

POLICY Quarterly

Volume 11 – Issue 4 – November 2015



Planning Auckland's Future

The Planning Framework for Auckland 'Super City':
an insider's view

Roger Blakeley

3

Climate Change and New Zealand: Is it doom
or can we hope?

Sir Geoffrey Palmer

15

Financial Incentives to Work: the size of the margin
between benefit and in-work incomes

Jason Raven

26

The 'Investment Approach' Is Not an
Investment Approach

Bill Rosenberg

34

Education Is for Everyone Unless You are Special

Giovanni Tiso and Hilary Stace

42

Canterbury Water Management Strategy:
'a better way'?

Elizabeth Eppel

49

Uncertainty in Policy: implications for practice

Germana Nicklin

58

A Systems Approach to Defining Environmental
Regulatory Institutions

Grant Pink and Matt Marshall

63

Watching the Birth of the Regulatory Profession

*Keith Manch, Peter Mumford, Sanjai Raj
and Ben Wauchop*

71

Exploring the Ethics of the Use and Commercialisation of
New Zealand Public Health System Data

*Kirsten Lovelock, Robin Gauld, Greg Martin and
Jayden MacRae*

77

Global Development in the Twenty-first Century:
the maturation of global development –
responses to three critiques

Ross Garnaut

85

Policy Quarterly (PQ) is targeted at readers in the public sector, including politicians and their staff, public servants and a wide variety of professions, together with others interested in public issues. Its length and style are intended to make the journal accessible to busy readers.

The journal welcomes contributions of about 4,000 words, written on any topic relating to governance, public policy and management. Articles submitted will be reviewed by members of the journal's Editorial Board and/or by selected reviewers, depending on the topic. Although issues will not usually have single themes, special issues may be published from time to time on specific or general themes, perhaps to mark significant events. In such cases, and on other occasions, contributions may be invited from particular people.

Subscriptions: The journal is available in PDF format on the Institute for Governance and Policy Studies (IGPS) website: <http://igps.victoria.ac.nz/publications/publications/list/10>. Readers who wish to receive it by email should register as PQ subscribers igps@vuw.ac.nz. This service is free.

For all subscription and membership enquiries please e-mail igps@vuw.ac.nz or post to Institute for Government and Policy Studies, P.O. Box 600, Wellington.

Electronic Access: The IGPS directs interested individuals to its website: www.igps.victoria.ac.nz where details of the Institute's publications and upcoming events can be found.

Permission: In the interest of promoting debate and wider dissemination, the IGPS encourages use of all or part of the papers appearing in PQ, where there is no element of commercial gain. Appropriate acknowledgement of both author and source should be made in all cases. The IGPS retains copyright. Please direct requests for permission to reprint articles from this publication to igps@vuw.ac.nz.

Co-Editors: Jonathan Boston and Bill Ryan

Editorial Board: Guy Beatson, David Bromell, Valentina Dinica, Gerald Minnee, Mike Reid and Andrea Schollmann

ISSN: 2324-1098 (Print)

ISSN: 2324-1101 (Online)

Volume 11, Issue 4 – November 2015

Copy Editor: Rachel Barrowman

Design & Layout: Aleck Yee

Design: Aleck Yee

Production: Alltex Design

Proof Reader: Vic Lipski

Editorial Note

This issue of *Policy Quarterly* traverses a range of contemporary policy issues including the governance of Auckland, climate change, financial incentives to work, the investment approach to funding social assistance, regulatory design and stewardship, water management, special education, the implications of uncertainty for policy practice, and the ethical issues surrounding the use and commercialization of public health data. In addition, Professor Ross Garnaut, a distinguished Australian economist and the Frank Holmes Fellow in 2015, responds adeptly to the three earlier responses to his Holmes Memorial lecture (all of which were published in the May issue of *Policy Quarterly*).

