driving the need for behaviour change home, it is simply wasted investment.

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David Hall

Greening the Future: a case for environmental impact bonds

A central puzzle for environmental economics is how to integrate long-run costs and benefits into present-day decision making. Commonly this puzzle is described in terms of externalities. These occur when 'an activity or transaction by some party causes an unintended loss or gain in welfare to another party, and no compensation for the change in welfare occurs' (Daly and Farley, 2011, p.184). For example, the millions of tonnes of carbon dioxide that a large coal-fired power plant releases annually contributes to the cumulative problem of climate change, yet those who profit from producing electricity do not bear the burden of the negative consequences. Rather, these costs fall disproportionately upon future generations and communities uniquely vulnerable to the impacts of climate change. Thus, the emission of greenhouse gases creates a negative externality, because its costly impacts are external to the accounting of the actors who emit them.

In this way, market mechanisms produce market failures, with grave implications for the environment. Professor Lord Nicholas Stern famously described climate change as 'the greatest market failure the world has seen' (Stern, 2007). Other examples include the degradation of freshwater or soil resources, air pollution, overfishing and mass deforestation. What is economically *rational* from the perspective of short-

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term capital gain is economically *irrational* from the perspective of long-term prosperity. The same problem also hinders remedial action: the costs of interventions are immediate, whereas the avoided costs of environmental damage are months, years, even decades away.

This challenge is not unique to environmental economics, moreover. As Jonathan Boston describes, there are a range of societal problems which 'entail non-simultaneous exchanges', in anticipation of which 'elected officials must impose near-term costs in order to deliver net long-term gains' (Boston, 2017, p.465). These include decisions of fiscal responsibility, health problems with delayed impacts on public health infrastructure, such as obesity and smoking, underinvestment in public infrastructure which retards economic productivity, and social problems that perpetuate the intergenerational transfer of poverty.

Given that these problems share a common payoff structure, it is plausible that solutions which make sense in one policy domain will translate effectively into another. For example, a central insight of the social investment approach to New Zealand's welfare system is that long-run costs can be pre-empted and obviated by targeted interventions in the short term, thereby reducing the state's 'forward liability' – that is, the cumulative present and future welfare expenditure. Colin James has noted in passing that this social investment logic translates very easily into environmental policy (James, 2015, p.2). The estimated future costs of environmental harms could be used to justify the immediate expense of mitigating those harms. The growing literature on ecosystem services – that is, the pricing of environmental functions in respect to their human value – provides the informational resources to generate projections for the forward liability of the status quo (for literature reviews with a New Zealand focus, see McAlpine and Wotton, 2009; Dymond, 2013; and Roberts et al., 2015).

This article examines whether social impact bonds (SIBs) might fruitfully translate into the environmental domain. SIBs can be regarded as an auxiliary to the social investment approach, as an outcomes-oriented financial instrument that is partially justified by the same imperatives used to justify the social investment approach, particularly the imperatives to reduce public sector expenditure and to shift service delivery to the non-governmental sector. I conclude that the SIB model is feasible for environmental interventions, and that, indeed, the shift from social to environmental outcomes might sidestep some of the ethical and methodological challenges that social impact bonds face.

… an outcome funder – typically a government – identifies a social problem that might benefit from outcomes-based funding.

Impact bonds: an emerging empirical record

This section describes social impact bonds from an advocate's perspective. (A critical perspective is taken below.) I focus on two reports. The first, *Social Impact Bonds: the early years* (Dear et al., 2016), was published in July 2016 by Social Finance, an economic think tank which pioneered the SIB model with the Peterborough Prison bond (2010–15), widely recognised as the world's first. The second report is *The Potential and Limitations of Impact Bonds: lessons from the first five years of experience worldwide*, published in November 2015 by the Brookings Institution in Washington (Gustaffson-Wright, Gardiner and Putcha, 2015).

What makes these reports interesting is that they both draw on empirical insights from the original cohort of SIBs. So, while SIBs have heretofore been promoted on *a priori* expectations, these reports constitute the beginnings of an *ex post* evaluation. Nevertheless, as the reports' authors readily acknowledge, these empirical insights are still partial and incomplete, so we ought not suspend our scepticism entirely.

Social Finance provides this neat definition:

> At its core, a Social Impact Bond is a public-private partnership which funds effective social services through a performance-based contract. Social Impact Bonds enable federal, state, and local governments to partner with high-performing service providers by using private investment to develop, coordinate, or expand effective programs. If, following measurement and evaluation, the program achieves predetermined outcomes and performance metrics, then the outcomes payor repays the original investment. However, if the program does not achieve its expected results, the payor does not pay for unmet metrics and outcomes. (Dear et al., 2016, p.12)

In other words, an outcome funder – typically a government – identifies a social problem that might benefit from outcomes-based funding. An intermediary organisation is tasked with structuring a deal, based on pay-for-performance contracts between the outcome funder, investors, service providers and evaluators. Investors pay a principal which is used as upfront capital by not-for-profits, social enterprises or other community organisations to fund service delivery. Evaluators then assess whether the service outcomes meet agreed-upon impact targets. If they do, then the outcome funder is obliged to pay the principal plus coupon to the investors in accordance with the pay-for-performance contracts upon bond maturity.

Social Finance's survey finds that, as of June 2016, there were 60 SIBs launched variously in the United Kingdom, United States, Australia, Germany, the

Netherlands, Belgium, Canada, Portugal, India, Switzerland, Austria, Israel, Finland and Sweden. These SIBs raised over US$200 million of capital combined, and affected over 90,000 people through service delivery (ibid., p.25). Not captured in this survey, however, are the SIB pilots which were initiated but not completed, and therefore are unaccounted for, some abandoned, others still under negotiation. This includes the Ministry of Health bond in New Zealand, which was launched in late 2013 but stalled in May 2016 when the provider withdrew (Treasury and Ministry of Health, 2016). Such projects are not failures per se; they could equally be seen as victims of a selection process which sorts out adequate from inadequate SIB proposals.

As for the active SIBs, both reports are cautiously positive about the success of these instruments. The Brookings Institution report – which drew on structured interviews and online surveys of contracted parties for the first 38 SIBs up to 1 March 2015 – concluded that 'it is very likely that the impact bond model development process, structure, and application will continue to be adapted in the future' (Gustafsson-Wright, Gardiner and Putcha, 2015, p.50). Over a year later, Social Finance reported 'a promising, if early, record of success', while acknowledging that this is based on 'interim, not final, results' (Dear et al., 2016, p.26). It found that 22 SIBs had reported performance data, 21 indicated positive social outcomes, 12 made outcome payments and four fully repaid investor capital (ibid., p.6).

The Brookings Institution report evaluates the success of SIBs in relation to 'ten common claims', several of which were reinforced by practical experience (Gustafsson-Wright, Gardiner and Putcha, 2015, pp.36-47): namely, that (1) *impact bonds prioritise prevention* rather than remedial interventions; (2) *impact bonds shift focus to outcomes* by identifying impact targets that trigger payment; (3) *impact bonds crowd-in private funding* from both new investors and traditional providers of social grants; (4) *impact bonds improve performance management* by inviting private sector expertise in monitoring success; (5) *impact bonds stimulate collaboration* between stakeholders in the private, public and non-governmental sectors; and (6) *impact bonds reduce risk for government* because public money is used only to reward successful outcomes, while private investors bear the burden of failure.

Two further common claims were less clear. At the time of the survey it was too soon to say whether (7) *impact bonds build a culture of monitoring and evaluation* and (8) *impact bonds sustain impact* over long time frames. However, the interviews uncovered optimism in regards to both.

The claims least supported by early evidence were (9) *impact bonds foster innovation in delivery* and (10) *impact bonds achieve scale*. In regards to innovation, there was no evidence that SIBs had prompted entirely novel models of service delivery – which is hardly surprising given the risk for investors – although there was evidence that conventional models were being applied in novel combinations, novel settings and novel target populations. In regard to scale, there was no evidence that SIBs were scalable in an absolute sense, where they could be replicated nationwide to address large-scale social problems. Indeed, the success of certain SIBs was contingent on them targeting a very specific population (ibid., p.42). However, the report notes that more modest forms of scalability are plausible. The Social Finance report further observes 'signs of standardization in the field, with programs being replicated and adapted to multiple geographies' (Dear et al., 2016, p.8).

From social to environmental

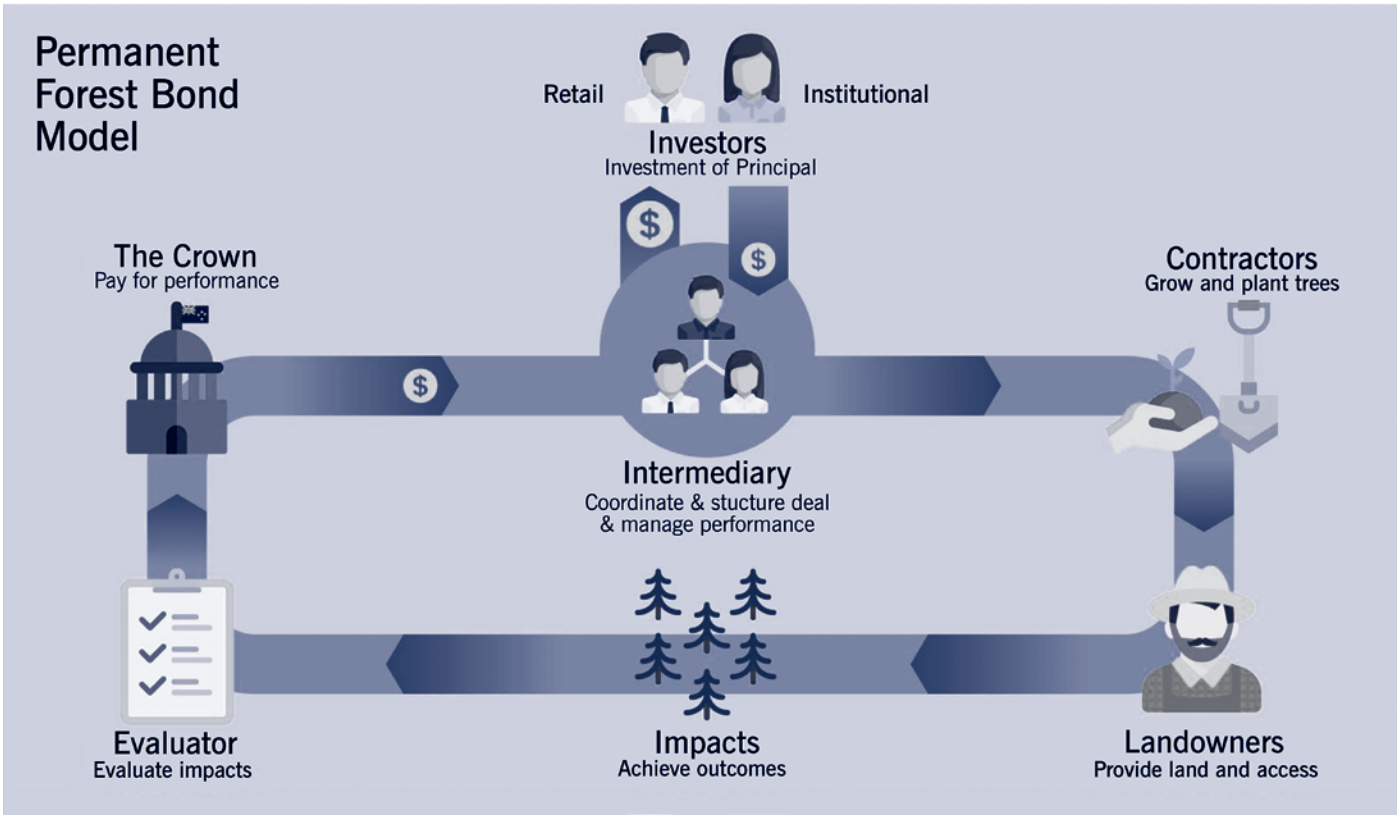
What then of environmental impact bonds (EIBs)? The adaptation of the impact bond structure for environmental outcomes was hypothesised in 2013 by David Nicola. He notes that '[m]onetization of future cost savings is a staple of environmental finance' and therefore well served by an impact bond where 'investors are paid a return based on the amount of cost savings generated by a particular project' (Nicola, 2013, p.14). Cost savings are expected to emerge from private sector involvement, especially from the capacity for innovation and private sector rigour in the delivery of interventions.

One such bond was issued on 29 September 2016 by District of Columbia Water and Sewer Authority (DC Water). This is billed as the US's first EIB and will manage storm water through the installation of green infrastructure. There is a mandatory tender set for 1 April 2021, when investors will receive either a US$3.3 million coupon if storm water runoff is reduced by over 41.3%; receive no coupon if runoff is reduced by 18.6%–41.3%; or pay a 'risk share payment' of US$3.3 million if runoff is reduced by less than 18.6%. This structure enables DC Water to prove the effectiveness of green infrastructure even while it is constrained from investing public money in risky or unproven solutions, because the EIB redistributes the risk of outright failure onto investors, in this case Goldman Sachs and the Calvert Foundation (Martin, 2017).

> The primary justification for the proposed permanent forest bond is that forest can be established more cost effectively by the private sector under an outcomes-based contract, ...

Another EIB in the US – still in pilot phase – is a forest resilience bond being developed by Blue Forest Conservation. This is designed to provide upfront capital for forest restoration, particularly the clearing of forest litter to reduce the risk and severity of wildfires. The principal outcome funder is the United States Forest Service, which can justify this immediate investment insofar as it reduces the

Figure 1: Schema for a permanent forest bond



Source: Hall, Lindsay and Judd, 2017

expected future budget for firefighting (Yonavjak, 2016; Blue Forest Conservation, 2017). This is transparently a forward liability approach, although aimed at reducing future government expenditure on nature conservation rather than social welfare.

This author has explored the potential for EIBs in New Zealand to establish new permanent forest (Hall, Lindsay and Judd, 2017). The primary justification for the proposed permanent forest bond is that forest can be established more cost effectively by the private sector under an outcomes-based contract, because the EIB model accommodates innovation and optimal management procedures to produce those outcomes. The secondary justification is a forward liability logic which accounts for the ecosystem services that forests provide, as well as the long-run costs of leaving large tracts of land unforested when it is erosion-prone or located in sensitive water catchments. From this long-term perspective, the immediate cost of permanent forest planting can be justified in terms of avoiding the relatively larger costs of non-forest land uses which promote freshwater deterioration from sediment and nutrient runoff, private and public property damage from erosion and landslips, and future expenses for purchasing carbon offsets from foreign markets to meet international climate obligations. Because these long-run costs are largely externalities that fall upon the wider community and future generations, the most appropriate outcome funders are identified as national or local governments acting on behalf of the Crown. By issuing permanent forest bonds, the Crown invests in long-term prosperity through a structure that prioritises cost-effective interventions. The attractions for other stakeholders are, for retail and institutional investors, a green investment proposition with measurable impacts; and for prospective tree-planters an opportunity to access untapped private capital (see Figure 1).

The bond structure is particularly well-suited for afforestation and reforestation, because forests involve large-scale investment and relatively long timescales (Cranford et al., 2011). However, EIBs could conceivably be used to address other environmental issues, wherever there is the right coalition of interests. The key questions to ask are:

- Do outcome funders (such as the Crown) stand to reduce long-run costs by intervening in this environmental issue? And do they stand to reduce the immediate costs of intervention by outsourcing delivery to the non-governmental sector?
- Do prospective investors have capital available that they are unwilling to donate philanthropically, but would be willing to invest under the expectation of a return on investment that is contingent on impact performance? Do investors have access to adequate scientific knowledge, and sufficient trust in other stakeholders, to justify the investment risk?
- Do contractors (or service providers) currently lack access to upfront capital due to the non-simultaneous exchange of investment and outcome? Are contractors willing and able to operate under the rigour of impact targets?

Accordingly, EIBs could be established to address other environmental problems where the measurement of impacts, and where relationships of cause and effect, are uncontroversial to a degree that is mutually acceptable to the contracting parties. For example, it is plausible to imagine: an EIB for water quality that encompasses not only revegetation but also wider land use strategies and further technologies to reduce effluent and sediment runoff; an EIB for the eradication of herbivorous pests that relies on carbon measurement of forest ecosystems to evaluate impact; or an EIB that increases average rates of soil carbon per hectare by funding the transition to innovative pastoral regimes. By contrast, it is less plausible to imagine the successful negotiation of EIBs for problems where measurement is controversial (such as changes to fish stocks) or where causal relationships are subject to irreducible uncertainty and complexity (such as air quality or coral bleaching). That said, technological advances in measurement and monitoring could overcome these problems.

An environmental advantage?

From an *a priori* perspective, there is little reason to anticipate that the purported merits of SIBs, if valid in the social domain, would not be replicated in the environmental domain. These merits are intrinsic to the impact structure itself, not the object of impact, so should be no less relevant for EIBs than for SIBs. Fundamentally, this structure is about shifting risk onto the seller, rather than the buyer, of outcomes.[1] The purpose of this redistribution of risk is to reorganise stakeholder incentives in such a way that intervention becomes an attractive proposition, prompting stakeholders to fund an intervention that would otherwise not be funded.

Nevertheless, there are important differences between SIBs and EIBs which have implications for their feasibility. Basically, SIBs focus on social systems and their constituent elements, whereas EIBs focus on ecosystems and their constituent elements. This means that the specific challenges of social measurement, social explanation and social prediction are central to the design of SIBs in a way that they are not for EIBs. Of course, it would be imprudent to draw this distinction too starkly, because measurement, explanation and prediction in the physical sciences are not without their challenges and controversies. Moreover, understanding ecosystems in this Anthropocene era of pervasive human influence involves, in part, understanding how ecosystems interrelate with human systems (Sarewitz and Pielke Jr, 2000, pp.12-15): for instance, how human economies influence resource use and how anthropogenic global warming adjusts inputs for local ecosystems. Nevertheless, when it comes to measuring impacts and predicting causal effects, an EIB can always narrow down its focus to basic scientific laws or correlations. By contrast, SIBs must necessarily focus on human subjects, who have a capacity for linguistic and reflexive thought that non-human phenomena do not. This entails a host of ethical and practical issues that are either absent from measuring environmental impact, or can be constrained or compensated for.

Thus, if we look beyond the advocates' view of SIBs and toward the critics', we see points where EIBs might sidestep some of the problems faced by SIBs. For example, one important critique of SIBs is that 'social outcomes are notoriously difficult to measure' (McHugh et al., 2013, p.249). This has several implications. First, this makes it more difficult to agree to appropriate outcome targets in the negotiation phase. Second, if targets are agreed to, there is greater potential for disagreement over whether outcome targets were met, which could lead to disputes over payment. Third, this increases the likelihood that an evaluative framework will need to be tailor-made: '"Off the shelf" measures do not exist for many of the social outcomes which SIBs aim to effect and proxies or new indicators would have to be used' (ibid.). Finally, these various complications will add to the transaction costs required for establishing the bond, particularly for identifying impact targets and methods for evaluation.

These are all genuine problems for SIBs; but note that these objections carry less weight for EIBs. There already exist a range of standardised tools and methods for environmental monitoring and evaluation which an EIB can piggyback on, thereby avoiding the time and costs of developing original metrics (Nicola, 2013, p.27). For example, the Resource Management Act 1991 imposes a responsibility upon local authorities to monitor the human impacts on natural and physical resources, such as contamination of land, air and water; soil conservation; water quality and quantity; and coastal marine areas. The tools, technologies and limits used to fulfil these responsibilities could be co-opted into EIBs. Further targets and measures could be adapted from the Ministry for the Environment's national environmental standards, the national policy statement for freshwater management, and other central government systems for monitoring and evaluation. Furthermore, there are a range of international standards and criteria, such as the quality assurance and quality control (QA/QC) infrastructure within carbon credit standards, which could also be utilised for establishing an EIB.

> … the establishment of [environmental impact bonds] is plausibly less resource intensive than of [social impact bonds], because tools and methods for environmental monitoring and evaluation often already exist.

Not only are there well-established measures within the environmental domain, but also well-established revenue streams, some of which are not government-dependent (ibid.). SIBs tend to rely on government as the primary source of payments, insofar as government pays for outcomes to reduce its forward liabilities in social welfare, public health or criminal justice. Yet EIBs tend to focus on natural assets that often generate revenue streams that are independent of government payments, such as timber, water, fish stocks, and carbon for voluntary markets. Some of these revenue streams will also be realisable within a time frame that isn't unusual for government-issued bonds; Climate Bonds Initiative (2016, p.5) notes that 70% of existing climate-aligned bonds have tenures (time to maturity) of ten years or more. Moreover, opportunities for market revenue do not preclude an EIB from also tapping into government systems of payment for ecosystem services, such as subsidies for erosion control, payments for biodiversity conservation, and carbon credits for compliance markets such as New Zealand's emissions trading scheme. The establishment of new payments for ecosystem services – as environmental externalities are eventually integrated into the accounting of local and national economies – will create future opportunities for revenue.