The lead article in the November issue focuses on Auckland, New Zealand's largest city and economic powerhouse. Beginning with the Royal Commission on Auckland Governance (2007-09), Roger Blakeley (the former Chief Planning Officer for the Auckland Council), explores the formation of a single, unitary governance body for the city in late 2010 and charts the development and implementation of the new planning framework. In so doing, he highlights the many policy challenges facing this rapidly expanding city, assesses progress over the past five years and draws a variety of lessons – both for policy-makers at the national level and in other regions of the country. He gives particular attention to a number of core issues confronting those charged with Auckland's governance: determining the future form of the city in spatial terms, including the political problems generated by those who oppose the idea of a more compact, higher-density city; how to fund the required infrastructure investment, especially with regard to public transport; how to address the crisis in housing affordability; and how to ensure the sustainable management of the environment – not least the need for rapid decarbonisation over the coming decades. All of these topics deserve ongoing attention and debate, and I hope that *Policy Quarterly* will be able to address them further in future issues.

I am particularly grateful to Sir Geoffrey Palmer for his comprehensive and perceptive analysis of the issues surrounding climate change mitigation. Sir Geoffrey was the Minister for the Environment when climate change first became a salient global policy issue, more than a generation ago. Understandably, he deeply laments the staggeringly slow progress since that time to curb the growth of greenhouse gas emissions – locally, as well as globally. It is remarkable to recall that as Prime Minister, in August 1990, Sir Geoffrey announced New Zealand's first climate change policy. This included a target of reducing net CO₂ emissions by 20% from 1990 levels by 2005. The National party, then in Opposition, supported this target. Indeed, on entering office in late 1990, National brought forward the date to the year 2000. Several years later, in mid-1992, the

National government released a 'Carbon Dioxide Reduction Action Plan'. The Plan retained the 20% reduction target by 2000, albeit as 'an interim planning target' until the nature of the evolving international negotiations on climate change were clarified. To assist the process of climate change mitigation, the Plan included a wide range of policy measures, such as energy efficiency and forestry initiatives. The government also raised the possibility of introducing a carbon tax if adequate progress was not forthcoming.

Fast forward 23 years: in mid-2015 the current National government announced New Zealand's emissions reduction target for 2030. This entails cutting greenhouse gas emissions by just 11% on 1990 levels – yes, by 2030. Admittedly, the latest target covers all emissions, not only CO₂. Nevertheless, 2030 is 30 years after a 20% reduction in CO₂ emissions was supposed to have been achieved. And the government has the audacity to call its 2030 target 'ambitious'. Viewed from the perspective of the early 1990s, such a description is laughable. Viewed from the perspective of future generations, the latest target borders on the tragic. But future generations do not have a vote. And too few current citizens in most democracies really care – or care enough. Until they do, poll-driven governments will continue to make decisions that impose huge environmental, social and economic costs on future citizens.

No doubt Sir Geoffrey's advice will one day find more receptive political ears locally and globally, but by then all the easier and cheaper mitigation options may have long been foreclosed. Worse, our collective failure to respond adequately to sound scientific evidence for over a generation will result in vastly higher adaptation costs, not to mention an immense loss of biodiversity. What a terrible legacy.

On a completely different note, my colleague and co-editor, Bill Ryan, is moving to a part-time role with the School of Government from the beginning of 2016. Shortly, therefore, he will be standing down as co-editor of *Policy Quarterly*. Bill has made a huge contribution to the journal over the past five years and I would like to thank him for all his support, dedication, hard work and scholarly endeavours. He will, I hope, continue to write the occasional article – so this is not the end of his association with PQ.

Very sadly, Don Gray, who was a senior public servant and a member of the Editorial Board of PQ, died recently. He will be sorely missed by all those who knew him. David Bromell, a friend and former colleague, has written a short tribute to Don which appears in this issue of the journal.

Jonathan Boston (Co-editor)

Roger Blakeley

The Planning Framework for Auckland ‘Super City’ an insider’s view

Auckland Council was launched five years ago, on 1 November 2010. This article examines the planning framework set in place to enable the growth of Auckland over the next 30 years. The author was chief planning officer of Auckland Council from its inauguration until mid-2015. It therefore gives an insider’s view on the framework, which may aid wider understanding in the policy community. The author has also had the opportunity since leaving the council to reflect on what has been learned, and the hurdles still to be cleared. The premise that Auckland’s success is critical to New Zealand’s success underpins this article.

The article examines the governance changes to Auckland, and describes the planning framework and the development strategy in the Auckland Plan. It then analyses the difficult challenges that still confront Auckland: its housing affordability crisis, and measures required

on urban form and planning rules, housing, transport and economic growth. The final section covers the features of the planning process, independent reviews, lessons for other regions, policy lessons and conclusions.

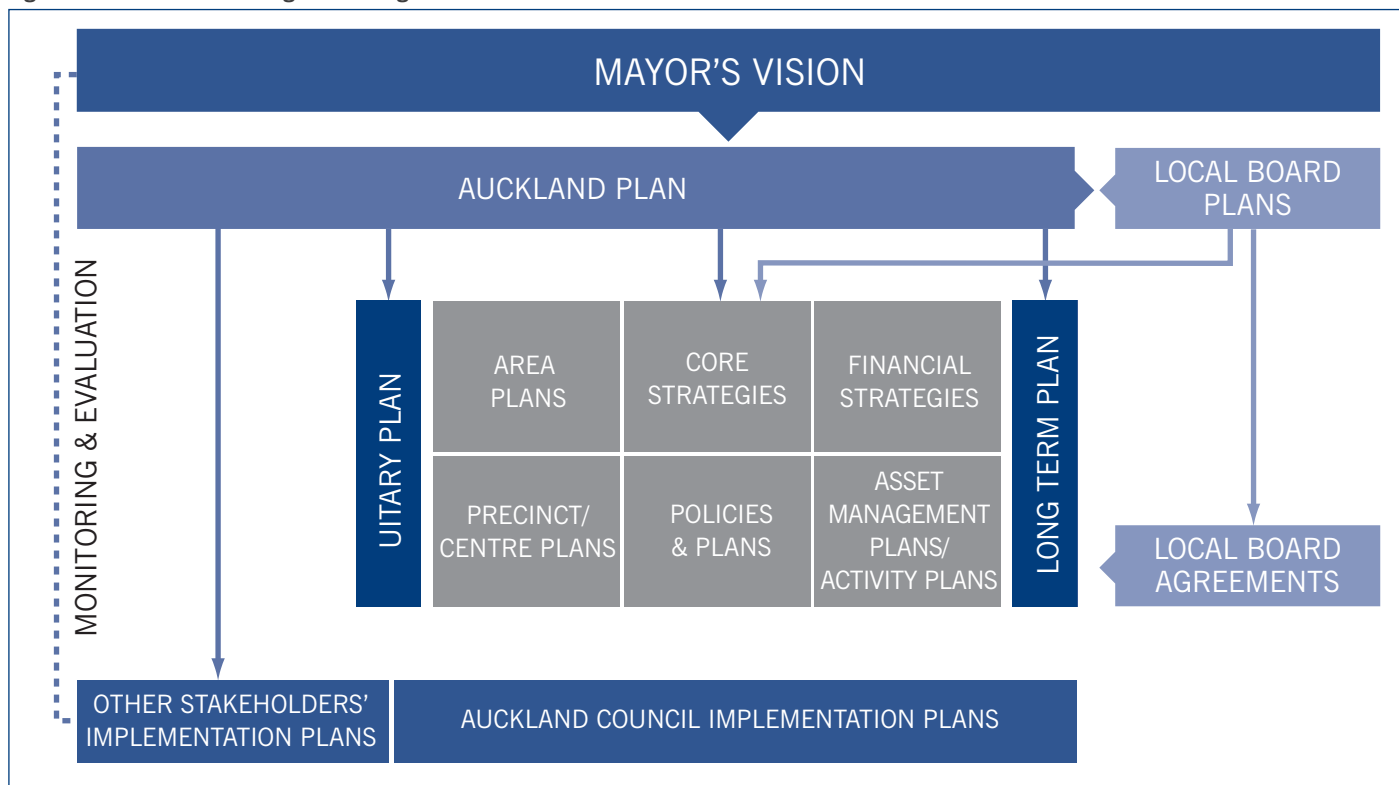
The governance changes to Auckland

The Royal Commission on Auckland Governance was established by the Labour-led government in October 2007 in response to growing concerns about the workability of local government arrangements in Auckland. Its report identified two broad systemic problems in the existing arrangements: regional governance was weak and fragmented, and community engagement was poor (Royal Commission on Auckland Governance, 2009). The commission recommended that a new, single unitary authority called Auckland Council replace the Auckland Regional Council and seven territorial authorities, and that six elected local councils operate within the unitary council; the government amended the latter proposal to 21 local boards. Further, it recommended that the council be led by a mayor elected by all Aucklanders, and with greater executive powers than those provided under the Local Government Act 2002: to chart and lead an agenda for Auckland. All policy would still be approved by the full Auckland Council.

The commission recommended that Auckland Council immediately prepare a regional spatial plan and an infrastructure investment plan, and develop one

Roger Blakeley is a consultant and Fellow of the School of Government at Victoria University of Wellington. He was chief planning officer, Auckland Council from its inauguration in November 2010 to mid-2015.

Figure 1: Auckland’s Strategic Planning Framework



district plan for the Auckland region. Changes should be made to the Resource Management Act 1991 to remove the right of appeal to the Environment Court from regional policy statement decisions by Auckland Council, and to allow Auckland regional policy statement submissions to be heard by independent commissioners. An urban development agency with compulsory land acquisition powers should be created, reporting to council.

The commission recommended that two Māori members be elected to the Auckland Council by voters listed on the Māori electoral roll. Instead, the government established an Independent Māori Statutory Board.