However, while these revenue streams are constitutive of an EIB's potential return on investment, this revenue should not be confused with the EIB itself, for two reasons. First, the bond structure of the EIB enables it to incorporate these various revenue streams, potentially combining income from both private and government sectors. For example, a hypothetical EIB that focuses on the outcome of reduced sediment yield in waterways could incorporate government subsidies for erosion control, carbon credits from green infrastructure, payments from private hydropower utilities for reduced sediment-related damage to turbines, and payments from fisheries companies for reducing sediment in sensitive spawning grounds. (As discussed below, this complexity involves a trade-off with transactional risk, however, by increasing the number of stakeholders involved.) Second, EIBs are structured to provide *ex ante* financing to fund the original intervention, even though the revenue streams that constitute the return on investment might not mature for several years. So, for example, while carbon markets enable *ex post* performance-based payments for carbon sequestration, an EIB enables *ex ante* financing for the creation of carbon sinks by involving investors who bear the burden of failure if carbon isn't sequestered.

> … it is possible that the initial advantage of an EIB will not be overall fiscal savings; even environmental interventions are undertaken more cost effectively by output-based contracts …

Finally, the environmental focus of EIBs also increases the likelihood of successful standardisation. Again, this point of distinction between EIBs and SIBs should not be overstated, because local contingencies can upset the expected outcomes of environmental interventions, such as the influence of local soils or microclimates on the growth of vegetation, or water quality in a specific catchment. However, environmental phenomena are still relatively more amenable to general explanation than social phenomena, where the dynamics of local history and culture, the contingencies of one-off events and particular individuals, and the reflexive capacity of human action can have a profound influence on actual outcomes. As discussed earlier, the empirical record does not yet support the hypothesis that SIBs can 'achieve scale', but there are reasons to expect that EIBs might do better in this regard, because causal relationships between intervention and outcome are more likely to hold across a range of sites.

Risks and limitations

EIBs are an attractive proposition. But like any funding model, impact bonds have risks and limitations. Some of these are tolerable, some surmountable through good design, and some are questions for political or strategic judgement. But it is important to bear these issues in mind to minimise surprises for participants and to increase the opportunity for designing solutions.

Chief among these issues are the transaction costs involved in establishing an impact bond: that is, the time, labour and associated expenses involved in identifying contracting parties, negotiating contracts, and monitoring and evaluating outcomes. As discussed above, the establishment of EIBs is plausibly less resource intensive than of SIBs, because tools and methods for environmental monitoring and evaluation often already exist. However, this does not forestall the basic logistical difficulties of developing complex contracts between multiple stakeholders that involve large sums of money. Of course, these difficulties – and associated risks – will also become greater the more stakeholders are involved, which creates a trade-off with the temptation to enlist multiple outcome funders. These difficulties are likely to be greater than for most output-based contracts, where government pays for services outright, although perhaps no greater than for existing pay-for-performance arrangements, such as the purchasing of *ex post* carbon credits. Thus, it is possible that the initial advantage of an EIB will not be overall fiscal savings, even if its environmental interventions are undertaken at less cost than by output-based contracts (see Wilkinson and Jeram, 2015, p.7). The

advantages, rather, are the redistribution of risk away from outcome funders and the encouragement of innovation, as well as the long-run savings if the EIB is successfully standardised and replicated elsewhere.

Other issues arise from the shift of accountability from outputs to outcomes, and especially toward protecting investments. This addresses a longstanding critique of government intervention being overly focused on process rather than results, but raises the possibility of new tensions and perverse incentives. As Balboa notes, EIBs might not result in long-term solutions to environmental problems, because payment is triggered by short-term outcomes which won't always be long-lasting (Balboa, 2016, pp.36-9). Similarly, the narrow metric-based focus of EIBs creates little incentive to tackle the underlying political or economic causes of environmental harms. Indeed, investors could conceivably have an interest in perpetuating an environmental harm, or even causing an environmental harm, in order to profit from its amelioration through an EIB. Such possibilities highlight the importance of being prudent in choosing which problems to address with EIBs and judicious in choosing impact targets.

Generally, the above considerations illustrate why impact bonds are not appropriate for core sectoral funding, nor as a general substitute for existing funding mechanisms. This is well-recognised within the SIB literature, even among SIB advocates (see Wilkinson and Jeram, 2015, pp.5-6; Dear et al., 2016, p.21; Gustafsson-Wright, Gardiner and Putcha, 2015, pp.3-4). It is best to think of EIBs as one tool in the toolbox, as a funding mechanism that is well-suited to certain types of problem, especially those where there is a lack of upfront capital to intervene immediately, where the intervention focus is preventative, where there is scope for innovation or more rigorous management, and where there is scope for more cost-effective service provision and avoided future costs (Hall, Lindsay and Judd, 2017, p.10).

Conclusion

EIBs are a plausible funding instrument which align with various prevailing public policy preferences: forward liability accounting, cost-effective service provision, use of performance targets, informational richness, an openness to innovation, and a preference for public–private partnerships. Accordingly, EIBs deserve to be considered as a viable funding option for environmental interventions in the present day. EIBs might even serve as a pathbreaker for SIBs, as a proof of viability for the impact bond model generally, which avoid some of the specific ethical and methodological complications faced by SIBs.

Discovering which environmental problems the EIB model is suited to solving will involve trial and error. Fortunately, error will often be identified at the negotiation phase, because the financial risks for investors necessitate a robust actuarial analysis. But even if an EIB is not suitable for addressing a specific environmental problem, this does not mean that the environmental problem is not worth solving. On the contrary, EIBs are one of many funding instruments, which are especially well-suited to bridging the gap between the non-simultaneous exchange of investment and outcome. If an EIB is not suited to addressing a certain environmental problem, then we should be asking ourselves how else we should be solving it.

1 The author would like to thank the anonymous reviewer for this specific formulation, as well as wider comments that improved this article.

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James Gluck and Michael Macaulay

Trading in Influence a research agenda for New Zealand?

Trading in influence – a new criminal offence

In November 2015 the Organised Crime and Anti-corruption Legislation Bill was passed by Parliament. An omnibus bill, it amended numerous different acts in relation to (among other things) money laundering, organised crime, corruption and bribery offences. One of its stated aims was to bring New Zealand legislation up to date to enable New Zealand to finally ratify the United Nations Convention against Corruption (UNCAC), which it did in December that year. The merits and potential demerits of the bill have been discussed previously (Macaulay and Gregory, 2015), but one thing that requires further attention is the creation of a new offence of 'trading in influence'.

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The offence was created as an amendment to the Crimes Act 1961 and is set out in section 105F:

> Every person is liable to imprisonment for a term not exceeding 7 years who corruptly accepts or obtains, or agrees or offers to accept or attempts to obtain, a bribe for that person or another person with intent to influence an official in respect of any act or omission by that official in the official's official capacity (whether or not the act or omission is within the scope of the official's authority).

Its wording is clearly based on the relevant passage from UNCAC, albeit in a much abbreviated form: The wording of the new offence is admirably succinct, as is its refusal to distinguish between domestic and overseas jurisdictions, which is in stark contrast to other

Article 18. Trading in influence

Each State Party shall consider adopting such legislative and other measures as may be necessary to establish as criminal offences, when committed intentionally:

(a) The promise, offering or giving to a public official or any other person, directly or indirectly, of an undue advantage in order that the public official or the person abuse his or her real or supposed influence with a view to obtaining from an administration or public authority of the State Party an undue advantage for the original instigator of the act or for any other person;

(b) The solicitation or acceptance by a public official or any other person, directly or indirectly, of an undue advantage for himself or herself or for another person in order that the public official or the person abuse his or her real or supposed influence with a view to obtaining from an administration or public authority of the State Party an undue advantage.

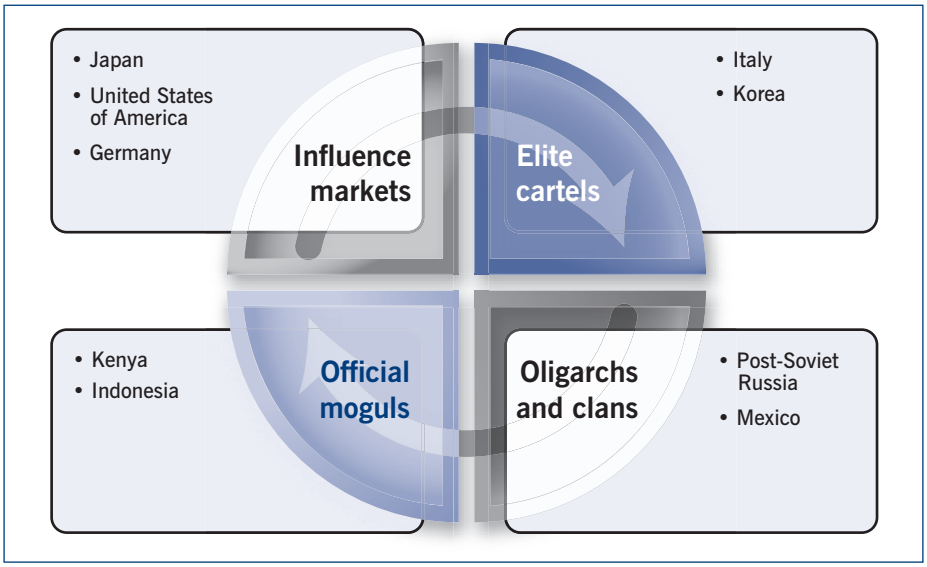
amendments made by the Organised Crime and Anti-corruption Legislation Bill. Even following the amendments, for example, bribery is still permitted under the Crimes Act as long as (a) the bribe is to a foreign official; (b) the value of the bribe is small;[1] and (c) it is paid to expedite a 'routine government action', rather than for any extra service (s105C(3)). To be fair, such routine government actions are now more tightly defined than in the past, and one final caveat is that businesses must now keep a register of such bribes under amendments to the Companies Act, section 194(1A). Nevertheless, it still seems incongruous to many that such a defence exists, and it is certainly against the wording of UNCAC, which allows for no exceptions to any form of bribery.[2]

The new offence also has substantial coverage, taking into account central and local government, as well as education. Its interpretation (s.99) usefully defines an official as:

> any person in the service of the Sovereign in right of New Zealand (whether that service is honorary or not, and whether it is within or outside New Zealand), or any member or employee of any local authority or public body, or any person employed in the education service within the meaning of the State Sector Act 1988.

In light of the above, the creation of the new offence of trading in influence can be admired both for its adherence to the letter and spirit of UNCAC, and also because it is potentially more far-sighted than may first appear.

Figure 1: The four syndromes of corruption (adapted from Johnston, 2005)



Syndromes of corruption

Perhaps the most remarkable aspect of the new offence is that trading in influence (often referred to as influence marketing) has long been identified as the most common form of corruption in developed, Western economies. Most notably, Michael Johnston (2005) has labelled trading in influence as one of the four 'syndromes of corruption' that can be used to describe and explain corrupt practices in different jurisdictions around the world, alongside official moguls, clans and oligarchs, and elite cartels (see Figure 1).

Johnston argues that, despite what common wisdom suggests, corruption of varying degrees occurs throughout the world. The form it takes is dependent on the social, political and economic regimes in which the behaviour takes place. Most academic attention is paid towards corruption in developing nations, a bias that is strongly reflected if not reified in the broader international policy and development climate. Yet Johnston suggests that as a result of this, the corruption that is manifested in many highly developed economies (and frequently in liberal democracies) goes either unnoticed or ignored. Indeed, not only are such activities not regarded as corruption, but they are actually seen as legitimate.

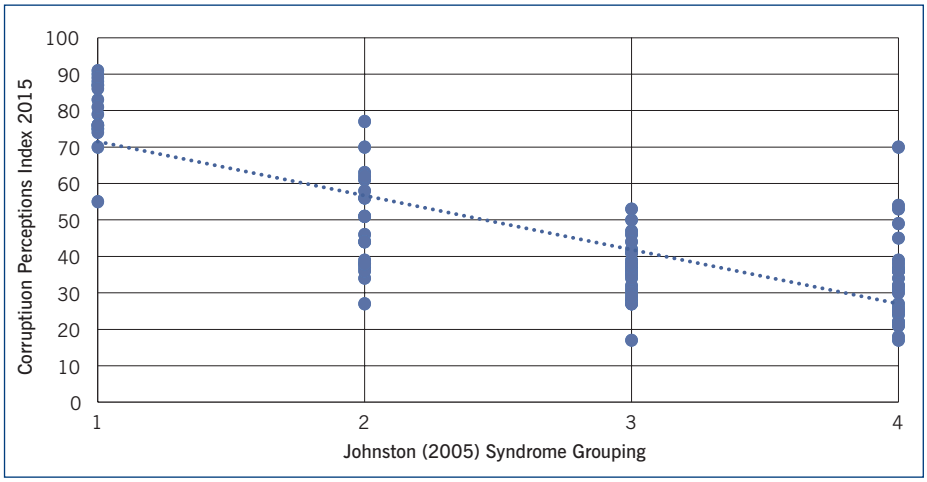
The four syndromes Johnston identifies are ideal types which are useful in expanding on how corruption can be viewed, but they also have a statistical backing: Johnston groups nations into the four types through a cluster analysis across a wide range of political and economic indicators.[3] This subsequently broadly corresponded to the Corruption Perceptions Index ranking of the nations in each group, and on further analysis of the countries Johnston categorised, the groupings still correspond well.

For developed liberal democracies, which are the locus of the 'influence markets' syndrome, Johnston refers to institutions that are strong enough to avoid being circumvented by forms of corruption such as blatant bribery. The corruption that does exist in such nations, therefore, happens within the remit of those institutions – political parties and government ministries, for example – and is usually well within the bounds of how such institutions are in fact designed to work. What is a key problem, and a reason why trading in influence should be seen as corruption, is that it damages and degrades the trust the public has in these structures. Citizens do not believe that they can have influence over what occurs in government, and this perception is, in Johnston's view, a serious problem.

Johnston suggests that political influence is essentially a commodity that can be bought or sold (or traded) through different channels, most of which are accepted as part of the political landscape. Indeed, many of them have effectively had industries built around them. Typically these include areas such as lobbying, political party funding, patronage, revolving doors of post-ministerial appointments, misuse of corporate hospitality, gifts and various others.

As previous studies have indicated, one of the key issues for debate here is the problem of access versus influence. Access to politicians is easy to determine: it is usually clear who has access to politicians and decision makers. What is less clear is the extent to which this may, or may not, lead to any influence being passed around. This highlights the limitations of transparency: 'we used to think that sunlight was the best disinfectant, but now we see that it only creates more shadows in which to hide' (Macaulay, 2011).

Figure 2: Johnston's corruption syndrome groupings[4] versus Transparency International's Corruption Perceptions Index 2015



Johnston focused his attention on three nations to explore trading in influence: the United States, Germany and Japan. Particularly interesting is how the situation in the United States has changed in the decade or so since he wrote *Syndromes of Corruption*. He identifies the problem of political donations in the US and how it means that political competition, even in 'free elections', is crippled. This is perhaps even starker now, with the 2010 *Citizens United* decision opening up even greater amounts of money for favoured political causes. In an example of the expanded legitimacy of money in government, the corruption charges against Robert McDonnell during his tenure as governor of Virginia have been vacated by the Supreme Court, an act which Johnston himself commented on in the media as constituting a new, and overly narrow, definition of corruption (Johnston, 2016). Johnston and the wider literature (Johnston and Dana, 2012; Etizoni, 2014) have also commented more recently on political capture and the undermining of political legitimacy by influence peddling.

Although Johnston did not focus his attention on the United Kingdom, it has seen numerous examples in recent years of a variety of forms of trading in influence. To start with an obvious example, the Conservative Party Leader's Group allows members direct meetings and engagements with the prime minister for an annual fee of £50,000.[5] The Leader's Group is certainly transparent and the list of its donors is readily available for public view.[6] What can never be clear, however, is the extent to which this access ever becomes translated into something more. What is clear is that the Leader's Group donated £43 million to the Conservative Party during 2012–14 alone (Graham, 2014).

A further example has recently emerged in terms of the power of patronage. Confirming what many have suspected for decades, a 2015 study from Oxford University demonstrated a conclusive link between political party donations and government appointments to the House of Lords. These are no mere vanity appointments, as party donations can buy people a direct seat at the legislative table (Mell, Radford and Thévoz, 2015). This study was undertaken at a time when the British government has been making an anti-corruption push on the global stage, even hosting an international summit on the subject (United Kingdom Government, 2016). Others in the public arena (Sachs, 2016; Oxfam, 2016) have criticised this because of the role developed nations have in allowing corporations to exploit developing nations; but in addition to this, corruption *within* the United Kingdom has come under public scrutiny (Short, 2016).

Between the UK summit and the prominence of UNCAC, anti-corruption legislation and pressure has been mounting. Many developed nations,

Table 1: An overview of trading in influence in New Zealand

Lobbying	Failure of Register of Lobbyists Bill
Political donations	Cabinet Club
Revolving doors	Appointments to public boards
Patronage	Debate in Hansard, 19 March 2014: Tony Astle – $60,000 Officer of New Zealand Order of Merit Chris Parkin – $66,000 Companion of New Zealand Order of Merit Sir William Gallagher – $25,000 knighthood
Cronyism	Appointment to GCSB

however, have pushed away from some of the themes in the international discourse, and in particular trading in influence. As stated before, New Zealand is one of the first countries to have explicitly criminalised it, despite international agreements calling for such legislation to be passed. Article 12 of the Council of Europe's Criminal Convention on Corruption has called for the criminalisation of trading in influence since 1999, and yet, even for those states that have ratified the convention, over a quarter have expressed reservations about article 12. Slingerland (2011) applies article 12 to two prominent cases of trading in influence – the management of DSB Bank (Dirk Scheringa Bank) and the financing of Nicolas Sarkozy's 2007 election campaign – and explores the difficulty of trying to apply a rigid definition of the phenomenon. The unclear nature of trading in influence is, according to Slingerland, a primary reason why states are reluctant to criminalise it, for fear of sweeping up 'legitimate' political influence such as lobbying.

The difficulty of defining corruption is not limited just to writing international law, however. Johnston devoted pages to trying to set a definition (2005, pp.1-15), and even then simply settled on one that was usable for his project. There are multiple comparisons of anti-bribery and corruption legislation (for example, CMS, 2014), and the absence of a definition of corruption is commented on. Part of the issue is that many pieces of legislation define corruption using terms such as 'undue influence', 'acting contrary to their duty' or, tautologically, 'corruptly offering'. What seems clear is that there is a qualitative component to corruption implied in most, if not all, legislation regarding corruption, and this includes the New Zealand case.

A New Zealand problem?

New Zealand prides itself on its reputation for integrity and a lack of corruption. Yet many of these forms of trading in influence have been identified as being prevalent in the political system. Transparency International New Zealand's 2013 National Integrity System study found that there are problems around 'grey areas': party funding; patronage; perceived nepotism and/or cronyism; unresolved conflicts of interest; misuse of lobbying, etc. Essentially these problems are of the same type as identified by Johnston, and which can be found throughout the US, UK and continental Europe.

There is also, of course, a New Zealand equivalent of the Leader's Group: the Cabinet Club. Although this has been dismissed by some as 'no suggestion of cash for access' (3News, 2014), there is an obvious concern that anonymous donations can grant a person direct contact (however innocent) with a member of the government. Although we do not seek to offer a comprehensive overview here, it is useful to flesh out some recent examples that suggest a prima facie case of trading in influence within New Zealand (see Table 1).

In 2012 the Lobbying Disclosure Bill was drawn. First introduced by Sue Kedgley, and subsequently reintroduced by Holly Walker, the bill sought to 'bring a measure of transparency and public disclosure around the lobbying activity directed at members of Parliament and their staff, and in so doing to enhance trust in the integrity and impartiality of democracy and political decision making' (Lobbying Disclosure Bill, 2012, explanatory note). It passed the first reading and was sent to the government administration select committee, where it was not recommended for further passage. Instead it was recommended that Parliament use non-legislative measures to strengthen departmental reporting and guidelines for how ministers report their activity. Much of the political and media response to the bill was negative, and focused on two areas: the belief that New Zealand does not have the same problems with lobbying as exist worldwide; and the argument that by mandating that lobbyists be registered, it would discourage ordinary citizens from talking to their representatives. Submissions on the bill, including from unions (for example, the Service and Food Workers' Union) and businesses (for example, McDonald's Restaurants (New Zealand)) spoke about the 'chilling effect' legislation might have if 'ordinary citizens' were caught up and labelled as 'lobbyists'. The debate during the first reading often brought up New Zealand's ranking in Transparency International's Corruption Perceptions Index (Hansard, 2012) and opponents used this to argue that while examining the role of lobbyists was a useful and important task, New Zealand did not have a problem of corruption. It will be interesting, however, to see if the bill will gain a second wind in the years to come, as the new offence of trading in influence could well provoke a legal conundrum for lobbying.