The National-led government in 2009 largely agreed with the recommendations of the commission. An Auckland Transition Authority was formed to manage the changeover, under the Local Government (Auckland Council) Act 2009 and the Local Government (Auckland Transitional Provisions) Act 2010. The new mayor and members of Auckland Council were sworn in on 1 November 2010. The scale of organisational change is perhaps unprecedented in Australasia: creating one new organisation from eight

previous councils, with 8,000 staff, an annual budget of \$3 billion and assets of the value of \$36 billion, and consolidating several thousand computer systems. The change went remarkably smoothly, which is a tribute to good leadership from the elected members, good change management from the executive and staff, and goodwill from the public.

The planning framework

Figure 1 shows the strategic planning framework under the new Auckland Council (Auckland Council, 2012a).

The mayor’s vision ‘to be the world’s most liveable city’ was adopted in the Auckland Plan after wide consultation (Auckland Council, 2012a). This is the 30-year strategic spatial plan, with statutory weight, as recommended by the royal commission. Under section 79 of the Local Government (Auckland Council) Act 2009, ‘The Auckland Council must prepare and adopt a spatial plan for Auckland. The purpose ... is to contribute to Auckland’s social, economic, environmental and cultural well-being through a comprehensive and effective long-term (20- to 30-year) strategy for Auckland’s growth and development.’ The important distinction in the legislation

is the requirement for a ‘spatial plan for Auckland’, not just Auckland Council. For the first time Auckland has a single, integrated plan for the region, covering land use, transport, infrastructure and housing, to guide investment by council, government, the private sector, iwi and communities.

The council decided that the Auckland Plan would be shaped by the European Regional/Spatial Planning Charter, also known as the Torremolinos Charter (Council of Europe, 1983). The Torremolinos Charter has four fundamental objectives: balanced socio-economic development of the regions; improvement of quality of life; responsible management of natural resources and protection of the environment; and rational use of land. That decision by council ensured a broad, integrated and values-based approach, not just a population-based strategy, which had been the legacy of previous regional growth strategies.

The Auckland Plan is the overarching plan for all other Auckland plans. Two major plans bookend all others: the Unitary Plan, the council’s principal land-use planning document, prepared under the Resource Management Act

1991; and the long-term plan, describing council's intended activities, key projects and programmes, and budget for a ten-year period (currently 2015–25), prepared under the Local Government Act 2002. Local board plans set the priorities and projects for each local board and inform both the Auckland Plan and the long-term plan. Local board agreements on budget are made annually with the governing body.

Figure 1 shows how the various plans interact: core strategies such as the economic development strategy (Auckland Council, 2012b); place-based plans such as the City Centre Masterplan (Auckland Council, 2012c), the Waterfront Plan (Waterfront Auckland, 2012), area plans, precinct plans and centre plans; financial strategies; asset management plans; and implementation plans, such as the Integrated Transport Management Plan prepared by Auckland Transport, which delivers the high-level transport strategy outlined in chapter 13 of the Auckland Plan.

Consistent with its overall approach to planning and implementation, council wanted to deliver the Unitary Plan at pace. It did not want to repeat the experience of some cities and districts, which have taken up to ten years until adoption of district plans. The council proposed to the government that it add an additional step of engagement with the community on a draft Unitary Plan at the front of the process, in return for limited appeal rights at the back. The quality of the plan would be enhanced by the extra engagement step at the start, and time would be saved by avoiding years of appeals to the Environment Court. It recommended that an independent hearings panel hear submissions on the notified Proposed Auckland Unitary Plan. The government agreed to the changes. The independent hearings panel will hear and consider submissions, and make recommendations on the final plan to council for decision. An appeal to the Environment Court is allowed only on any matter where council disagrees with the panel's recommendation. Where the council agrees with the panel's recommendation, an appeal on that matter can only be made to the High

Court on a point of law. Those provisions were included in the Local Government (Auckland Transitional provisions) Amendment Act 2013.

The Auckland development strategy

Figure 2 shows the composite map which incorporated the development strategy within the Auckland Plan. Areas shaded in pink fall within the metropolitan urban limit (MUL) when the council was formed in 2010. The red broken lines show areas for investigation for greenfield development.

The policy of controlling the outward spread of Auckland through MUL-type mechanisms has been a policy in regional planning documents for

the housing market, because lower-priced land is more often found further out on the fringes of cities.

The MUL was usually located adjacent to the existing urban area and could only be expanded through a plan change to the regional policy statement. The rural urban boundary (RUB) is completely different from the previous MUL. The RUB removes the binding constraint, thereby relieving land price pressures caused by the MUL. The RUB is usually located well away from the existing urban area and is designed to provide for 30 years' growth. Greenfield land between the RUB and the existing urban area will be zoned 'future urban' until a staged release of that greenfield land

We live in a rapidly urbanising world: by 2025, 75% of the world's population will live in cities. Globalisation and the knowledge economy have made city-regions the engines of growth of nations.