Alongside the issue of lobbying often comes the question of political donations. Often those speaking against the Lobbying Disclosure Bill compared New Zealand favourably to America, and the phenomenon of lobbying is closely related to that of political donations: they are both discussed by Johnston, and both can cause perceptions of disempowerment among citizens. In New Zealand there has been some recent scrutiny of the Cabinet Club, where individuals pay a certain amount to National Party electorate organisations in return for being invited to dinners and other social functions with members of Parliament and ministers (3News, 2014). Representatives who have taken part in these 'clubs' vehemently deny any notion of 'cash for access',

pointing out that the donations are declared and that anyone can set up an appointment to see a minister about an issue by contacting their office. Similarly to the defence Judith Collins gave about her association with Oravida – 'just popping around for a cup of tea' – the Cabinet Club has been described as 'pizza politics' – casual, informal interaction between politicians and citizens. Ministers have also claimed that they are not acting in any way as ministers, just members of Parliament, when they go to such dinners (although the name Cabinet Club might make such a response less convincing). Nevertheless, the majority of citizens would not be able to afford to join the Cabinet Club, and this again raises the question of access, influence, and who gets to have them.

Judith Collins' dinner at Oravida during a state-funded visit to China is one of the more well-known and commonly seen as 'corruption' scandals of the National government. Oravida, a New Zealand company which exports goods to China, had a history with the National Party and with Judith Collins in particular: it had made donations to National in the past (Gower, 2014); Collins had opened the company's Auckland headquarters that same month; and one of the directors of the company was her husband (3News, 2014). This visit to the company while in China was not reported in the minister's report; nor was it notified before she left. This was picked up by the media and the opposition, and Collins came under concerted criticism for her actions. She denied any conflict of interest in her visit (Collins, 2014) and in the media described it as 'popping in for tea', focusing on the casual nature of the dinner as a defence against corruption allegations. It was apparent from the rebuttal that for such an event to be seen as corruption by the government there would need to be an obvious, knowledgeable financial advantage to be made: in effect, there would have to be a bribe. The concept of trading in influence and the syndromes of corruption that Johnston discusses are, however, broader than this and could be applied to the Oravida scandal.

Interestingly enough, that very same day in Parliament saw the passage of the Families Commission Amendment Bill, within which another aspect of potential influence trading came under debate: the appointment of individuals to public boards. Both sides of the House were accused of political placements to the Families Commission, and of trying to use legislatively independent bodies to further ideological agendas. It seems almost inevitable that any government will run into accusations that they are making 'political appointments', and this is an accusation that has been levelled at both Labour (Farrar, 2013) and National (Macskasy, 2013) governments. Like with lobbying, the appointment of people to boards and commissions in the public sphere is an area where the line between legitimate and corrupt is difficult to clarify. Naturally those who are appointed to positions involving advocacy or public work need to have experience and exposure in that area, and often the only way to get such experience and exposure is through the political sphere. Similarly to lobbying, however, there is an issue of capture: if such appointments are not viewed with scrutiny there is a risk that supposedly 'independent' organisations become overly bound to the government of the day's policy direction, enhancing the feeling of exclusion on the part of the public which Johnston identifies as a key outcome of such syndromes of corruption.

While New Zealand does not give those who are rewarded by the honours system the same legislative role as does the system in the United Kingdom, as mentioned above, the system has been an area where accusations of cronyism have been levelled in the past. Almost immediately after the National government brought back knighthoods in 2009 the spectre of cronyism was raised in the media (Watkins, 2009). This has continued through to recent years when the honouring of business people, especially those who have made large donations to the governmental party, could be seen as problematic. It may be worth asking, however, how much citizens care about this when no legislative role is involved. Even with the reaction to UK prime minister David Cameron's resignation honours earlier this year there was a sense from some that people getting titles wasn't a big deal (Clark, 2016). It too can be viewed, however, through the lens of influence peddling. A potential hypothesis to explore might be in what influence honours give individuals, both in the public sphere and private.

Judith Collins' dinner at Oravida during a state-funded visit to China is one of the more well-known and commonly seen as 'corruption' scandals of the National government.

Does New Zealand have a case to answer?

Whether or not trading in influence is seen as a problem in New Zealand will very much depend on one's perspective on what constitutes legitimate political activity. This article does not seek to cast moral aspersions on any of them. What it set out to do was to scope out some of the examples of trading in influence that have been identified elsewhere (both in literature and in practice) and ascertain whether or not these could be found within New Zealand. It is unquestionable that they can: it is no exaggeration to suggest that most of our political institutions and processes rely to some degree or other on influence.

The research agenda now is to look at a number of questions:

- Just how prevalent is each of these forms of trading in influence within the political system?
- Just how detrimental is each of these forms of trading in influence to New Zealand's political life?

- What are the implications of these activities in light of the new offence in the Crimes Act, section 105F?
- What might constitute the proper forms of such activities?
- What is the most appropriate way to regulate these activities?

We do not doubt that there are more questions that can be asked, but we feel that these are a healthy start. What is needed is serious research and balanced debate: there can be no moral witch-hunts if we are to make constructive progress. We must take these issues seriously. As recent surveys have indicated, trust in politicians and government is at an incredibly low level (Institute for Governance and Policy Studies, 2016). There has been mounting criticism of New Zealand's attitude towards its international commitments in this area, such as the open government partnership.

Answering these questions will involve a number of key methodological challenges, something quite common for projects which seek to implement a degree of empiricism in studying corruption. Corruption by its nature is hidden and not in the open; it cannot be simply quantified. This is likely to be particularly true of trading in influence, since the concept involves so many small-scale interactions between lawmakers and influencers. White (2013) links the stereotypical nature of international and headline-grabbing corruption (bribes, kickbacks and the like) to a common image of corruption as almost a pantomime of tan briefcases changing hands. For this research, a more subtle and nuanced approach must be taken.

Commonly, perceptions of corruption have been used as a proxy for corruption itself, such as in Transparency International's Corruption Perceptions Index. The problem here is that it is certainly possible for corruption to happen when there is a high perception of transparency on the part of the government, such as the case in Iceland before the financial crisis (Erlingsson, Linde and Öhrvall, 2016). In addition, attempts to curtail lobbying corruption through campaign finance law in the US had little to no effect on perceptions of corruption, making such data of little use in understanding real levels of corruption (Persily and Lammie, 2004).

Different approaches must be taken, therefore, although perceptions do undoubtedly play a role in understanding trading in influence. One possibility is to look at understandings of what is 'normal', both within political circles and in the wider public arena. Looking more closely at instances where potentially corrupt situations have arisen and unpacking the process through which they happened would also shed some light. In conjunction with such qualitative methods, there are also opportunities to utilise quantitative tools. These would be particularly useful in analysing flows of donations, political activities, and their relation to appointments, honours and (though with more difficulty) favourable policy changes.

We suggest, therefore, that there is a clear research agenda to be taken forward in New Zealand. Each of these forms of trading in influence needs to be thoroughly defined and categorised. More importantly, the impact that they have had needs to be identified and elucidated, not only in terms of hard metrics (for example, who has donated what, and with what outcome), but the more nuanced issue of people's daily lived experiences. Only then can we start to work on solutions to strengthen our collective integrity.

1 'Small value' has not, of course, been defined.
2 Australia also kept a defence for such small bribes and was strongly admonished by the UNCAC evaluation team in 2012.
3 Johnston (2005) used the polity scores from 1992 and 2001, the Economic Freedom in the World Index from 1990 and 2001, the World Economic Forum's Environmental Sustainability Index from 2002, and the Heritage Foundation's Security of Property Rights Index.
4 1=influence markets; 2=elite cartels; 3=oligarchs and clans; 4=official moguls.
5 For all Conservative Party donor groups see https://www.conservatives.com/donate/Donor_Clubs.
6 https://www.conservatives.com/~/media/Files/Downloadable%20Files/Donors/LG%20Meals%20Q4%202014.ashx.

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Matthew Gibbons

Government Expenditure in New Zealand since 1935: a preliminary reassessment

Introduction

The optimal size of government is an important political and economic issue. However, because no long-term government expenditure series has official standing, New Zealand is often a missing case in comparative studies of government expenditure (Castles, 1998). Although government expenditure data is available from 1972 on Treasury's website (New Zealand Treasury, 2016), the most widely used data before 1972 is a 'consolidated' long-term data series, on Statistics New Zealand's website, which uses data from a number of sources and is published with strong disclaimers.

This article draws together alternative data, primarily from published official sources, to show that better quality data is often available from different printed sources. It discusses why the alternative data is more accurate and consistent, and considers what the data shows about changes in the role of the state in New Zealand.

The article first defines government expenditure, and considers other ways in which governments affect people's behaviour and purchasing power. The best available expenditure series are then outlined, and changes in government expenditure over time examined. The low reporting of tax expenditures in New Zealand, compared to other countries, is discussed. Finally, the weaknesses of New Zealand's most widely used expenditure data set are considered.

Defining government expenditure

Government expenditure is frequently defined as economic activity that is subject to public expenditure budgetary processes. Governments can directly provide goods and services, or fund their provision. Some types of government expenditure, such as pensions, primarily involve people buying private goods and services of their choice, rather than public sector economic activity (Wanna, Kelly and Forster, 2000, pp.7-8). Indeed, transfers and interest expenditure are not part of gross domestic product (GDP). Nevertheless, it is common practice of

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many economists, but not statisticians, to report government expenditure as a percentage of GDP (Gemmell, 1993, pp.2-3, 6-8; New Zealand Planning Council, 1979, p.33).

GDP is the market value of all final goods and services produced within a country. It excludes intermediate consumption, and instead measures value added by firms (Briggs, 2003, 2007, 2016, p.34). GDP also excludes home production and the level of environmental degradation, but includes imputed income on owner-occupied housing (Fiorramonti, 2013, pp.12-15, 56, 110). Treasury's Living Standards Framework recognised that there are a broad range of material and non-material determinants of living standards (Gleisner, Llewellyn-Fowler and McAlister, 2011).

As well as directly purchasing goods and services and paying transfers, governments can also affect people's behaviour, the distribution of income and economic outcomes through taxes, regulations, procurement policies, asset sales and expenditure mandates (Hofferbert and Budge, 1996, p.26). Some countries, such as Australia, Singapore and the United States, have particularly high mandated expenditures. For example, Australian employers and employees are required to make pensions scheme contributions, while accident cover is through employer-funded insurance. There is also a growing literature on tax expenditures. Tax expenditures are loopholes or breaks, such as deductions, preferential rates, deferrals or exclusion of some types of income from tax (Howard, 1997, p.4; OECD, 2010, p.13).

New Zealand expenditure data

State expenditure account (Treasury, 1935–38)

During the 1920s the Crown's accounts were reorganised on 'commercial lines' (Forbes, 1931, p.10) that followed scientific management thinking, and separately identified the costs of activities (Ashwin, 1935). From 1930 a consolidated state balance sheet was published, and from 1935 Treasury added an accrual state income and expenditure account. By bringing together expenditure from all departmental accounts, this provided the first official whole-of-government expenditure statistics. Although this account excluded fixed asset purchases, it included capital charges (New Zealand Treasury, 1935, p.88).

The state expenditure account series was published for four years, and then never resumed after being 'discontinued until after the conclusion of the war' (Statistics Department, 1941, p.494). Indeed, after the Second World War there was a further decrease in the resources committed to reporting departments' finances using commercial practices.

National accounts (Statistics Department, refined by the Planning Council, 1939, 1944, 1950–79)

For 1939 and 1944, however, there are 'preliminary estimates' of government expenditure, calculated on the new United Nations and government-favoured national accounts basis (Statistics Department, 1950, p.604). From 1947 this series became permanent, and continued on a consistent basis for key expenditure classifications until 1979. Although government departments operated on a cash basis, trading departments, such as the post office, used private sector accounting methods. This series was net, and included capital formation by state trading enterprises (New Zealand Planning Council, 1979, p.8).

The national accounts data reported the cost of government-provided goods and services separately from cash transfers such as pensions, benefits and interest payments (Statistics Department, 1953, p.595). When the Planning Council published data from this series from 1950, however, central government expenditure included current expenditure on goods and services (public consumption), gross capital formation (public investment) and transfers and other current expenditure such as interest and subsidies. Hospital board expenditure was also reclassified as central government expenditure for the entire period (New Zealand Planning Council, 1979, pp.8, 26-7).

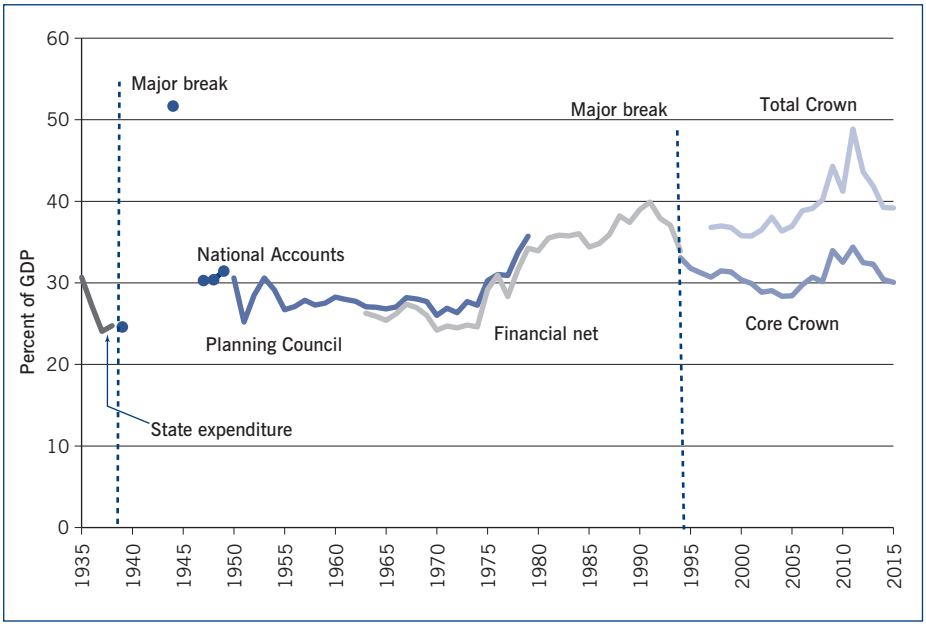
Financial net expenditure (Treasury, 1963–72 (retrofit) and 1973–94)

By the early 1960s Treasury was producing a summary budget table, showing income and expenditure for all government accounts, and in 1967 received permission to publish this table (McKinlay, 1983). After further refinement, Treasury published a ten-year retrospective functional series that included eight broad categories of expenditure and 18 more detailed categories (New Zealand Treasury, 1973). Treasury continued its financial net expenditure series until 1994, and data from 1972 to 1993, with a slight downward adjustment in early years and a substantial upward adjustment from the late 1980s to allow for net lending less repayments, is on Treasury's website (New Zealand Treasury, 2016). This series has been included in this article from 1963.

> … governments can … affect people's behaviour, the distribution of income and economic outcomes through taxes, regulations, procurement policies, asset sales and expenditure mandates …

Financial net expenditure was based on government appropriations, after allowing for departmental receipts (Shand, 1979, p.353), and included the consolidated fund, the loans account and the national roads fund (Preston, 1980, pp.41-2). Net expenditure was a financing concept which showed the level of funds that needed to be raised (Shand, 1979, p.354). Although cash-based, departments sometimes spread capital purchases across years (Preston, 1980, pp.57, 61), while governments transferred money into war accounts to fund military expenditure events for which final costs were uncertain.

Figure 1: Government expenditure as a percent of GDP



Gibbons (2000) worked out how some of the functional categories were calculated, and extended them back to 1950. Total financial net expenditure is often almost identical to total expenditure in the Statistics Department's national accounts series (Tan, 1981). Splicing these two series together provides information on changes in total government expenditure for 1939 and 1944 and for 1947–94.

Some changes occurred to financial net expenditure over time. Although some changes are difficult to quantify, the 1986 Budget noted that changes would increase net expenditure by approximately 4.3%, 'without adding to the government's claim on total resources' (New Zealand Treasury, 1986, p.33). Changes include categorising Family Support tax rebates as expenditure, adding GST onto expenditure by government departments, not deducting import licensing revenue from Trade and Industry expenditure, and, for equity and administrative reasons, grossing up most remaining untaxed benefits and making them subject to income taxation (New Zealand Treasury, 1986, p.33).

Core Crown expenses (Treasury, 1994–) and total Crown expenses (Treasury, 1997–)

The 1994 Budget was the first prepared under New Zealand generally agreed accounting practice (GAAP) and switched from a predominantly cash-based expenditure system to an accrual system. Capital expenditure by government departments was no longer included, and, although depreciation on physical assets was added, this was not a close equivalent. While capital charges were now appropriated, they were eliminated on consolidation. Furthermore, whereas since 1939 functional classifications had shown net expenditure, core Crown expenditure was gross. In addition, the functional classification used changed to classification of functions of government (COFOG) used by the International Monetary Fund, while expenses now included the Reserve Bank (New Zealand Treasury, 1994, pp.170-5). In addition, after 1994 GST was excluded from departmental and non-departmental output classes. These changes created a 'fundamental break' in the fiscal time series (ibid., pp.33, 75; New Zealand Treasury, 2008, p.7).

From 1997 government expenditure statistics used international financial reporting standards. However, by subtracting net foreign exchange gains and losses from the 1994–96 data it is possible to control for the major change (New Zealand Treasury, 2008). The switch to public benefit entity standards (backdated to 2005) has fractionally reduced government expenditure over this period. Furthermore, from 1997 statistics for total Crown expenses, which include all expenses of Crown entities and state-owned enterprises, thus including ACC and commercially operated businesses, such as electricity companies, were reported.

Changes in government expenditure in New Zealand

The state expenditure account provides the first four years of data in Figure 1, with the first year of data preceding the election of New Zealand's first Labour government in late 1935. Government expenditure fell between 1935 and 1938 as a proportion of GDP. This largely reflected a buoyant economy; in inflation-adjusted terms there was considerable growth in government expenditure. Furthermore, the first Labour government used savings on relief payments, which during the Depression had become New Zealand's biggest welfare programme, to fund other social services (Gibbons, 2001, pp.5-6). Because total expenditure by commercial enterprises was included, this series has some conceptual similarities with Treasury's current total Crown series.

The national accounts data show that government expenditure declined from a peak in 1944, when New Zealand's war effort was greatest, although it was still higher than the pre-war level. Nevertheless, government expenditure was slightly lower in the 1960s under National than under Labour in the late 1940s. Internationally this was unusual (Castles, 1998, p.100), and may reflect National using tax expenditures rather than direct expenditure. For instance, National made private health insurance tax deductible, reduced taxes on land and on selected goods purchased by voters it was targeting, and used the tax system to encourage particular types of investments (Goldsmith, 2008, p.236). National also preferred to deliver housing and farming assistance through discounted asset sales and low-cost mortgages, rather than as reported expenditure (Auditor-General, 1951, p.37).

During the second half of the 1970s government expenditure increased from 25% of GDP in 1974 to 34% in 1980, fuelling concern that public sector overload was occurring (New Zealand Planning Council, 1979). Government expenditure peaked at 38% of GDP in

1991, before declining. Indeed, core Crown expenditure fell from 34.4% of GDP in 1994 to 29.5% of GDP in 2004, before slowly increasing to a peak of 35.1% in 2011. Since then it has decreased to 30.1% of GDP in 2015, although, due to operating balance deficits and other cash outflows, the government's debt has substantially increased since 2009. In Figure 1, total Crown expenditure has also been included as a proportion of GDP. However, some of this expenditure is not a component of GDP, and some other expenditure is transfers that individuals personally spend. Indeed, the government sector probably accounts for between a fifth and a quarter of the economy (Easton, 2007).

A functional breakdown of many areas of government expenditure is available. The results (Figures 2–11) show defence expenditure trending downwards after peaking during the Korean War. However, law and order expenditure has sharply increased, reversing the trend of the first half of the century (Gibbons, 2001), as reported crime rates and concern about crime have grown. Although there is usually a strong statistical relationship between political parties' manifesto emphases on particular topics and equivalent subsequent government expenditure trends, this relationship is particularly strong for law and order (Gibbons, 2000, p.289). Health and education expenditure have both increased, although evidence of retrenchment by National during the early 1980s is visible.