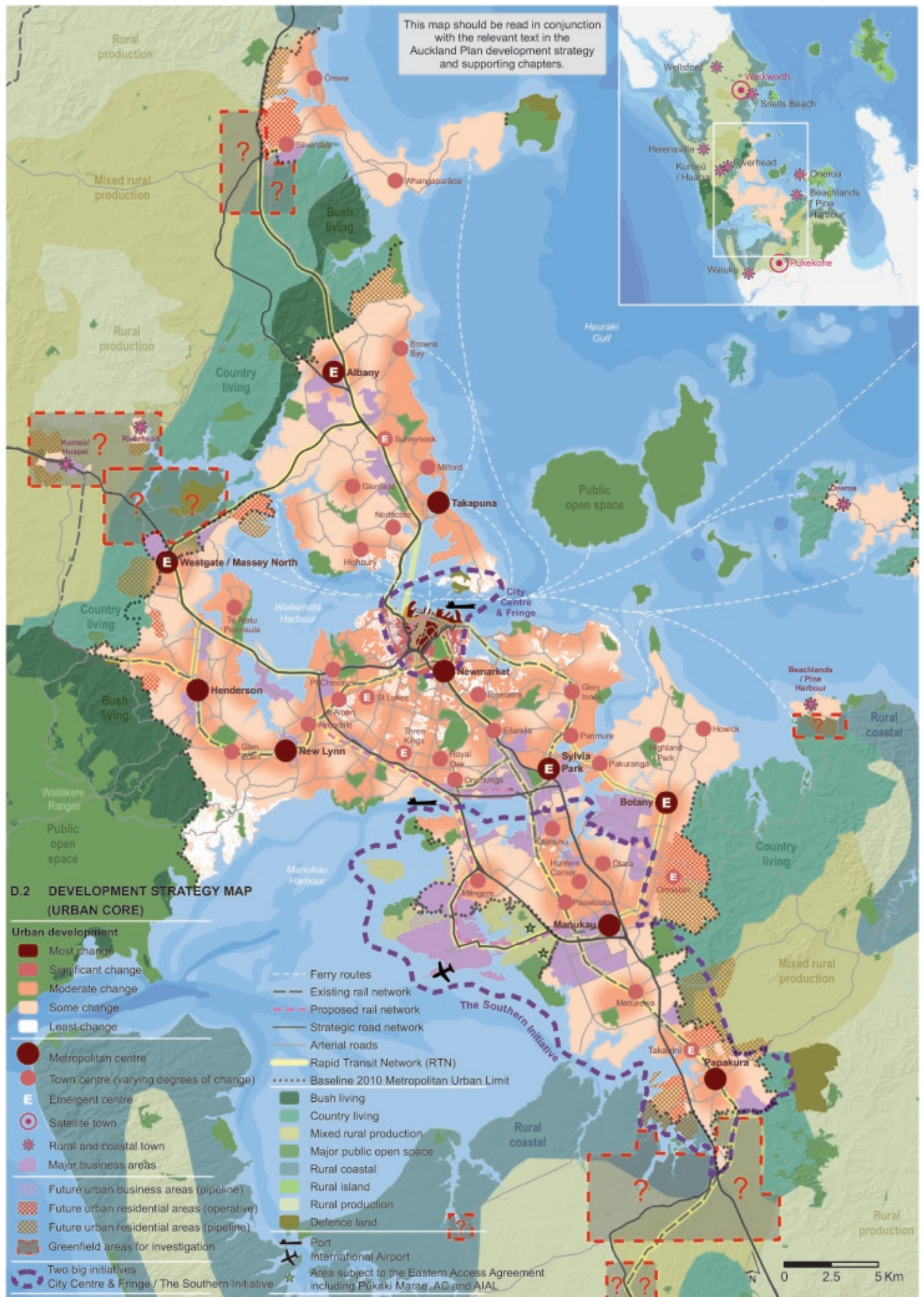
more than 50 years (Hill, 2008). The reasons for its use have changed over time. Initially it was mainly to sequence growth, so that infrastructure could be provided more efficiently. Then, under the Auckland regional policy statement of 1994, developed under the Resource Management Act 1991, the main objective became to protect rural and coastal environments from peripheral growth and achieve containment and intensification. The region has absorbed over 300,000 more people in the last 20 years without significantly extending the MUL.

Studies have shown (Grimes and Liang, 2009) that the metropolitan urban limit has had a significant impact on land prices in the city, with the price of land just inside the MUL around ten times higher than that of land just outside the MUL. More recent research (Zheng, 2013) has concluded that the impact of the MUL on housing affordability is most pronounced for those at the lower end of

occurs to meet demand. By that time it will be rezoned urban and bulk services infrastructure will be in place. The RUB will be confirmed through the Unitary Plan process.

The development strategy provides for an extra 1 million people (400,000 dwellings) in Auckland by 2041, as per the Statistics New Zealand high-growth projection. The 'quality compact city' strategy provides for development both up and out, based on a range of up to 70% of future population growth being located within the existing urban area and up to 40% in new greenfields: a 70/40 split. Providing for an orderly release and development of greenfield land lowers infrastructure costs. Studies on Australian cities (Trubka, Newman and Bilsborough, 2013) have shown that total costs of greenfield development are approximately twice those of brownfield development (particularly for infrastructure provision and transport) for the same quantum of population increase.