There was a sharp increase in expenditure on both land use and other industrial services and energy by the third National government, which was reversed after 1984 by Labour (Rudd, 1991, p.155). For instance, appropriated land use expenditure was 2.7% of GDP in 1984, compared to less than 1% during the 1960s. Similarly, economic and industrial services expenditure was often a percentage point of GDP higher in the early 1980s than during the 1960s. Payments for past major industrial projects and for producer board refinancing (not graphed here) were significant contributors to government expenditure between 1987 and 1990, with costs peaking at 5.8% of GDP in 1987, although, in accordance with usual practice, these have been excluded from total government expenditure. Economic development expenditure has substantially increased since 1997, although not to the levels of the early 1980s. Treasury does not currently report total primary sector expenditure. However, irrigation subsidies have increased under the current government, despite concerns about their economic worth (New Zealand Treasury, 2010). Furthermore, the terms under which high country farmland becomes freehold have been generous to farmers (Brower, 2008).

The government's interest costs (Figure 9) increased sharply from 2.2% of GDP in 1975 to 7.7% in 1988. However, some interest payments reflected inflation reducing the value of borrowed money, although the government's debt also increased in real terms. Interest costs then fell as assets were sold, nominal interest rates declined, and there were periods of

Figure 2: Defence expenditure as a % of GDP

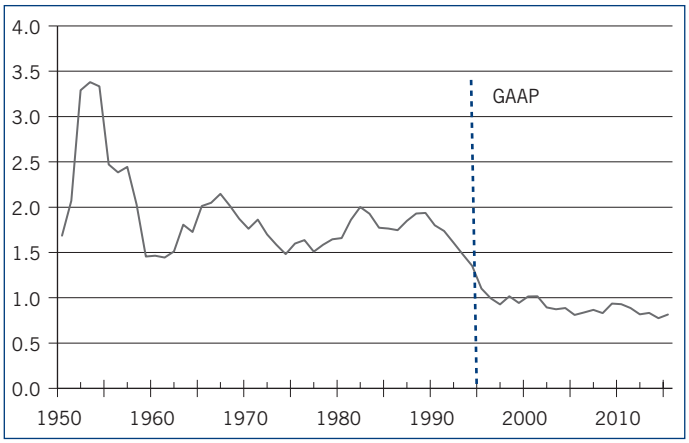


Figure 3: Law and order expenditure as a % of GDP

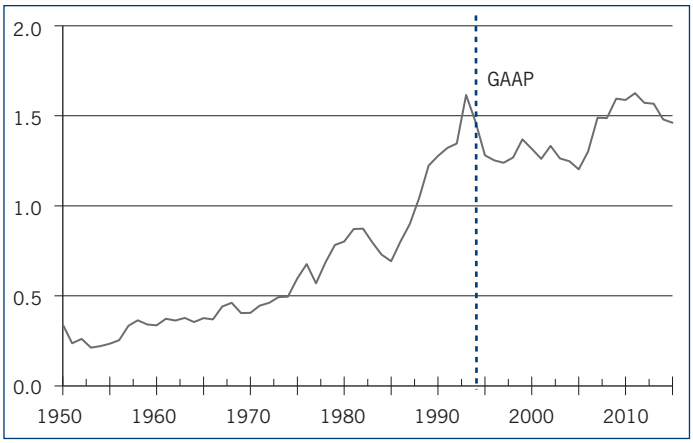


Figure 4: Health expenditure as a % of GDP

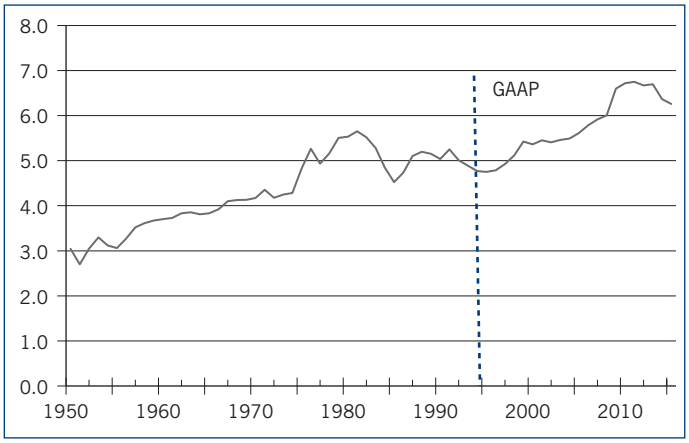


Figure 5: Education expenditure as a % of GDP

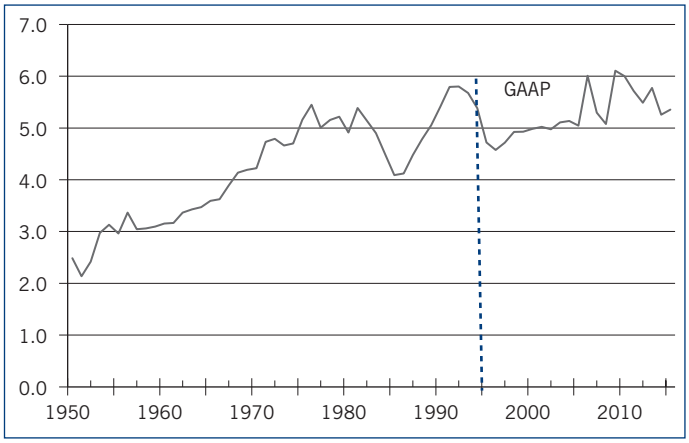


Figure 6: Transport and communications expenditure as a % of GDP

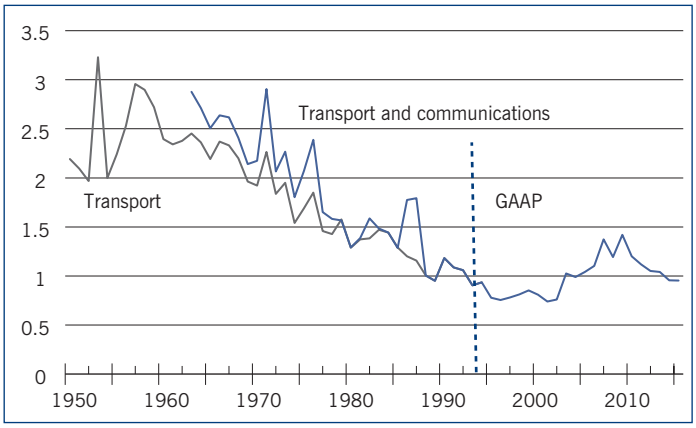


Figure 7: Land use expenditure as a % of GDP

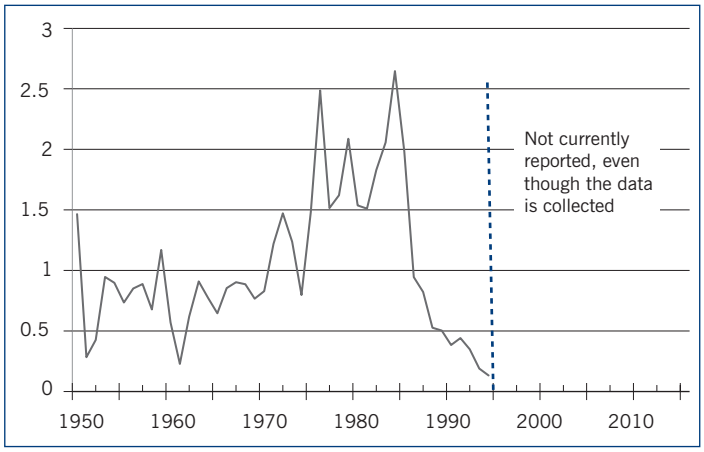


Figure 8: Economic and industrial services as a % of GDP

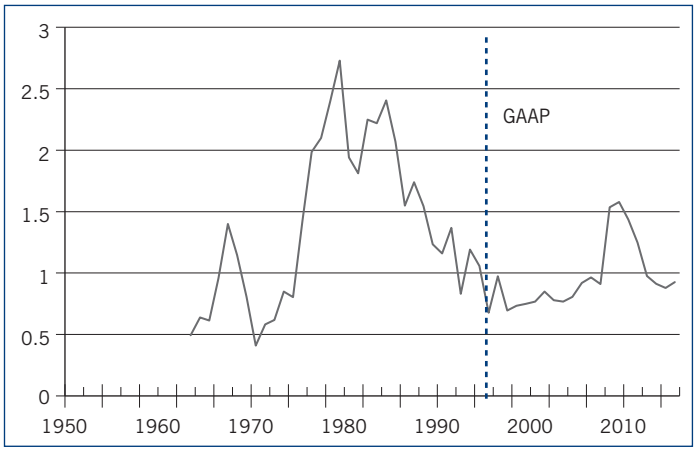


Figure 9: Government interest expenditure as a % of GDP

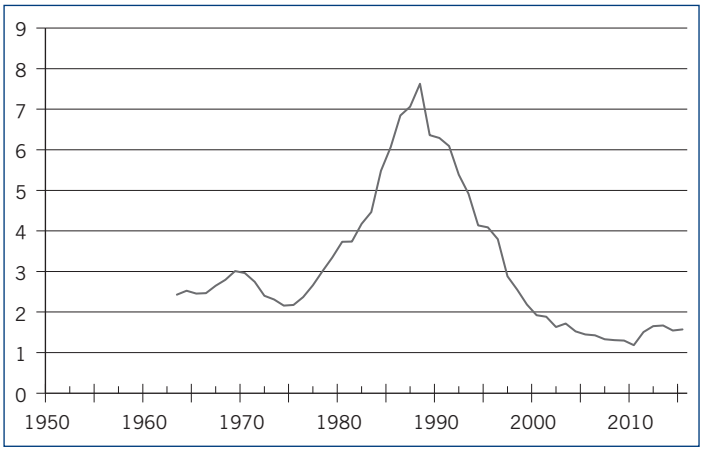


Figure 10: Net lending less repayments as a % of GDP

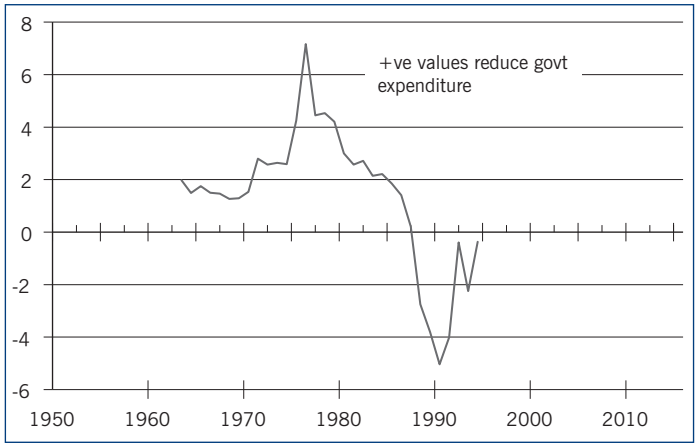
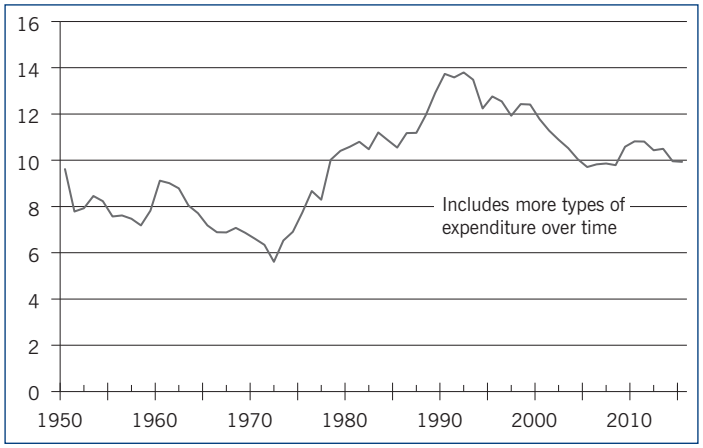


Figure 11: Social security and welfare expenditure as a % of GDP



fiscal surpluses. Since Treasury now subtracts net lending (Figure 10) from government expenditure, this reduces total government expenditure up to 1988, and increases net expenditure substantially for the next few years (Rudd, 1991, p.147).

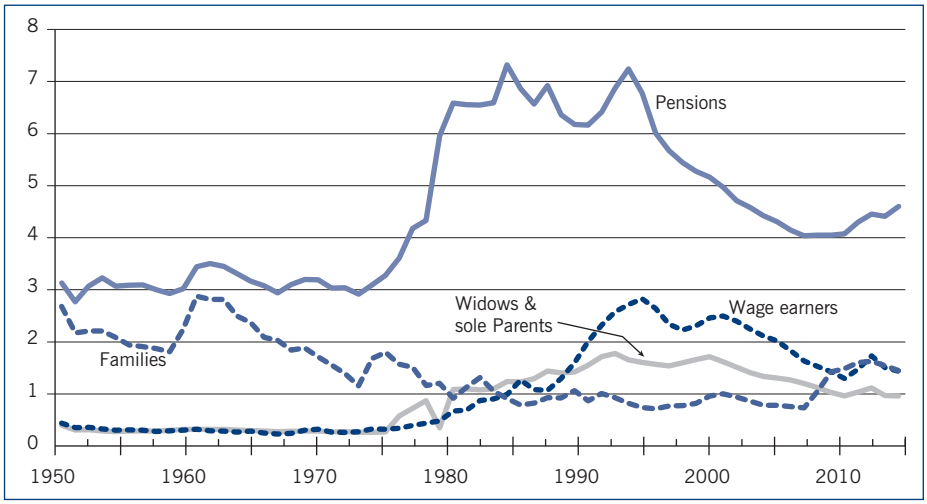
From the mid-1970s there was also growth in expenditure on social security and welfare. Figure 12 shows that superannuation expenditure increased from about 3% of GDP in the early 1970s to almost 7% by 1980, and accounted for almost half of the 9% increase in government expenditure as a proportion of GDP.[1] However, Figures 11 and 12 do not show how some of the cost of ending means-testing for those aged between 60 and 65 and of higher pension rates was recovered by making a formerly means-tested pension subject to income taxation (Preston, 2008, p.14) at a time when marginal tax rates for high-income earners were high. Due to an increase in the age of eligibility and demographic changes, superannuation spending is now lower than in the early 1990s, but is higher than before the mid-1970s. Superannuitants have also benefitted from lower marginal tax rates and the end of mandatory retirement rules, with the latter change boosting both their labour market participation and the tax base.

During the 1970s and 1980s expenditure on benefits for single parents increased. In addition, payments to wage earners also steadily increased during the 1970s and 1980s, particularly after 1986, due to increasing unemployment, and peaked at 2.8% of GDP in 1994. In contrast, family support payments declined over time, after peaking at 2.6% of GDP in 1961, and were 1.4% of GDP in

2012. Indeed, the universal family benefit was abolished in 1991 in favour of more targeted assistance, with 89% of Working for Families expenditure in 2010 going to families in the lower half of the income distribution after equivalising for family size (Aziz et al., 2012, p.33).

More expenditure on families has been recorded over time, with the decision in 1973 to increase the family benefit but abolish a long-standing tax exemption for families with children increasing appropriated family support expenditure (Figure 12), without significantly changing the income distribution (New Zealand Planning Council, 1979, p.10). During the 1980s tax credits specifically for low-income families, which had grown since the late 1970s, also became appropriated expenditure. Then during the 1990s formerly unquantified income-related rent subsidies to state housing tenants became funded: first in 1991 through an expanded accommodation supplement, and then after 1999 by the reintroduction of income related rents for those with incomes below the level of New Zealand superannuation. Furthermore, although the net fiscal expenditure series allocated contributory government employee pensions to functional expenditure areas, under COFOG this constitutes social security expenditure. Including consumer subsidies would considerably increase welfare expenditure during the 1950s, when these were sometimes over 2.5% of GDP, and to a lesser extent also during the 1960s and some years in the 1970s (ibid., pp.27-30; Rose, 2014, p.12).

Figure 12: Expenditure on different types of transfers as a % of GDP, 1950-2012



Tax expenditures and international comparisons

International comparisons of government expenditure are difficult, partly because some countries make heavy use of tax expenditures and mandatory private expenditures to achieve policy goals (OECD, 2011, p.64). For instance, tax expenditures for education, housing and health care are equivalent to one-fifth of appropriated government expenditure in Australia, and amount to almost half of appropriated welfare expenditure in the United States (Howard, 1997, pp.18, 27; Stebbing and Spies-Butcher, 2010, pp.593-5, 597). Tax incentives and breaks are often popular with voters because they are frequently seen as tax cuts rather than increases in expenditure, and there is less oversight and targeting of them. They tend to benefit higher-income earners most (Burman, Geissler and Toder, 2008; Faricy, 2011), although in the United States the earned income tax credit for low-income families with dependent children is a tax expenditure. Despite the Charter of Budget Honesty (1998), there has been a political consensus on keeping reported government expenditure low in Australia (Wanna, Kelly and Forster, 2000, p.282). Differences in welfare spending also shrink when the decision by the United States and Australia to not tax cash transfers or apply sales tax to perceived necessities and merit goods is considered (Howard, 2007, pp.14-16).

New Zealand's first tax expenditures statement was in the 1984 Budget, and listed 112 tax concessions and expenditures (New Zealand Treasury, 1984, pp.20-30). Some tax expenditures were subsequently abolished, and others became appropriated expenditure. As a 'first step' towards improving its financial reporting, Treasury reintroduced a short tax expenditures statement, which quantified nine tax expenditures, in 2010. The biggest items were income tax deductions on charitable donations ($235 million) and the independent earner credit ($212 million) for middle-income workers who do not receive other tax credits or cash benefits and after the 2009 taxation changes paid more sales tax but did not benefit from the top income tax rate reduction. However, Treasury noted that its list was incomplete (New Zealand Treasury, 2014, p.3).

Indeed, New Zealand's tax system has features that elsewhere are quantified tax expenditures. For instance, tax deductions on mortgage interest on owner-occupied property are recorded as a tax expenditure in the United States (Howard, 1997, pp.21-2), but the reduction in tax revenue from $650 million per year in losses on residential property investments is not recorded in New Zealand's tax expenditures statement. Rental property tax arrangements in New Zealand enable providers to build retirement wealth while sometimes reducing the cost of renting (Coleman, 2009; King, 2014). However, a disadvantage of not annually recording and monitoring these expenditures is that providers do not face the contestability, conditionality, and requirement to efficiently provide quality services, with annual improvements in the quality and quantity of services, which occur for other service providers. For instance, the interest expense deduction could be restricted to the capital cost (excluding land) of new high-density housing, and not available to reduce other taxable income.

Similarly, the ability by farmers to lower their taxes through income averaging is a quantified tax expenditure in Australia (Australian Treasury, 2014, p.66) but not in New Zealand. Furthermore, the loss of revenue from not taxing capital gains on owner-occupied housing is reported in Australia. In addition, the decision to exclude all imputed income on housing from income

Figure 13: Government expenditure as a percentage of GDP since 1870 in NZIER's *Looking at the numbers*

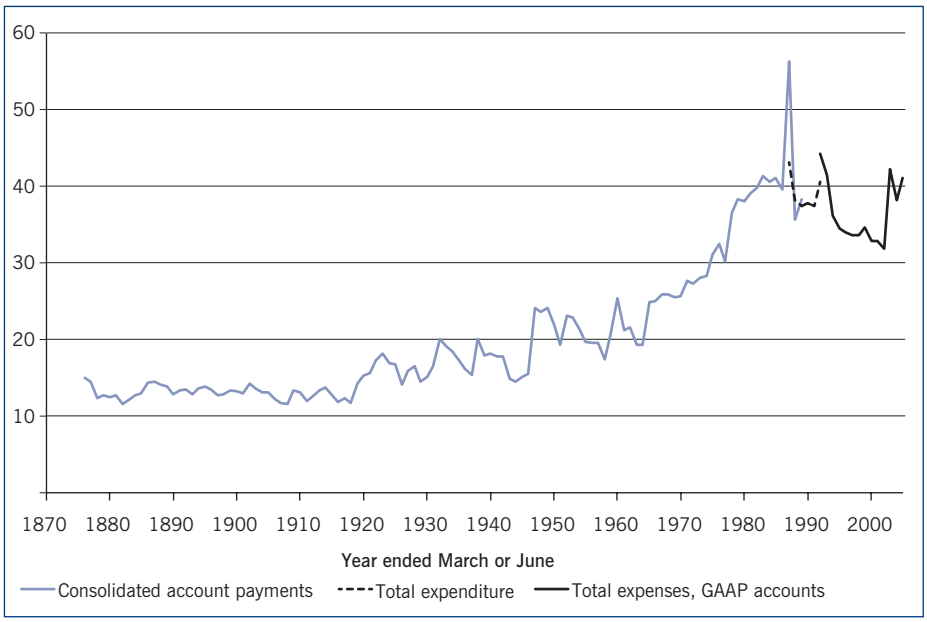
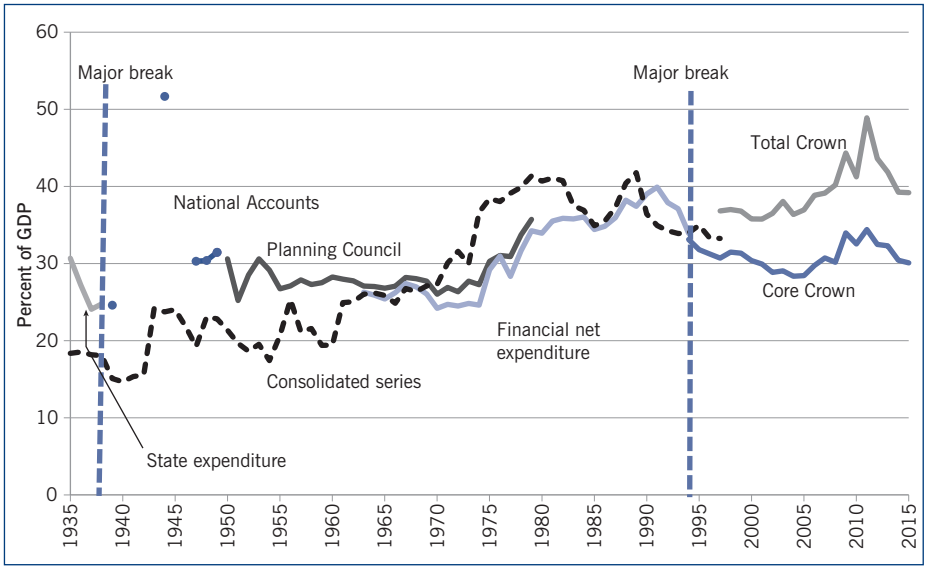


Figure 14: Government expenditure as a percent of GDP with Consolidated series added



taxes has been criticised in Australia (Jones, 1980, p.178; Stebbing and Spies-Butcher, 2010, p.593). It has also been suggested that these sources of income should be taxed in New Zealand so that other taxes can be reduced, and to increase investment in productive activities (Financial Services Council, 2013, pp.5, 22). Indeed, the OECD has recommended that New Zealand implement a comprehensive capital gains tax to promote equity and economic efficiency (OECD, 2013, pp.3, 22). Political pressures have protected employee car parking privileges from fringe benefit tax (Shuttleworth, 2013), although this could reduce traffic congestion. Small business owners have also benefitted from tax changes that facilitate counting personal consumption as a business expense. It is therefore important to consider not just the level of recorded government expenditure, but also unrecorded tax breaks and policies that facilitate high and rising prices for assets such as residential property.

Alternative data sets

The total expenditure series in Figure 1 come from consolidated functional expenditure series based on Treasury or Statistics New Zealand publications. However, the most-used long-term government expenditure graph for New Zealand uses a consolidated expenditure series that is shown in Figure 13. Slightly different versions of this graph have appeared in a New Zealand Institute of Economic Research economic history text (Briggs, 2003, 2007, 2016), two articles in this journal (Gemmell and Gill, 2016, p.4; Rea, 2009, p.62), and a Productivity Taskforce report (2025 Taskforce, 2009, p.82). However, a Treasury report on governments and economic growth partly used data collected and created by the author of this article (Cook, Schousboe and Law, 2011, p.27). Treasury's fiscal updates have sometimes included graphs from the 1950s onwards for functional expenditure that include series from the current author's PhD thesis (New Zealand Treasury, 2006, pp.57, 74, 95, 96), but have not included long-term total government expenditure.

Overlapping the series reveals considerable differences (Figure 14). In particular, the consolidated series shows continual growth in government expenditure between the early 1950s and the early 1980s, supporting age-of-democracy theories of growth in government (Olson, 1982, pp.41, 132-3). In contrast, the more consistent Planning Council and financial net expenditure series show no increase until the mid-1970s.

These differences partly occur because the consolidated series has absorbed other government accounts over time (Committee on the Simplification of the Public Accounts, 1962). In particular, in 1964 the consolidated fund, social security fund and the gas industry account merged to form the consolidated revenue account, boosting government expenditure by 13%. Similarly, after reductions in scope during the 1970s, the abolition of the works and trading account in 1978 further increased consolidated account expenditure. In addition, consolidated series data were reported on a gross basis from the early 1950s, whereas the functional series were net until 1994.

The limitations of the consolidated series raise the question of why it has been so widely used to illustrate changes in government expenditure. Historic expenditure data from the consolidated fund and consolidated revenue account

has sometimes been printed in Yearbook appendices with the warning that 'The figures shown … are not on a comparable basis' (Statistics Department, 1980, p.934). The consolidated expenditure data has been reprinted with similar disclaimers in historical statistics texts (Bloomfield, 1984, p.335; Thorns and Sedwick, 1997, p.103).

The consolidated data was included in an internal Treasury data set in the early 2000s, and Treasury staff added expenditure as a percentage of GDP and a graph similar to Figure 13. Later this data was published on a long-term data series website hosted by Statistics New Zealand. This website carries strong disclaimers encouraging users to check the statistics themselves, and the expenditure sheet notes that the data is 'not strictly consistent' (New Zealand Treasury, 2004). However, the series has met the desire of researchers to have a graph showing long-term expenditure, although users have usually repeated Treasury's warning and asked Treasury staff if better data are available.

Caution remains necessary when considering other government expenditure statistics. For instance, in published statistics on per student education costs early childhood and tertiary education appears relatively expensive compared to the compulsory sector. However, because the Ministry of Education is responsible for school property, the capital charge on school property is eliminated on consolidation. Differences in per student government expenditure on compulsory education and on early childhood and tertiary education become much smaller when all property funding is considered on an equivalent basis. Furthermore, student allowance and loan costs are included in tertiary education expenditure, but family tax credits are not included in other types of education expenditure.

Conclusion

This article has shown that the best available published functional government expenditure statistics present a different picture of growth in government since 1935 to the consolidated expenditure series used in other publications. In particular, the functional series show that government expenditure was relatively stable between the late 1940s and the mid-1970s, although expenditure increased thereafter. This increase was largely due to higher social security expenditure on pensions by the third National government, although some of the increase was recovered by making formerly means-tested pensions subject to income tax. Interest costs for the government also steadily increased from the late 1970s, while expenditure by National on land use and on economic services was high from the late 1970s to mid-1980s. During the 1980s, expenditure on means-tested benefits, but not on assistance to families, also grew. New Zealand government expenditure has fallen as a percentage of GDP since 1991, with pensions expenditure falling sharply due to a higher eligibility age and demographic changes. Interest costs and expenditure on means-tested benefits also declined from the early 1990s.

The statistics in this article exclude tax expenditures, which are important in other countries and under-reported in New Zealand. However, the functional data used in this article are better than the Consolidated expenditure series used by several other publications, since they include a wider range of government activities and are more consistent over time.

1 Pensions expenditure includes the old age pension and superannuation, but not civil servants' pensions. Wage earner benefits are the unemployment, sickness and invalid benefits. Widows and sole parent benefits include the DPB and orphans' benefits. Family support includes the family benefit and, since the 1980s, appropriated expenditure on family care, family support, Working for Families and paid parental leave. Accident insurance is not core Crown expenditure, while housing and veterans' pensions are excluded due to definitional changes. Sources include the long-term data series and Appendices to the Journals of the House of Representatives.

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and Deborah Edmunds

Reversing the Decline in New Zealand's Biodiversity

empowering Māori within reformed conservation law

Creating new conservation law that more holistically and comprehensively supports hapū and iwi leadership in conservation management should be embraced as a critical step towards reversing the decline of Aotearoa New Zealand's biodiversity. Treaty of Waitangi settlement statutes (for example, the Te Urewera Act 2014) and new conservation policies and practices (for example, the Department of Conservation's *Conservation Management Strategy Northland 2014–2024*) throughout the country are strongly recognising the need for tangata whenua to be more involved in the conservation and management of New Zealand's biodiversity. It is timely for conservation law itself to be reformed to better reflect and support these recent advancements. Conservation law reforms should reflect and support the intent of hapū and iwi to act as kaitiaki (guardians) of New Zealand's biological heritage.

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Conservation law for future generations

Conservation is defined in legislation as:

> the preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational

> enjoyment by the public, and safeguarding the options of future generations. (Conservation Act 1987, s2)

But what will be the options for our future generations? Despite New Zealand's conservation law, much of our native biodiversity and the quality of natural habitats continue to degrade under a suite of historic and emerging anthropogenic pressures:

> 21% of birds are now extinct; 63% and 18% of freshwater fish and vascular plants respectively are either threatened with extinction or declining; about two-thirds of the original native forests has been lost; wetlands have been reduced by 90%; soils have become seriously degraded; and the sediment and nutrient status of many rivers and lakes has deteriorated badly. (Ministry for the Environment and Statistics New Zealand 2015; Norton et al., 2016)

While native biota still dominates many ecosystems, invasive organisms (plants, animals, fungi, microorganisms) have dramatically affected species assemblages and natural ecosystem structures, processes and functions (see, for example, Fukami et al., 2006; Kelly et al., 2010).

After arrival, Māori literally became the original peoples of these lands – the tangata whenua – deriving identity and meaning from the lands and waters and the biodiversity that dwelled within those domains (Mead, 2016). For Māori, to lose native species is to lose something of themselves, the cultural spirit of and being Māori (Mead, 2016). For all New Zealanders, and especially for Māori, the richness of our biodiversity is essential for future generations. For Māori specifically, their world view will have little context if the lands become mostly devoid of original flora and fauna (Waitangi Tribunal, 2011). Biodiversity loss is a critical issue not just for Māori but for all within New Zealand, with many sectors of our society and economy relying on its integrity and function.

The Department of Conservation is primarily responsible for biodiversity management, with approximately one-third of New Zealand's land area under its mandate (in fact, New Zealand has a higher proportion of its land area protected for conservation purposes than any other OECD country (Ministry for the Environment, 2010)). However, the Department of Conservation remains one of the smallest of the government's ministries as a recipient of taxpayer funding, with a growing reliance on financial assistance from conservation use concessions – for example, tourism ventures – more business partnerships and the private philanthropic sector (see State Services Commission, Treasury and Department of the Prime Minister and Cabinet, 2014). Many species and habitat restoration and conservation initiatives, including day-to-day pest control, also rely heavily on contributions from iwi and hapū. For example, Ngāi Tahu are the biggest non-government contributor to kiwi restoration in this country as the owners of Rainbow Springs Nature Park (Ngāi Tahu have owned this park since 2004) and the hapū of the Maungaharuru ranges are actively involved in species reintroduction as part of the Poutiri Ao ō Tāne ecological and social restoration project (Poutiri Ao ō Tāne, 2017). Despite financial constraints, ambitious goals such as Predator Free 2050 emerge. We believe that for New Zealand to achieve these aspirational conservation goals, greater leadership from hapū and iwi is required. The capacity for Māori to achieve 'leadership', however, is questionable under the current legal conditions. New legislative and policy mechanisms that allow iwi and hapū to engage with their values and bring their knowledge systems and approaches to developing solutions are therefore needed. This point has been made forcefully by others, including the Waitangi Tribunal in 2011 when it stressed that partnership is the intellectual framework for understanding the principles of the Treaty of Waitangi and thus:

> [T]he department [of Conservation] must be looking for partnership opportunities in everything that it does. … opportunities to share power with tangata whenua should be a core performance indicator for the department rather than … the exceptional outcome driven by the wider pressures of Treaty settlements it now is. (Waitangi Tribunal, 2011, p.324)

Present conservation legislation arguably reflects antiquated ideas about the value of tangata whenua in contributing to biodiversity restoration because most of it was enacted prior to the modern Treaty of Waitangi settlement statutes.

Present conservation legislation arguably reflects antiquated ideas about the value of tangata whenua in contributing to biodiversity restoration because most of it was enacted prior to the modern Treaty of Waitangi settlement statutes. Many of these conservation statutes emerged from a period when policymakers and government members were heavily influenced by the Western conservation ideals of the 19th and early 20th centuries. The date of enactment of many of our conservation statutes evidences this. While some legislative amendments have attempted to keep the statutes relevant, many require reform especially in order to capitalise on new opportunities created by the contemporary Treaty of Waitangi settlements. For example, the Department of Conservation

administers the Conservation Act 1987, and another 24 statutes (as listed in schedule 1 of the Conservation Act 1987). Only four of these statutes were enacted after the first Treaty of Waitangi settlement statute in 1995. All of the others were framed from another era (one was enacted in 1897, another one in 1928, three in the 1930s, one in 1950s, nine in the 1970s, four in the 1980s and two in the early 1990s). More importantly, there has been little substantive legislative change since the Conservation Law Reform Act 1990. Many of these 25 statutes, including the Conservation Act 1987, National Parks Act 1980, Reserves Act 1977 and the Wildlife Act 1953, require updating to reflect treaty settlement legislation, but also to better empower Māori in the conservation space. While the government has indicated intended reform of one specific conservation statute – the Marine Reserves Act 1971 (Ministry for the Environment, 2016) – a coherent and coordinated overhaul of the whole discordant framework of conservation legislation is required. Others are calling for this too (see Wallace, 2016; Solomon, 2014; Waitangi Tribunal, 2011).

The objective of conservation through preservation and protection in New Zealand theoretically allows little opportunity for tangata whenua to practice their own environmental ethic. Government conservation regulation and management over the last century has contributed to the isolation and disconnection of hapū and iwi from their taonga (see, for example, Lyver, Jones and Doherty, 2009; Ruru, 2017). Crown policies have effectively interfered with the relationship between tangata whenua and their lands and natural environments (Waitangi Tribunal, 2011).

Although the Conservation Act acknowledges that conservation legislation must give effect to the principles of the Treaty of Waitangi (s4), more developed policy and practice to empower legislation from treaty settlements is required. For example, the Conservation Act contains only limited provision for authorising the taking of plants for 'traditional Māori purposes' (s30(2)). Further, in accordance with the Wildlife Act 1953, animals are categorised into certain levels of protection or ability to be taken, hunted or killed. A more coordinated new approach is required that includes valuing tangata whenua knowledge and solutions for thriving biodiversity.

A closer focus on the biodiversity within national parks is worthwhile to begin to illustrate this point. The National Parks Act 1980 clearly states that no person, without the prior written consent of the minister for conservation, can cut, destroy or take any plant or animal that is indigenous to New Zealand and found within a national park (s5). While policy documents soften this by providing for the potential for customary use, the policy is heavily qualified. The *General Policy for National Parks* dictates that customary use:

> may be allowed on a case-by-case basis where:
> i) there is an established tradition of such use;
> ii) it is consistent with all relevant Acts, regulations, and the national park management plan;
> iii) the preservation of the species involved is not adversely affected;
> iv) the effects of use on national park values are not significant; and
> v) tangata whenua support the application. (New Zealand Conservation Authority, 2005, policy 2(g))

In the case of most native protected birds, the Wildlife Act 1953 deems that this wildlife is vested in the Crown (section 57). This provision has implications for the weaving and ownership of korowai (traditional cloaks), positioning those feathers from absolutely protected birds as still Crown property.

Not surprisingly, Māori leaders have for some time aptly summarised the conservation protection objective as 'hostile to the customary principle of sustainable use' and observe that 'the spiritual linkage of iwi with indigenous resources is subjected to paternalistic control' (Ellison, 2001), and see national parks more broadly as 'gated areas where we are obstructed from our customary practices, locked out from decision making, and held back from continuing our relationship with sites of deep spiritual or cultural significance' (Solomon, 2014). Māori are formally submitting these views to government. For example, in a submission to the Ministry for the Environment's proposed National Policy Statement on Indigenous Biodiversity, the Raukawa Trust stated clearly:

> We note that 'kaitiakitanga' is commonly understood to relate to conservation of resources but that interpretation will be particular to each tangata whenua group according to their tikanga. For Raukawa it is important to note that the concept of kaitiakitanga relates to the management of resources and this includes their use and not just their protection. Effectively it refers to sustainable management and using resources in such a way and at such a rate as to ensure they are not diminished. This is an important

... Māori leaders have for some time aptly summarised the conservation protection objective as 'hostile to the customary principle of sustainable use' and observe that 'the spiritual linkage of iwi with indigenous resources is subjected to paternalistic control' ...

> distinction as recognising and providing for the role of tangata whenua as kaitiaki includes recognising and providing for our use of resources. (Ministry for the Environment, 2011, p.76)

Thus, from a tangata whenua perspective, use is an important part of the conservation ethic for the sustainable management of flora and fauna and for the sustenance of tangata whenua as a people (Kirikiri and Nugent, 1995). Although tangata whenua do not require use of flora and fauna within the conservation estate for physical survival, it is critical for cultural survival, identity and knowledge (including language revitalisation) (Mead, 2016). This observation about use is not meant to detract from the international and national priorities for the conservation of biological diversity. Tangata whenua agree with government that native plants and animals must flourish for future generations, but disagree that preservation is the sole means to achieve this goal. One option is to embrace the tangata whenua knowledge and practices of sustainable management for ensuring thriving species. Customary use (including the decision to not use) can sit within a flora and fauna-empowering conservation ethic that New Zealand's legislation could better enable as a 'value-add' to current state conservation management practices.

After all, the current conservation regime is comfortable with a progressive concession regime which permits major commercial use of, and activities within, the conservation estate. Some of this activity requires significant infrastructure and physical impacts, such as ski lifts, tourism facilities, telecommunication structures, golf courses, grazing, and many other non-conservation focused-activities. In the 2013–14 year, 4,470 concessions were granted, most unrelated to primary conservation or protection outcomes, representing an increase of more than 1,000 concessions in less than a decade[1]. Revenue from concessions and recreation activities (around $17 million) is now a vital element of income for the department in the face of an insufficient (due to the very high biodiversity challenge) yet static core funding appropriation (see the department's annual report for the year ended 30 June 2016). It is anticipated that an increasing focus of the department will be to improve this revenue. It is important, however, that this is not at the expense of tangata whenua relationships with the biodiversity within the conservation estate.

New Zealand's law and policy needs to shift from a principal objective of conservation as preservation to a more pluralist approach which also encompasses a tangata whenua inclusiveness that signifies conservation for cultural and sustainable management outcomes. A broader definition of conservation has existed on the world scene since before the Conservation Act 1987 was enacted. The World Conservation Strategy (1980) defines conservation as 'the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations'. However, such a definition in New Zealand would have proved contentious in the 1980s and 1990s, especially if the motive was to give effect to the tangata whenua environmental ethic in the conservation estate (despite sustainable use concepts being legally applied to non-conservation resources, as in the Resource Management Act 1991) (see New Zealand Conservation Authority, 1997). Opponents of formal reintroduction of a tangata whenua environmental ethic point to past experiences as evidence of why it would be destructive to incorporate such an ethic into present day mainstream conservation practices (Taiepa et al., 1997). Common arguments include the hunting of the moa to extinction and the use of fire as a tool for forest clearing (New Zealand Conservation Authority, 1997). But, as Chanwai and Richardson have succinctly argued, this should not disqualify the tangata whenua environmental ethic:

> 'Pākehā development activities over the past 150 years have caused massive ecological damage, and yet this is not held to disqualify Pākehā society from seeking to improve environmental conditions today' (Chanwai and Richardson, 1998, p.163).

Such pastoral or commercial-based impacts continue today.

The political environment has now changed. The Treaty of Waitangi settlement statutes and co-management agreements show how the tangata whenua approach to sustainable conservation and restoration can work in partnership with the state (for example, predator removal from offshore islands and reintroduction of threatened species, e.g. Putauhinu Island – see Miskelly, Charteris and Fraser, 2013; Marotere Islands – see Towns, Parish and Ngātiwai Trust Board, 2003).

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Treaty settlements and the conservation estate

Significantly, New Zealand's cultural and socio-political landscape in relation to the environment is beginning to be transformed with the settlement of Treaty of Waitangi claims that began most prominently with the Waikato Raupatu Claims Settlement Act 1995 and the Ngāi Tahu Claims Settlement Act 1998. All of these settlements include important financial and cultural redress and are beginning to enable iwi and hapū to participate in some species recovery work. But to further facilitate

this transformation, core conservation legislation needs to be reformed so as to better accommodate the principles of the treaty and the principles of reconciliation inherent within treaty settlement legislation. These legislative reforms would then open the pathway for the Crown's treaty partner and strongest ally, tangata whenua, to become fully engaged in conservation and reversing the decline in biodiversity in this country.

The National Parks Act 1980 is particularly ripe for reform. No significant changes have been made since 1990. The purpose of the act is to preserve:

> in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest. (s4(1))

Completely absent from this legislation, enacted as it was prior to the practice of treaty references in statutes, is the tangata whenua relationship with these lands. Treaty settlement statutes provide the lens to guide the much-needed reform. By way of example we discuss here the first and latest comprehensive settlements concerning the conservation estate: the Ngāi Tahu Claims Settlement Act 1998 and the Te Urewera Act 2014.

The Ngāi Tahu Claims Settlement Act 1998 was the first treaty settlement statute to empower an iwi to have some role in contemporary conservation management. The reconciliation mechanisms inherent within this 1998 settlement statute include:

- recognition that Aoraki Mount Cook is a most important ancestor of Ngāi Tahu and that this maunga (mountain) will be returned to Ngāi Tahu for a period of seven days when they wish to action this; at the expiry of the seven days the mountain will be gifted back to the nation (see ss15, 16);
- provision for Ngāi Tahu representation on relevant conservation boards and the New Zealand Conservation Authority (ss272, 273); and
- laying of tōpuni (to cover) over stretches of conservation land that emphasise the Ngāi Tahu cultural, spiritual, historic and traditional association with that area of land (ss237-53).

These were the important first steps for providing a platform for Ngāi Tahu representation and some recognition of Ngāi Tahu customary rights and interests. They provided a starting point for Ngāi Tahu inclusion in conservation management, but Ngāi Tahu remain frustrated that conservation legislation itself is mostly indifferent to broader Ngāi Tahu rights and interests (Solomon, 2014). Ngāi Tahu must still seek to achieve their goals within paternalistic conservation law. As a Ngāi Tahu leader has remarked in regard to Aoraki: 'while there is a tōpuni in place and enhanced input into management plans, this does not override or alter the non-indigenous framework overlaying this park and others within our takiwa' (ibid.).

We believe that recognition of and respect for tangata whenua 'ways of knowing and doing' within the New Zealand public are increasing.

Fast-forward to this country's most recent treaty settlement concerning a national park, Te Urewera. Te Urewera was named a national park in 1954 and was managed by the Department of Conservation pursuant to the National Parks Act 1980. The park became simply Te Urewera on 27 July 2014: 'a legal entity' with 'all the rights, powers, duties, and liabilities of a legal person' (Te Urewera Act, s11(1)). The Te Urewera Act is undoubtedly legally revolutionary in New Zealand and internationally. However, this was also the government's politically acceptable solution to circumvent the Tūhoe proposal for outright ownership of the park (Lyver, Davies and Allen, 2014).

The Te Urewera Act makes it clear that those lands cease to be Crown land and cease to be a national park. Te Urewera is now not managed by the Department of Conservation but by a new Te Urewera Board. This board is responsible for acting 'on behalf of, and in the name of, Te Urewera' (Te Urewera Act, s11(2)(a)). The board, in contrast to nearly any other statutorily created body, encourages acknowledgement of Māori law. It can 'consider and give expression to' 'Tūhoetanga' and 'Tūhoe concepts of management' such as rāhui, tapu me noa, mana me mauri, and tohu' (s18(2)). The act expands on the meaning of these concepts:

- *mana me mauri* conveys a sense of the sensitive perception of a living and spiritual force in a place;
- *rāhui* conveys the sense of the prohibition or limitation of a use for an appropriate reason;
- *tapu* means a state or condition that requires certain respectful human conduct, including raising awareness or knowledge of the spiritual qualities requiring respect;
- *tapu me noa* conveys, in tapu, the concept of sanctity, a state that requires respectful human behaviour in a place; and in noa, the sense that when the tapu is lifted from the place, the place returns to a normal state;
- *tohu* connotes the metaphysical or symbolic depiction of things. (s18(3))

And the board 'must consider and provide appropriately for the relationship of iwi and hapū and their culture and traditions with Te Urewera when making decisions' and that the purpose of this is to 'recognise and reflect' Tūhoetanga and the Crown's responsibility under the Treaty of Waitangi (ss20(1), 20(2); see too Ruru, 2014).

Nick Smith, who was the minister of conservation in the 1990s when the Ngāi Tahu Claims Settlement Act 1998 was enacted and again in 2014 when the Te

Urewera Bill was in its third reading, stated in the House:

> It is surprising for me, as a Minister of Conservation in the 1990s who was involved under the leadership of the Rt Hon Jim Bolger – who is in the House – in the huge debate that occurred around the provisions of the Ngāi Tahu settlement in respect of conservation land, how far this country and this Parliament have come when we now get to this Tūhoe settlement in respect of the treasured Te Urewera National Park. If you had told me 15 years ago that Parliament would almost unanimously be able to agree to this bill, I would have said 'You're dreaming mate'. It has been a real journey for New Zealand, iwi, and Parliament to get used to the idea that Māori are perfectly capable of conserving New Zealand treasures at least as well as Pākehā and departments of State. (Smith, 2014)

The Te Urewera Act provides a prominent commitment to recognising Tūhoe customary rights and interests. However, with the mechanisms and principles within conservation law still largely applicable (for example, the list of activities requiring permits replicates that in the National Parks Act: see sections 55 and 58 of the Te Urewera Act), reform of conservation law would better enable the true vision for Te Urewera.

New conservation rules

The treaty settlement legislation, particularly the Te Urewera Act, begins to provide New Zealand with a model for how new conservation law, including national park law, could look. A starting point will be to amend the National Parks Act, because much of our native biodiversity lies in national parks, to include a reference to the Treaty of Waitangi (consistent with the Conservation Act) and recognise the importance of national parks not just for scenery, recreation and science but also for tangata whenua well-being. Further, the Wildlife Act 1953, the Native Plants Protection Act 1934 and aspects of the Conservation Act need to be reviewed and better integrated to provide for Māori engagement in biodiversity protection policy and practice, as well as better processes for traditional customary governance. The Ngāi Tahu Claims Settlement Act with its concepts such as tōpuni and the Te Urewera Act with its embracement of Tūhoe law are strong starting models demonstrating how respectful iwi and hapū management of lands, flora and fauna encased in the conservation estate could become the state norm. Within new rules could be weaved kawa, tikanga, mātauranga (Māori knowledge) and kaitiakitanga-based approaches to conservation and biodiversity protection and restoration.

We believe that recognition of and respect for tangata whenua 'ways of knowing and doing' within the New Zealand public are increasing. This growing appreciation is being facilitated across society, including in education, arts, the media and sports, with increased use of te reo Māori (the Māori language) and kapa haka (performing Māori arts). This trend is also becoming prevalent within environmental management, with recognition that tangata whenua seek the same outcome as all in New Zealand, which is flourishing native biodiversity supported within resilient and functioning ecosystems. The tangata whenua ethic of 'conservation for future use' is an end point that challenges current conservation law. Within that ethic, tangata whenua may also have different approaches to contribute towards that end goal than current conservation legislation prescribes and permits. Despite these differences, the time is now here for the government to embrace new rules for conservation that provide the opportunity for tangata whenua to fully engage in accordance with their rights and interests and goals.

Therefore, more enhanced approaches to biodiversity management supported by fit-for-purpose policy and legislation for Māori are needed to restore our biodiversity. Initial progress requires legislative amendments to increase and expand the way biodiversity is valued in New Zealand, and also to remove blocks to iwi and hapū engaging in biodiversity management in a manner that reflects core tangata whenua rights and interests, values and principles. Tangata whenua seek greater recognition and functionality of their mana within conservation policy and legislative processes. This emerges with rules that facilitate the rights and responsibilities of tangata whenua to set priorities and goals, identify issues, implement solutions and benefit from outcomes. New legislation is therefore needed to better facilitate the role of tangata whenua as a treaty partner (not merely a stakeholder), restore connections between iwi and hapū and environments, diversify value held in respect to biodiversity, and bring alternative approaches and capacity to conservation management.

We call for current conservation laws governing biodiversity management to be refreshed and refocused with this intent.

1 Department of Conservation concession at statistics sat http://www.doc.govt.nz/get-involved/apply-for-permits/managing-your-concession/concession-statistics/

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Keith Manch

What Does Good Regulatory Decision Making Look Like?

Introduction

This article addresses a key theme of regulatory activity – decision making – in the context of the Government Regulatory Practice Initiative (G-Reg).[1] This initiative has a broad focus on the improvement of regulatory practice and the development of the regulatory profession in New Zealand. In doing so, the article addresses decision making across regulatory systems. The term regulatory systems refers to:

- the end-to-end approach of government intending to influence or compel specific behaviour, including policy development;
- the design of instruments intended to achieve the intention;
- the implementation of those instruments;
- identifying and understanding the outcomes achieved; and
- assessing and reviewing the success of each of these components, as a whole.

This can be thought of as involving three main interrelated system phases: design, implementation and review.

The article discusses the mechanics, influences and principles involved in good regulatory decision making. First it deals with design and review, as those phases essentially set the context of implementation. Then it deals with implementation and how the advent of G-Reg creates the conditions for improved regulatory decision making in this phase. It concludes with a brief description of what we will see if regulatory decision making at an individual case, industry and system level is, in fact, 'good'.

The mechanics, influences and principles involved in good regulatory decision making – design and review

Decision making in respect to regulatory design and review happens first and foremost in the policy and political domain. While the shape and decision-making rights of different regulatory systems differ (sometimes significantly between regimes), broadly speaking regulatory regimes generally consist of:

- primary legislation (e.g. laws) – decided by Parliament;
- secondary legislation (e.g. rules, regulations, by-laws) – decided by Cabinet, ministers and/or local

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authorities, within the bounds of primary legislation;
- tertiary legislation (e.g. standards and codes) – which may be in the decision-making domain of ministers, Cabinet or (unelected) regulatory bodies (ministries, departments, Crown entities), but any decision making must in any event occur within the bounds of the enabling primary and secondary legislation.

Of course, the courts also play a role in design, review and implementation through the development of common law (case law), and through precedent-setting decisions. Court decisions inform the way regulation is implemented, and may also trigger the review and re-design of regulation.

Design and review decision-making frameworks

Much work has been done to support good regulatory decision making in respect to (initial) design and (subsequent) review of regulatory systems. For the purposes of this article, the most relevant products of that work are the Treasury's *Regulatory Impact Analysis Handbook* (Treasury, 2013) (the *Handbook*) and *Best Practice Regulation Principles and Assessments* guide (Treasury, 2012) (the Guide).

The *Handbook* is effectively the regulatory policy adviser's bible, with its stated purpose being to serve two benefits:
- enhancing the evidence-base to inform decisions about regulatory proposals – to ensure that all practical options for addressing the problem have been considered and that the benefits of the preferred option not only exceed the costs but will deliver the highest level of net benefit, and
- transparency – the presentation of agencies' free and frank advice to decision makers at the relevant decision points provides reassurance that the interests of all sectors of the New Zealand public have been considered. RIA [regulatory impact analysis] also aims to encourage the public to provide information to enhance the quality of regulatory decisions, to further inform the evidence-base. (Treasury, 2013, p.1.4)

Those familiar with the *Handbook* will know that it also includes a section on implementation, on the basis that it is important to consider practical implementation issues when key policy and design choices are made. The specific implementation considerations referred to include:
- administration issues, such as which agency will implement and administer the option and how it will function;
- timing and transitional arrangements: e.g. delayed or gradual introduction of new requirements, provision of interim assistance;
- compliance cost minimisation strategies: what implementation

Table 1: Best practice regulation principles and assessments guide

Attribute	Principle	Indicators
Growth Supporting	Economic objectives are given an appropriate weighting relative to other specified objectives	1. Identifying and justifying trade-offs between economic and other objectives is an explicit part of decision-making 2. The need for firms to make long-term investment decisions is taken into account in regulatory regimes where appropriate 3. Open and competitive domestic and international markets including minimising barriers to, and maximising net benefit from, cross-border flows are explicit objectives
Proportional	The burden of rules and their enforcement should be proportionate to the benefits that are expected to result	1. A risk-based, cost-benefit framework is in place for both rule-making and enforcement 2. There is an empirical foundation to regulatory judgements
Flexible	Regulated entities should have scope to adopt least cost and innovative approaches to meeting legal obligations	1. The underlying regulatory approach is principles or performance-based, and policies and procedures are in place to ensure that it is administered flexibly 2. Non-regulatory measures, including self-regulation, are used wherever possible 3. Decisions are reassessed at regular intervals and when new information comes to hand
Durable	The regulatory system has the capacity to evolve to respond to changing circumstances	1. Feedback systems are in place to assess how the law is working in practice including well-developed performance measurement and clear reporting 2. The regulatory regime is up-to-date with technological and market change, and evolving societal expectations
Certain and Predictable	Regulated entities have certainty as to their legal obligations, and the regulatory regime provides predictability over time	1. Safe harbours are available and/or regulated entities have access to authoritative advice 2. Decision-making criteria are clear and provide certainty of process 3. The need for firms to make long term investment decisions is taken into account in regulatory regimes where appropriate 4. There is consistency between multiple regulatory regimes that impact on single regulated entities where appropriate
Transparent and accountable	Rules development, implementation and enforcement should be transparent	1. Regulators must be able to justify decisions and be subject to public scrutiny
Capable Regulators	The regulator has the people and systems necessary to operate an efficient and effective regulatory regime	1. Capacity assessments are undertaken at regular intervals and subject to independent input and/or review

Source Treasury, 2012

strategies will be required, such as an education campaign, the use of electronic technology, form design, advisory services and testing with stakeholders? Is there existing regulation that can be reduced or removed to prevent overlap?;
- implementation risks and their potential impact on the effectiveness of an option: strategies for mitigating these risks should be explained;
- information that regulated parties will require in order to comply with the regulation, and how this will be provided (e.g. whether there is opportunity to rationalise or 'piggyback' on existing information sources or methods of communication);
- enforcement strategy: how compliance will be enforced, who will undertake this, whether there will be sanctions for non-compliance (e.g. warnings, fines, licence suspension, prosecution, and whether there will be gradations of sanction depending on the phase/severity of breach), the suitability of risk-based enforcement strategies.

The *Guide* (see Table 1) responded to a challenge posed in 2010 by the minister of finance to Treasury to answer three questions: (1) what is a best practice regulation? (2) how close are we to the frontier? and (3) what can we do to get closer?

Its principles[2] are used as part of the ongoing process of identifying potential improvements in regulatory regimes. As Treasury notes in the Guide (p.4):

> The principles and performance indicators should function as an initial diagnosis of potential for improvement within regimes – to shift closer to the best practice frontier – and to detect latent weaknesses that may result in regulatory failure. If an assessment against these principles indicated that there was an issue, then a further diagnostic would need to be undertaken which would be specific to the regime in question.

The *Handbook* and the *Guide* can be thought of as 'closing the loop' in terms of support for good regulatory decision making across the three phases of regulatory systems.

Key influences on design and review decision making

While the *Handbook* and the *Guide* provide advice which will support good regulatory design and review decision making, the actual decision making is influenced by constitutional and political issues. It is not the purpose of this article to address these issues in any depth, but, for the sake of context, a brief comment on each is helpful.

Constitutional conventions (which would be reflected in policy advice) guide the decision-making rights that apply as between the primary, secondary and tertiary regulatory instruments. In plain language, those who are elected to office get to make the high-level decisions. At this level the decisions are typically about whether, and broadly how, to intervene in our lives to address risks and opportunities and provide (net) public benefits. By contrast, unelected state servants and local authority officials implement what is intended. This is usually with specific or delegated powers and functions that explicitly seek to ensure that operational decisions are independent of the elected (political) decision makers, and often with significant discretion.

The political influences on design decision making are related to:
- the world view and policy preferences of the governing political parties;
- the mandate they have achieved through democratic elections;
- the political capital they have: that is, the trust, goodwill and influence the (governing) political parties and politicians have with the public and other political figures; and
- the ideas that arise through things such as engagement with business and academia, and emerging international practice.

G-Reg and the role of professional development in good regulatory decision making

Bearing in mind that regulatory design and review are primarily policy and political constructs, G-Reg has been careful to carve out its specific contribution to the improvement of regulatory systems as being related to the implementation phase.

Good regulatory decision making is a key part of implementation and a necessary part of exercising discretion as a regulator. The topic of exercising discretion was identified as one of five thematic issues of particular importance by the G-Reg Steering Group in its 2016 work programme.[3] It provided the theme for G-Reg's 2016 (Wellington and Auckland) conferences. An earlier version of this article underpinned the opening address at both.

Good regulatory decision making as part of the implementation of regulation requires:
- processes that support the effective collection, collation and analysis of information and facts (for example, intelligence, certification, audit and investigation processes);
- effective decision-making frameworks that provide for good regulatory decision making (for example, frameworks that enable risks to be considered, discretion to be applied and appropriate interventions to be imposed);
- people who have the capability to 'process' the information and facts in

Good regulatory decision making is a key part of implementation and a necessary part of exercising discretion as a regulator.

accordance with the decision-making frameworks; and
- organisations that are well led, with a culture[4] (norms, values and beliefs) that is appropriate to regulatory activity.

Professional development, in the G-Reg context, supports each of these elements directly or indirectly. It does this through its five themes of work which sit alongside the development of the regulatory compliance qualifications framework. This framework was developed to improve capability amongst those undertaking regulatory activities and to recognise expertise where it currently exists. The five themes are: the use of information; risk and communication of risk; the exercise of discretion; regulatory stewardship; and the future of the qualifications.

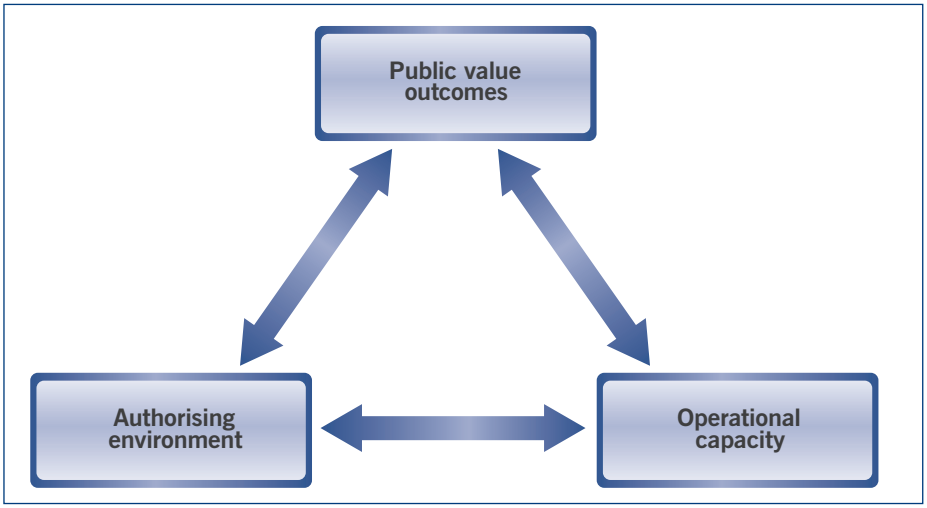
Ultimately, G-Reg's focus on regulatory practice and capability initiatives is intended to improve leadership, culture and workforce capability. This is intended to create the conditions in which good regulatory decision making can occur: essentially, 'professionalising' the regulatory workforce.

The mechanics, influences and principles involved in good regulatory decision making – implementation

Good regulatory decision making in the implementation phase occurs within organisations that are either:
- selected as part of machinery of government[5] decisions as being the appropriate existing organisations to implement the system; or
- put in place as part of the system design or review phases, to implement the system.

The machinery of government decisions are typically informed by advice provided in accordance with the requirements of the implementation section of the *Handbook*, discussed above. So, effectively the shaping of the boundaries of the regulatory decision making that is within the domain of the organisation (or statutory office holders within it) occurs as the policy intent is expressed through the development of the relevant legislative instruments. And legislative instruments are now much more likely than previously to provide guidance on matters of good regulatory decision making to those involved in regulatory implementation.

Figure 1: Mark Moore's strategic triangle of public value



Source: Moore 1995

As noted by Searancke et al.:

> Modern statutes convey much more information to regulators than in the past about their role and how they should perform it. In effect, regulators have always been able to exercise discretion. Modern statutes still provide for discretion, but are more informative in terms of how that discretion should be exercised. Discretion continues to be important, as the modern regulator needs to choose the most appropriate type of intervention (e.g. informing versus sanctioning) given the particular circumstances and based on evidence. This is not necessarily clear at the time a new regulatory regime is put in place or a new regulator is established. This is not just an issue of flexibility for the regulator. If implemented well, it should lead to the most effective and lowest (social) cost solution for the regulated. (Searancke et al., 2014)

Within these boundaries it is generally the case that regulatory decision making in the implementation phase is statutorily independent[6] of political influence,[7] but this does not mean that those engaged in that decision making should be politically naïve.

Considered in terms of Mark Moore's strategic triangle of public value (Figure 1), discussed by Bromell (2012), it seems apparent that even independent regulators should seek to ensure that their decisions and actions deliver the public value intended by the regulatory system. This should maintain the confidence of those in their authorising environment (democratically elected representatives, the private sector, the voluntary sector and the broader community).

This is a challenging issue to deal with operationally, which is discussed further below.

Decision-making frameworks

Unlike the examples discussed above relating to design and review – the *Handbook* and *Guide* produced by Treasury – the development of decision-making guidance and frameworks in the implementation phase has occurred with limited central direction and support.[8] The exception to this is the *Solicitor General's Prosecution Guidelines* (Crown Law, 2013), which are required to be followed but relate clearly only to one type of decision making in a regulatory decision-making context.

Other guidance material has been developed; for example:
- the *Achieving Compliance* guide (Compliance Common Capability Programme,[9] 2011), which is a broad-based guide which contains material relating to decision-making guidance, but is not focused primarily on that and has no 'formal' standing as a guidance document;
- the New Zealand Productivity Commission's *Regulatory Institutions*

Table 2: Guiding principles for decision making on compliance interventions

Decisions regarding Maritime NZ compliance interventions will take into account the attitude towards compliance and be:

- logical, timely and considered evidence-based
- made impartially and without fear, favour, bias, prejudice or improper motive
- sufficiently robust and well-documented to withstand judicial review
- proportionate to the risk posed by the non-complaint behaviour, and the attitude towards compliance
- consistent with the law, the public interest, Maritime NZ's policies and values, and any applicable international treaties.

Factors for consideration

The factors for consideration are set out in the table below. Application of these factors requires expertise and experience to be applied in the process of weighing up which compliance tools might be most applicable.

Extent of harm or risk of harm: This includes harm or potential harm to health and safety, security, and the environment. Actions that create risks but do not actually lead to harm occurring can still be serious and require a firm response.

From	• There's minimal or no harm or risk of harm. • Harm is, or would likely be, easily remedied. • Harm is, or would likely be, restricted in scale or effect. • There's significant or widespread harm or potential for such harm.
To	• Harm is actually or potentially caused to a vulnerable section of the community/environment.

Conduct: Conduct in this context means the behaviours, intent and capability of the person whose actions are being considered.

From	• It is first-time or one-off behaviour that is unlikely to be repeated. • The conduct is accidental or resulted from momentary carelessness or the result of a limited understanding of the law (where that is not inconsistent with the expectations of someone holding a maritime document). • Mitigating factors exist. • The behaviour is deliberate, reckless or involving consistent carelessness. • The conduct is repeated, ongoing or sector-wide. • There is a serious departure from expected lawful behavior by a maritime transport operator.
To	• Aggravating factors exist.

Public interest: Public interest can be described as something being in the interest of the wider public or of public importance. It is more than simply interest from the public or expectation from the public of action. Considerations include responsibility to victims, the need to clarify the law, and whether the matter at hand reflects a widespread problem that can be usefully addressed by highlighting the need for compliance.

From	• The conduct occurred some time ago and has ceased. • The legal principles involved are well-established and do not require clarification in court. • A decision not to act would undermine public confidence in the maritime transport system or a significant sector within the system. • The conduct involves a new or significant service to a large travelling public. • Action is necessary to clarify a grey area in the law.
To	• Action is necessary to deter others from similar conduct.

Attitude to compliance: Typically, the nature of the responses will be informed by, and tailored to, the attitude of individuals or groups involved towards compliance. This helps ensure that the intervention(s) chosen will have the desired effect. This does not prevent significant action being taken for other reasons, even when attitude is good.

From	• Willing and able to comply. • Willing but not able to comply. • Reluctant to comply. • Unwilling to comply
To	• Actively and intentionally non-compliant.

Available compliance interventions

Assessment against the factors above, and attitude to compliance, will support a decision about the best course of action. There is a continuum of possible interventions:

- from: an approach based on information, education and engagement to support and encourage compliance
- to: an approach (usually through investigation) that may lead to enforcement interventions such as infringement notices, improvement notices, warnings, imposition of detention or conditions and/or other civil or criminal action under applicable law.

More than one intervention may be appropriate and applied as a 'package' of interventions. For example, it may be appropriate to prosecute and also publish educational material for the general public in response to an incident raising serious safety concerns.

Source: Maritime New Zealand, n.d.

and Practices report (New Zealand Productivity Commission, 2014), which, again, has a broader focus than regulatory decision making but contains material very relevant to that, and, while it has been instrumental in driving the development of G-Reg, does not have any 'formal' standing as a guide to regulatory decision making;

- more broadly, the administrative law decision-making guide *A Judge Over Your Shoulder* (UK Government Legal Department, 2016), which is an important foundation.[10]

Overall, the development of G-Reg and its antecedents, as described by Manch et al. (2015), is a response to this gap in the level of central, coordinated and consistent direction and support in relation to many regulatory implementation issues.

Having said this, approaches to good regulatory decision making are coalescing. The advent of G-Reg is contributing to this. The relatively small size of New Zealand's state sector, and close relationships and common histories among people in the regulatory implementation field have been a factor. The engagement in New Zealand of a small number of well-known and highly regarded academic leaders in the field (such as professors Malcolm Sparrow, Arie Frieburg and Julia Black) has also played a part.

Thus we are seeing an emerging consistency of regulatory implementation decision-making frameworks. They are mainly underpinned by the key concepts of 'risk-based' and 'responsive' approaches discussed by the Productivity Commission (2014, pp.68-76), which support the implementation of regulation. Which example is used for illustration purposes is not critical in considering good regulatory decision making. They all tend to reflect similar factors and criteria, and they all form the basis for the exercise of discretion relating to decisions made.

The example that I am currently most familiar with is the approach taken by my own organisation, Maritime New Zealand, through our 'Policy on decision making' (Maritime New Zealand, 2016) and Compliance Operating Model and supporting documents.[11] In this context, there are three main things that support regulatory decision making. First, the 'Policy on decision making' begins by establishing its purpose, as follows:

> As a regulatory, compliance and response organisation our 'business' involves receiving information, considering that information, making decisions and taking action. Decisions are made and actions taken by people

according to their job responsibilities and accountabilities (general decisions), and in many cases delegations (statutory decisions), under the laws that provide authority to Maritime NZ and its staff.

This policy is intended to support good decision making, in support of better outcomes in respect to our focus on safe, secure and clean seas and waterways.

The policy then touches on the importance of taking good advice (legal, technical, policy) and acting in good faith according to Maritime New Zealand's statutory mandate. It outlines key factors in good decision making (context, facts, advice, costs and benefits and risks), as well as foundation issues such as having the appropriate authority (delegation) and competency, and applying professional judgement and discretion.

The policy is clear that advice received by the decision maker must be considered carefully, but the advisers do not make the decisions. The intention of this is to ensure that our decision makers understand that good regulatory decisions require discretion and a focus on overall outcomes rather than being framed by specific or narrowly defined perspectives. This can be a source of tension should the advice provided not all be followed.

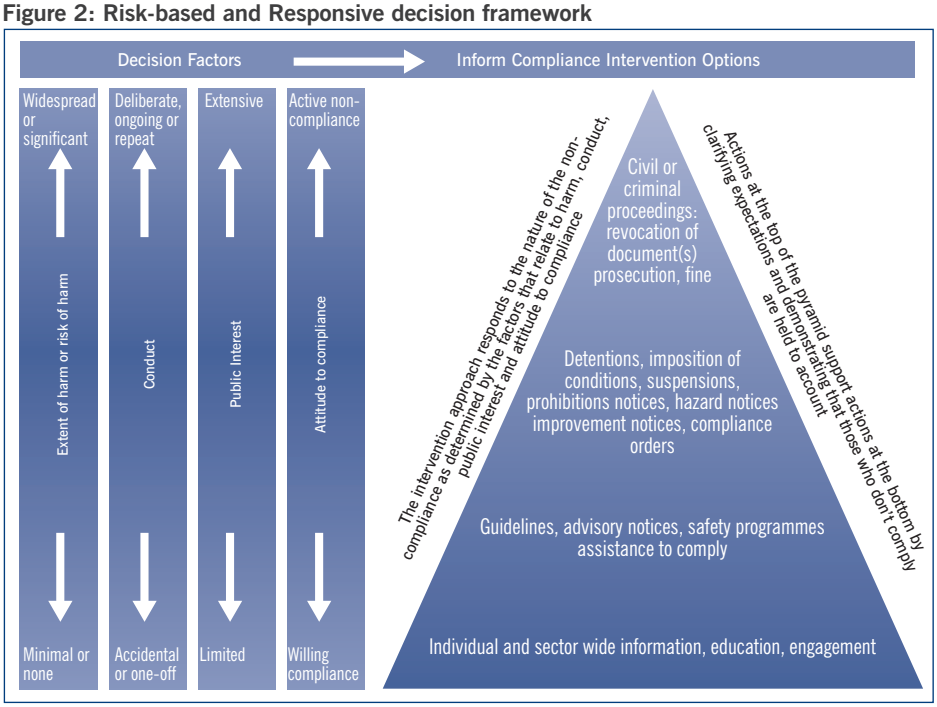
The policy on decision making has broad application across all regulatory decisions, including

- licensing, certification and approvals ('entry' control);
- audits and inspections ('monitoring' activity); and
- investigation, prosecution and administrative actions ('accountability and exit' activities).

The extent to which discretion can be applied can vary across these different types of regulatory and compliance activities depending on the prescriptive (or not) nature of the underpinning legal requirements.

Noting that there are often group or collective processes involved in regulatory decision making (see below and the reference to Maritime New Zealand's compliance intervention panel), the policy also comments on the importance of the decision maker retaining responsibility for the decision. Finally, it notes the importance of using established decision-making guidelines, where they exist.

Figure 2: Risk-based and Responsive decision framework



Source: Maritime New Zealand, Undated

This brings me to the second of the decision-making frameworks: the guiding principles for decision making on compliance interventions (part of the Compliance Operating Model). These enable assessment of risk-based decision factors to identify the appropriate responsive interventions (Table 2, and represented in a graphical form in Figure 2). As such, while the guiding principles apply across 'entry', 'monitoring' and 'accountability and exit' activities, the 'factors for consideration' are more attuned to 'monitoring', 'accountability and exit' activities specifically.

Operational decision-making frameworks such as these are similar to the *Handbook* and *Guide* discussed above in that they provide analytical frameworks that allow discretion to be applied, but in a consistent fashion across different matters. Essentially, they allow the same factors to be weighed up in relation to different factual situations so that the decision-making process takes account of risk, and considers what the most appropriate response is, to address the matter at hand.

This framework is supported by a compliance intervention panel (the standard operating procedures for which are also part of the Compliance Operating Model). This panel provides guidance, direction and advice regarding courses of action to be followed in responding to compliance issues. While it is intended to support a robust, consistent and proper operational decision-making capability, it does not replace the need for statutory decisions that require formal delegations to be made by the holders of those delegations.

The third necessary element relates to delegations. Commonly, the law relating to the decisions that are being made will specify who has the decision-making rights (often the chief executive or some form of statutory office holder), and allow for decision making to be delegated. Decisions about delegation are usually made by considering matters such as:

- the ability to specify the scope of decision making;
- the significance of the impact of the decisions to be delegated (for example, in respect to people's rights and obligations);
- the capability and capacity of those who might receive delegations (do they have the required knowledge and experience); and
- the efficiency and effectiveness of decision making (to optimise this, does it rely on an ability to make decisions in a particular time frame or at a particular phase).

Table 3: Better practice checklist: accountable decision making

Better Practice Checklist: Accountable Decision Making

Delegated decision-making

- The delegation of decision-making authority is consistent with legislative requirements and any public-service or organisational directives.
- Procedures for exercising delegated authority are documented and staff are trained in applying them.
- The exercise of delegated authority is monitored and subjected to quality-assurance processes.

Exercising discretion

- The agency has clearly stated principles and values that guide the exercise of discretion.
- A decision-making framework document specifies what decisions need to be made, by whom, and when.
- Decision makers understand relevant legal requirements so that their decisions can withstand legal challenge.

Source: Compliance Common Capability Programme, 2011

Achieving Compliance (Compliance Common Capability Programme, 2011) discusses delegation (and discretion) in a chapter relating to accountable decision making, and provides a simple better practice checklist (Table 3) that addresses both delegation and discretion.

Key influences on 'implementation' decision making

While decision-making and delegation frameworks are important, there are other factors at play that have a big influence. Just as constitutional conventions and political influences shape decision making at the design and review phases, there are significant influences at the implementation phase that must be considered. They are strongly interrelated and include the importance of:

- delivering public value;
- calibrating effectively the approach to risk;
- maintaining a clear focus on the purpose of the regulatory system; and
- ensuring that the incentives that exist in performance management systems are aligned with the desired regulatory outcomes.

Delivering public value

While decision making in the regulatory implementation phase is usually, for good reason, independent of political involvement, overall it must deliver public value. As noted above, a crucial element of this is having an effective authorising environment (through maintaining the support of democratically elected representatives, the private sector, the voluntary sector and the broader community). There are two good reasons for this. The first is that, as every regulator knows, the ability to succeed in delivering desired regulatory outcomes is heavily affected by the overall attitude of the industry or sector being regulated and the confidence there is in the regulator. The second is that the continued existence of a regulatory agency depends on government and Parliament having confidence in it to deliver the outcomes desired by the regulatory systems in which it operates.

Taken superficially this could be read as suggesting that regulators are subject to political interference in the way they do their work and make their decisions. A better way to think about it is that regulators' continued existence is subject to the views that democratically elected decision makers have about the body of the regulator's work and decisions in terms of whether or not that is delivering public value.

The influence this has isn't, in my experience, felt in day-to-day operational decision making. It does, however, encourage careful attention over time to the quality of decision making. This includes the careful use of discretion and focusing on the outcomes that are intended by the law for which the regulator has responsibility. In this context, it remains critical that regulators continually have regard to what their statutes say about their role and how they should perform it, as discussed by Searancke et al. (2014).

Approach to risk

A significant influence on regulatory decision making in the implementation phase is the approach to risk. Risk is an all-pervasive issue for regulators. Regulatory systems themselves are risk-management systems. Within those systems, decisions about which risks to focus on are always necessary, as no regulator has the resources to deal with everything that is possibly within their legal mandate. Making a decision to focus on one set or area of risks over another creates risks both to achieving the desired outcomes, and in terms of the regulator's reputation for not dealing with something, or conversely focusing too much on something else.

As Quarmby (n.d.) notes, 'regulation permeates the world of vested interest, representative groups, and lobby groups; all of whom generate political and legal scrutiny over the decisions made by regulators'. He also touches on another matter that can undermine good regulatory decision making. That is how regulators may respond to reputational risks by either not applying discretion (we will look bad if we apply discretion and something goes wrong), or, where it is within their power to do so, by requiring more detailed controls (we can't trust them to do anything right so we should prescribe everything). The result of this is that the risk to be avoided becomes regulated parties not adhering to the black-and-white letter of the law, or the increased controls, in the strictest possible way, instead of the risk of the desired outcomes not being achieved.

This would not be a problem if regulatory frameworks were able to specify detailed requirements that met every possible situation, in dynamic industries and sectors, in a way that only prevented harms, without interfering with reasonable behaviours. We all know that that will never happen. It is easy for

regulators to get lost in this milieu, so careful attention needs to be paid to it.

Focus on the purpose of the regulatory system

In addition to calibrating effectively the focus on risk, it is important to consider carefully the purpose of the regulatory system in respect to matters such as 'who is intended to benefit' and 'how to engage'. I was fortunate recently to see the products of some internal discussion within the New Zealand Transport Agency (2015, pp.4, 11) as part of its regulatory capability improvement activity. People in the agency were encouraged to engage in 'thought-provoking discussions' relating to regulatory issues.

Part of this material underpinned the challenges associated with what might be thought of as the quite simple idea of defining regulated parties as 'customers' in order to drive good-quality engagement. While customer service principles remain relevant to good regulatory practice, it is important to think about the actual nature and purpose of the relationship regulators have with regulated parties. It is primarily one of supporting, encouraging and requiring them to do things they might not otherwise do (as opposed to delighting them by providing what they want). The following extracts from this material capture well the importance of thinking carefully about the purpose of the regulatory system in the context of such issues.

> One of our guiding principles as an Agency is putting the customer at the heart of everything we do – from the way we design and build roads, to how we handle calls to the contact centre, to the process we use to set and interpret rules.
>
> This is a really neat idea. We give New Zealanders what they want, when they want it, and in a way that they want it, which makes them more likely to be compliant. Legislation that works for people, rather than restricts them. Easy, right? But what if what our customers want isn't actually the right thing? Where is the tipping point where doing something for the customer compromises our role as regulators?[12]

As part of a project last year, we went out and tested six or seven different text messages and three different layouts for email reminders that customers might receive to encourage them to pay their vehicle licensing (rego) 'on time and online'.

The message that we internally thought would be a winner, and which our customers loved, was the 'A friendly reminder from NZTA' message. It was positive, friendly and had all the relevant information for people to renew their 'rego' on time and online.

When we went out and asked our customers what they thought would encourage them to pay on time and online, 60% of our customers chose this message over the others which made it a clear winner from a customer service point of view.

But when we trialled the messages in an online pilot to measure the behaviours of our customers once they received these reminders, the message that was most successful, was the message customers least 'approved' of. The 'Avoid a fine, pay on time' message. This message was the preferred option for only 6% of our customers, but had a huge impact in encouraging customers to comply both on time and online. This is because what we had tapped into was our customers' drivers and motivations and understood best how we could 'manipulate' them to comply.

'Avoid a fine, pay on time' isn't going to win any customer service awards but what it did do was help increase on time compliance within the trial from 50% to 75% and increase people paying online from 32% to 62%. These are both regulatory objectives.[13]

Performance-management systems

Various people have been credited with the phrase 'what gets measured gets managed'. Regardless of its origins, it is a reality that applies to the implementation of regulatory systems as much as any other enterprise. This reality underpins the importance of getting the measures right, in respect to the purpose of the system, with an appropriately calibrated understanding of risk.

The tendency of measurement systems is to default to things that are easy to measure and that demonstrate efficiency, often because it is simply too difficult to measure outcomes. A good example, also discussed by Quarmby, is in the area of licensing and certification. Focusing on processing times can be quite inconsistent with the purpose of such activity, which is to examine the capability or suitability of someone to exercise privileges granted by a regulatory system. Timeliness must be subordinate to quality in such decision making. This is not an argument against efficiency measures, but for inclusion of them in an appropriate way that does not derogate from the intended purpose of the activity.

> '…regulation permeates the world of vested interest, representative groups, and lobby groups; all of whom generate political and legal scrutiny over the decisions made by regulators'.

So, what does good regulatory decision making look like?

As shown in Table 4, good regulatory decision making can be thought of at four levels: in respect to victims, individual cases, sectors or industries, and regulatory systems.

In respect to victims, good regulatory decisions will:

Table 4: What good regulatory decision making looks like

Victim	Individual	Sector/Industry	System
Treated fairly, respectfully with courtesy and compassion	'Risky' behaviour stopped	General deterrence supported	Regulatory system development informed
Well informed of progress of complaint	Compliant behaviour supported	Standards supported	Respect in system/ regulator engendered
Victims views, effects and impact of offending understood and acknowledged	Held to account	Standards Improved	Trust in government supported

- meet the requirements of the Victims' Charter, ensuring that victims are treated fairly and with respect, courtesy and compassion;
- ensure that victims are well informed of the progress of their complaint; and
- ensure that their views, including on the effects and impacts of the offending, will be understood and acknowledged.

At the individual case level a good decision is one that identifies the most appropriate intervention to do one or all of the following:

- stop risky behaviour;
- encourage compliant behaviour (both in respect to the individual person or organisation concerned, and in respect to the 'messages' that action sends to others);
- where appropriate hold someone to account for their actions.

At the industry or sector level a good decision is one that:

- sets or supports standards;
- engenders respect in the regulator; and
- encourages high levels of voluntary compliance.

In respect to the regulatory system, a good decision is one that:

- highlights strengths and weaknesses in the system; and
- provides information that is used to improve and evolve the system.

Overall, good regulatory decisions will deliver public value.

Conclusion

The intent of this article was to explore matters relating to good regulatory decision making. It doesn't break new ground, except perhaps by seeking to articulate a clear framework to judge what good regulatory decision making might look like in an overall sense (Table 4), but brings together a number of aspects that will be known individually or collectively to readers who work in the regulatory field.

The scope of things that affect good regulatory decision making is broad and different in various phases of regulatory systems, but with common threads, such as dealing with risk and ensuring that the benefits of regulatory activity outweigh the costs. Other common features are the need for clarity of decision-making rights, effective policies and workable frameworks to guide and support advisers and deciders. The article seeks to 'put it all together' as part of the continuing process of developing a shared view of key aspects of regulatory practice that is important to developing this as a professional enterprise.

1 The Government Regulatory Practice Initiative (G-Reg) primarily has an operational, not policy, focus and seeks to lead and contribute to regulatory practice and capability initiatives where collective action can be shown to be helpful. It works on actions that improve leadership, culture, regulatory practice and workforce capability at the operational level in regulatory organisations and systems. While not the primary purpose, improvement in these areas will enable operational regulators to contribute more effectively to improving regulatory policy development.

2 The government has just released a refreshed set of 'Government Expectations for Good Regulatory Practice'. These expectations overtake, but with some selectivity and refinement draw significantly on, earlier principles in documents such as the *Guide*. They address the design of regulation and regulatory stewardship, including providing specific expectations in respect to good regulator practice. As part of its 2017 and beyond work programme, G-Reg is undertaking work to support regulatory practice agencies to engage with and operate in accordance with the refreshed expectations. They are available at: http://www.treasury.govt.nz/regulation/system/strategy.

3 The G-Reg work programme was signed off by the G-Reg chief executive oversight group at its meeting on 4 May 2016.

4 The New Zealand Productivity Commission discussed the importance of regulator culture and leadership in chapter 4 of its report into regulatory institutions and practices (New Zealand Productivity Commission, 2014).

5 The State Services Commission describes 'machinery of government' as referring to the structures of government and how they work. It includes the changing set of organisations within government, their functions and governance arrangements, and how they work together to deliver results for ministers and the public (State Services Commission, 2016).

6 Decision making is generally either expressly statutorily independent and undertaken by statutory office holders, or, where vested by statute in ministers, is required to be performed independently of political considerations.

7 The nature and degree of independence is a function of statutory provisions and organisational form: for example, compared to ministries and departments in which state servants may have independence conferred by specific provisions in law, Crown entities have varying degrees of independence (as Crown agents, autonomous or independent entities) alongside similar legal provisions.

8 As noted in endnote 2, new expectations for good regulatory practice published by the New Zealand Government do provide greater central direction and support to implementation activities than has been the case in the past, some of which focuses on decision making.

9 The Compliance Common Capability Programme is the predecessor to G-Reg.

10 *Judge Over Your Shoulder: a guide to good decision making* was first published in 1987. The fifth edition was released by the Treasury solicitor and permanent secretary of the government legal department in the UK in 2016.

11 The Compliance Operating Model is made up of a compliance strategy, compliance intervention guidelines and the compliance intervention panel standard operating procedures, available at http://www.maritimenz.govt.nz/about/what-we-do/compliance/compliance-model.asp#overview.

12 Contribution from Luke Bailey.

13 Contribution from Damien Le Breton.

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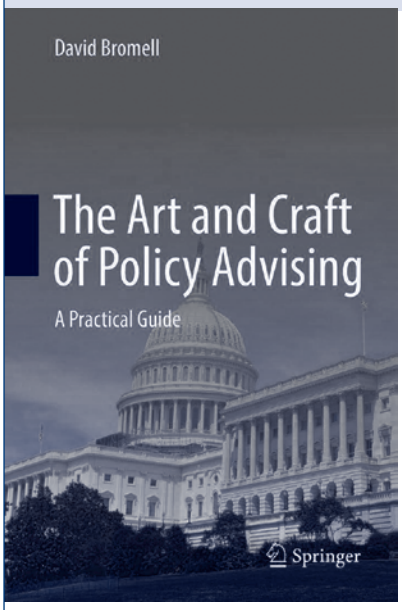

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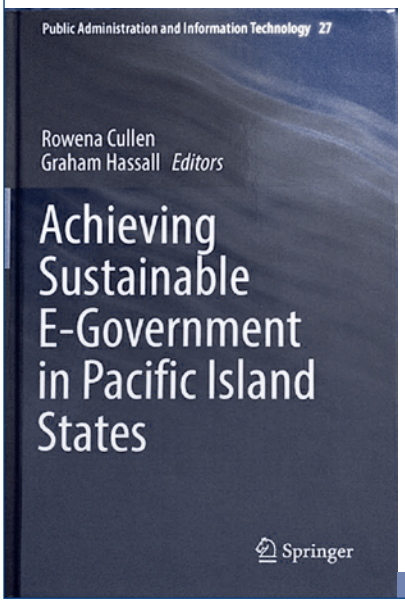

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Mary Anne Thompson, Philippa Howden-Chapman and Geoff Fougere

Policy Changes: Kiribati migration and settlement

Introduction

This article examines how policy changes at a range of levels could improve decision making by and initial settlement outcomes for Kiribati migrants, a relatively new migrant group to New Zealand. It draws on recent research, based on in-depth interviews, on the settlement experiences of Kiribati migrants and their families living in New Zealand (Thompson, 2016). The first section examines how minor changes to existing operational policies under the Pacific Access Category (PAC) could improve migration decision making and enable new migrants to search for and find employment in a more efficient manner. The second section examines the efficacy of the current PAC quota for Kiribati, given the demographic, economic and environmental vulnerabilities facing it. Looking to the future, the last section explores the need for a longer-term strategic approach to policy formation relating to climate change and migration with special reference to Kiribati.

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Minor changes to PAC operational policies

There is general acceptance among academic researchers that migration is a dynamic response to a range of interlinking factors, including economic, social, environmental and political influences (McLeman and Smit, 2006; Bedford and Bedford, 2010; Perch-Nielsen et al., 2008; Samers, 2010). These and other issues, such as demographic factors, conditions in the home country of migrants, and immigration policy settings for potential destinations have

been recognised as influencing the decision of citizens to move or stay (King, 2012; Lee, 1966). This complexity was corroborated by Kiribati migrants living in New Zealand, with their decision to migrate inextricably linked to a mix of positive expectations about life in New Zealand and negative views about the future of Kiribati (Thompson, 2016).

Fourteen Kiribati migrants (eight women and six men), representing 91 members of the Wellington Kiribati community (7.5% of the total Kiribati population in New Zealand born in Kiribati and 30% of the Kiribati-born population living in the Wellington region), were interviewed about their settlement experiences in New Zealand (Statistics New Zealand, 2014). The common view of the participant group was that they could provide their children with a 'better life' in New Zealand compared to what they might expect if they remained in Kiribati. This was typically denoted in terms of their children having access to fresh fruit, safe drinking water, a clean environment, good education, and high-quality health services.

Although there was broad agreement among participants that these expectations were largely met, half of the men and all of the women with the exception of one (led predominately by those who had never travelled out of Kiribati before coming to New Zealand), were embarrassed at their naivety in believing that they would be provided with free housing and jobs to kick-start their settlement in New Zealand. It was in the context of these settlement 'shocks' that many women recalled thinking about returning to Kiribati. A number of cultural sensitivities were indicated as contributing to the poor exchange of information about life in New Zealand. For those seeking information, this included wariness about their questions being viewed by family and friends living in New Zealand as prying into their private lives, or being perceived as an indirect way of asking for settlement assistance. For those providing information, the lack of rich information could be attributed to reluctance in telling their relatives about to migrate to New Zealand that they were experiencing difficulties, as to do so could suggest that they were unable to assist new migrants with their settlement.

The inability of many Kiribati migrants to obtain good information from their social networks living in New Zealand led to a reliance on a range of informal information sources, such as magazines, movies and, more recently, what they could glean from the internet. Unlike refugees entering New Zealand, who are provided with information about key settlement issues, such as housing, employment, social services and social values, Kiribati migrants (as with all other voluntary migrants) are expected to gather their own information about life in New Zealand.[1] While the difference in approach between refugees and voluntary migrants can be understood (given the high needs of refugees), a case can be made that the lack of accessible settlement information for those migrating under the PAC is at odds with the targeted nature of this immigration programme. As with refugees, those Kiribati migrants who formed unrealistic expectations were found to have experienced detrimental shocks and a sense of loss of control, resulting in poor initial settlement outcomes (Simich, Beiser and Mawani, 2003; Fanjoy et al., 2005).

These findings suggest that access to good information would lessen the shock, anxiety and stress experienced by many Kiribati migrants and their families arriving under the PAC. Research suggests that the provision of settlement information would be particularly helpful for Kiribati women, who were significantly disadvantaged compared to most Kiribati men because of their much lower likelihood of having previously travelled out of Kiribati. Information, written in the Kiribati language, on the cost of living, employment and the private rental housing market would go a long way in assisting new migrants to gain a better appreciation of what life would be like in New Zealand. This information could be provided by the High Commission in Tarawa to inform those considering migrating to New Zealand. Improved information on the operational aspects of the cash economy, which plays a smaller part of the economic lives of its citizens in Kiribati, would mitigate many of the settlement shocks experienced by these migrants (Thompson, 2016).

In addition to the role of information, another area worthy of further scrutiny concerns operational policy settings under the PAC relating to employment. While it is widely recognised that employment is one of the most important determinants of settlement outcomes (Beckhusen et al., 2012; Colic-Peisker, 2002, 2003; Burnett, 1998; Henderson, 2004), research on the settlement experiences of Kiribati migrants living in New Zealand suggests that current operational policy settings could be improved, enabling new PAC migrants to enter the labour market more efficiently (Thompson, 2016). Kiribati migrants coming to New Zealand under the PAC identified a number of policy obstacles standing in the way of them obtaining offers of jobs utilising their skills.

One of the most common complaints raised by Kiribati migrants was the pervasive lack of recognition by New Zealand employers of the PAC immigration programme and the fact that

Pacific Access Category policy

The Pacific Access Category is an immigration programme that enables citizens aged between 18 and 45 years from Fiji, Tonga, Tuvalu and Kiribati to register for an annual ballot. Those who are successful in the ballot are invited to apply for residence on the basis that the principal applicant or their partner obtains a job offer of full-time work that is for 12 months or more, pays enough to support them and their families to live in New Zealand (the income threshold is currently set at $33,500 per year), and must be able to read, write and speak English. Applicants must be of good character and be in good health to be considered for residence.

those approved for entry under the PAC have the right to work in New Zealand, subject to obtaining a satisfactory job that meets certain criteria.[2] As a result of employers not understanding how the PAC operated, employers with vacancies were unwilling to offer jobs to Kiribati migrants (who were typically searching for jobs while on a visitor visa) if they did not hold a current work visa. This had the effect of Kiribati migrants applying for standard work visas, only to have their applications declined due to labour market tests indicating the availability of New Zealanders to work. This confusion resulted in many Kiribati migrants repeatedly applying for work visas, leading to increased transaction costs and raised levels of stress and anxiety for migrants and their families. These difficulties could have been avoided if Kiribati migrants were provided with a letter from Immigration New Zealand that they could show employers, outlining that they there entitled to search for a job in New Zealand that met specified PAC criteria.

Despite the fact that the PAC has been in operation for over 15 years, the lack of a policy connection between work visa policy and the PAC led to an undue dependence by new Kiribati migrants on personal networks, such as family and friends, typically resulting in their congregating in low-paid service industries. A large part of the problem for those Kiribati migrants with specific industry skills was the unwillingness of New Zealand employers, who wanted their skills, to invest their time and resources in assisting these migrants to apply for work visas. In particular, employers in the marine industry communicated to those Kiribati migrants with industry-recognised skills that they did not want to commit time and effort to a process they perceived as being overly complex and unlikely to yield positive results. In other words, the marine industry did not think that Kiribati workers would be successful in their applications for work visas.

This led to all those participants, or their partners, with marine industry skills having to take any job, as long as it met the requirements for gaining permanent residence. As a result these migrants took on jobs as cleaners and supermarket stackers, and only moved into employment utilising their skills once they had gained permanent residence. While this two-step employment process could be considered as par for the course for new PAC migrants, it raises serious concerns about the unintended consequences of less than adequate operational policy settings. Indeed, rather than them being facilitative, those migrating under the PAC are forced to negotiate their way through disconnected policy streams. A number of options could be considered to improve these operational processes, including, as noted above, providing new PAC migrants with a letter outlining the intent of the PAC that they could show employers, providing PAC migrants with open work visas, and eliminating the labour market test given that these migrants are using these jobs as a pathway to residence.

Another policy area under the PAC worthy of consideration is the operational instruction allowing only the principal applicant (the person who registered for the PAC) to come to New Zealand to search for a job. While this may be intended to ensure that whole families do not migrate to New Zealand without having some assurance of their ability to obtain work, this operational practice could be viewed as being unreasonable given that the partner of the principal applicant may have higher skills, and that for families with dependent children, both adults are commonly required to obtain jobs to meet the annual income threshold set under the PAC. With this, a defined time period for migrants to complete the immigration process, and the practice of having to apply for work visas on multiple occasions, it was not surprising that the process of obtaining job offers was indicated as one of the most stressful experiences of their settlement.

Another policy area under the PAC worthy of consideration is the operational instruction allowing only the principal applicant (the person who registered for the PAC) to come to New Zealand to search for a job.

Recommendations for operational policy changes under the PAC

These findings suggest that minor changes to existing operational policy settings under the PAC have the potential of making the process significantly easier for new migrants. Small modifications, such as raising awareness among New Zealand employers of the PAC, and providing new migrants with a letter from Immigration New Zealand, would go a long way to obviating the requirement imposed by many employers that PAC migrants hold a work visa to obtain a job offer. These changes would also reduce the inefficient process of PAC migrants applying for work visas, only for their visa applications to be declined due to not meeting the labour market test. While the requirement to meet the labour market test may be viewed as a reasonable obligation, the fact that PAC migrants will eventually compete with New Zealanders after they obtain their permanent residence visa suggests that this process is simply delaying competition with other New Zealanders. On this basis, it could be argued that it would be most beneficial for PAC applicants and their partners to be provided with open work visas, enabling new migrants to move into jobs utilising their skills. This would reduce the current practice of new PAC migrants taking on any job that met labour market requirements, only to then move into subsequent employment of their choice once they gained permanent residence status.

As noted previously, this reasoning is based on the rationale that, as a specific immigration programme, operational policy should support and facilitate the intent of the PAC, rather than encumber the efficient connection of migrants to the labour market. Fine-tuning operational policy would not only streamline how new PAC migrants entered the labour market, reducing costs for employers, but also ease settlement costs for migrants. Another area for policy consideration would be to allow the partner of the principal applicant to join them to search for work together and to make informed decisions about where they want to live. This would reduce transition costs by mitigating the need for migrant families to be separated if the partner finds work in another region, or families having to relocate and for the principal applicant to have to start the search for work again.

Overall, although policy settings typically involve a balance between being facilitative and reducing risks, this investigation underlines that policy settings are only as good as how well they work in the real word. This is not intended to imply that PAC operational policies need to eliminated and replaced, but rather that small changes to existing policy settings have the capacity to improve labour market and settlement outcomes for Kiribati migrants, and other PAC migrants.

Policy changes to parameters of the PAC

At a higher policy level, a pertinent question that arises is whether the existing PAC quota of 75 places per year (this relates to 75 people, including the principal applicant, partner and dependent children) for Kiribati is still appropriate. The small size of the Kiribati ethnic population in New Zealand in 2000, when the PAC policy was being developed, suggests that the size of the quota may have been prudent, but other factors have emerged to challenge the appropriateness of the quota today. The first factor relates to the fairness of the quota, given the size of the Kiribati population relative to that of other PAC countries. Without implying the need to reduce the size of quotas for other countries, with its estimated population of over 114,000 in 2016, the quota of 75 places for Kiribati under the PAC seems particularly restrictive compared to the 250 places allocated to Tonga, with an estimated population of just over 106,000 in 2016, and 75 places allocated to Tuvalu, with a population of 11,000 (World Population Review, 2016; Bedford et al., 2016; Bedford and Bedford, 2010).

A second factor is the growth of the Kiribati ethnic population in New Zealand, from 540 in 2001 to 2,115 in 2013 (Bedford and Bedford, 2010; Statistics New Zealand, 2014). Although still very small compared to many other Pacific ethnic populations in New Zealand, the increase in the Kiribati ethnic population indicates a greater capacity of this group to absorb new Kiribati migrants and their families settling in New Zealand. This is supported by research showing a strong inclination by family, friends and the wider Kiribati community to assist and support new migrants to adjust to their new environment (Thompson, 2016). Some examples of assistance typically provided to new migrant families during the initial stages of their settlement include: providing accommodation by taking them into their homes upon their arrival in New Zealand; helping them search for jobs; supporting them to access education and other social services; and facilitating them to establish their own independent households. Over the longer term, these networks also played a critical role as back-up to families in times of adversity and unexpected financial hardship.

Lastly, the high level of environmental and economic vulnerabilities facing the people of Kiribati raises questions about the efficacy of the size of the PAC quota for this atoll nation. Despite research confirming that atolls are dynamic, adaptive and resilient structures (Webb and Kench, 2010; Woodroffe, 2008), concerns have been raised about climate change and other anthropogenic impacts on the viability of vital socio-environmental systems necessary to sustain the population of Kiribati (Kelman and West, 2009; White and Falkland; 2009). Detrimental influences, such as progressively more powerful sea surges resulting in coastal erosion and overtopping of the land, prolonged episodes of drought, and increasing sea temperatures, combined with untenable population densities in Tarawa, high levels of pollution, widespread poverty and poor health outcomes (particularly for children), suggest that an increase in the PAC quota for Kiribati, based on vulnerability, would be highly appropriate.

At an even more general policy level, developed countries like New Zealand can be expected to come under increasing political pressure to respond to the issue of climate change-induced migration in the Pacific, ...

Strategic policy development: climate change and migration

At an even more general policy level, developed countries like New Zealand can be expected to come under increasing political pressure to respond to the issue of climate change-induced migration in the Pacific, especially with regard to the two atoll countries which have PAC quotas. However, in this case there is no established policy to policy to change or respond to. Rather, policy development on how to recognise and protect those citizens who may eventually be forced to migrate due to climate change has been characterised

by an absence of international agreement and policy formation. The lack of progress on this issue can be attributed to a number of complex issues, ranging from the largest greenhouse gas emitters seeking to avoid becoming liable for the costs of protection, to the reluctance of countries to develop policies in the absence of an international framework. The lack of a precise definition of what determines a citizen as needing protection as a result of climate change impacts is at odds with the precise definition of who can be considered a 'refugee' (Limon, 2009; Knox, 2009; Biermann and Boas, 2010). This does not mean that climate change-induced migration will not occur, but rather that currently it would do so in a legal and policy vacuum, resulting in policy risks both for those countries whose citizens may be forced to migrate, and for those countries, such as New Zealand, which will be expected to respond to increased pressure for alternative places for residence, especially for atoll dwellers.

Adding to this complexity, countries such as Kiribati are likely to face an ongoing struggle to convince other countries of an association between climate change and migration. While the prospect of whole populations having to relocate due to the disappearance of atolls as a result of increased sea levels may be relatively easily understood, the hypothesis advanced by McAdam (2012) that migration will occur not simply as a consequence of climate change, but from the interaction of slow-onset climate change influences and existing vulnerabilities, is likely to be significantly more difficult to grasp. For those countries, such as New Zealand, which will be expected to assist, this complexity means that they may not be in a position to recognise rising risks to the socio-environmental systems necessary to sustain the Kiribati population. While increased investment in research on climate change and existing vulnerabilities may go a long way in improving our knowledge base of what is happening in Kiribati, the absence of a strategic policy framework on climate change and migration still poses risks for New Zealand.

Although it is understandable that New Zealand would be reluctant to be seen as a 'first mover' in the formation of policy on the protection of 'forced' climate change migrants, the absence of at least some preliminary thinking runs the risk of New Zealand having to respond in the longer term to a high level of humanitarian crisis in an ad hoc fashion. Such a response presents risks to future governmental administrations and to New Zealand society, which will increasingly have to shoulder costs related to housing, employment and other forms of assistance. This is not intended to suggest that there is a need to develop a full and detailed policy now, but rather that it would be beneficial for some policy thinking to be started on this ongoing and complex issue. While New Zealand should continue to encourage efforts by Kiribati to mitigate and/or adapt to climate change impacts, there is also a need to be realistic about the many risks and constraints facing Kiribati.

It is with this in mind that it is argued that more could be done to open New Zealand labour market opportunities for Kiribati citizens via temporary work programmes (Bedford and Bedford, 2010) and an increase in the PAC quota. Over the longer term, an increase in the PAC quota for Kiribati would provide an important immigration outlet for Kiribati citizens, allowing for an 'orderly' increase in the migrant population (Bedford et al., 2016). This would in turn enable increased levels of Kiribati migrants to be successfully absorbed by an increasing Kiribati ethnic population in New Zealand. While this argument may be viewed as being currently unnecessary, and perhaps premature, it underlines the importance of policy thinkers looking to the future, no matter how difficult that may be. Indeed, the more complex the issue, the more lead time is required for enquiry, debate and discussion to be had on possible responses.

Conclusion

Policy settings have a major influence on the decisions people make with regard to overseas migration, or, in the case of refugees, to avail themselves of protection provided. As such, migrants and refugees do not enter their new host countries in a policy vacuum. Rather, they are enveloped not only by the policy settings of the day, but also by the social attitudes of their host societies. Across the policy spectrum, changes to existing policies and the formation of new policy thinking on the complex subject of climate change and migration all deserve attention by policy thinkers seeking to improve both short-term and longer-term outcomes for Kiribati migrants and New Zealand society.

1 Although Immigration New Zealand provides a significant amount of information to assist new migrants and much of this is available electronically, Kiribati migrants are likely not to know where to look for this information. Another constraint may be the difficulty of new migrants in fully understanding what is meant by the information due to lack of language proficiency.

2 Those invited to apply for residence need to provide evidence of a current offer of full-time work that is for 12 months or more. This offer can be for either the primary applicant or their partner. Those with dependent children will also need to show evidence that they and their partner will earn $34,500 or more between them each year.

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