Figure 2: Development strategy from the Auckland Plan



Why Auckland has a housing affordability crisis

One dominating question is central to the planning framework: why does Auckland have a housing affordability crisis?

The population pressure in Auckland is part of a global trend affecting all big cities. We live in a rapidly urbanising world: by 2025, 75% of the world's population will live in cities. Globalisation and the knowledge economy have made city-regions the engines of growth of nations. Cities reduce the distance between people, and so reduce the costs of moving people, ideas and goods throughout the economy. That agglomeration effect is why the centre of Auckland has higher labour productivity than the rest of New Zealand (New Zealand Productivity Commission, 2015, p.28). It makes cities more attractive, generates higher wages and more opportunities, and explains why Auckland is growing so rapidly. Statistics New Zealand projects that between 2026 and 2031, 65% of New Zealand's total population growth will occur in Auckland.

Between August 2014 and August 2015 median house prices in the Auckland metropolitan area jumped by about 20%, from \$635,000 to \$765,000 (Real Estate Institute of New Zealand). The median house price in metropolitan Auckland is now about nine to ten times higher than Auckland's median annual household income of about \$80,000. 'Affordable' housing is generally taken to be housing costing three to four times the median household income. The difference is a measure of Auckland's housing affordability problem. Auckland's house prices have been on a different path from the rest of New Zealand's since 2012.

Many factors contribute to the extraordinary growth in Auckland house prices. These include demand drivers (such as a net gain of 60,000 migrants to New Zealand in the last year, low interest rates, and increasing investor presence in the market), and supply drivers (lack of land supply, fragmented land ownership, restrictive planning regulations, constraints in provision of infrastructure, and low measured productivity in the building construction sector). As the deputy prime minister said in a speech on 29 September 2015:

a housing market that is not functioning can have a significant effect on the macro-economy ...

The point is that when the supply of housing is relatively fixed, shocks to demand – like migration flows increasing sharply as they have recently – are absorbed through higher prices rather than the supply of more houses. (English, 2015)

Auckland Council and the government have introduced several significant measures to increase supply of housing in Auckland, which are discussed in the following sections. The government has introduced a range of measures to reduce demand.

The deputy governor of the Reserve Bank commented on the high cost of the land component (60%) in house prices in Auckland, and noted that the council has the opportunity ... to allow greater numbers of dwellings per unit of land, and therefore more affordable housing

There are four major issues within the planning framework: urban form and planning rules, housing, transport and economic development. Discussion on each of these follows.

Urban form and planning rules

The Auckland Plan and the Proposed Auckland Unitary Plan have specifically addressed the need to ensure adequate land supply. The plans have provided for supply through additional intensification within the existing urban area, as well as through staged release of greenfield land within the rural urban boundary to meet future demand over 30 years. In addition, their target is that there will always be at least seven years' forward supply of land zoned for future development, with bulk infrastructure services available for a developer.

Auckland Unleashed (Auckland Council, 2011) received strong public

support for a 'quality compact city' strategy. This strategy was incorporated into the Auckland Plan in 2012, and subsequently the draft Unitary Plan in March 2013. There was pushback from the Auckland 2040 lobby group and other current property owners against greater height and density in suburban areas. These groups often expressed support for action to reduce urban sprawl, but 'not in my back yard' (NIMBYism). Council responded to this public pressure by reducing height limits and reinstating density controls in some areas, notified in the Proposed Auckland Unitary Plan in September 2013. The decision to rescind the proposed removal of minimum lot sizes in the mixed-housing suburban

zone (40% of the Auckland urban land area) significantly reduced the flexibility for developers to provide greater supply, choice and affordability of housing units.

Provisions in the Proposed Auckland Unitary Plan which require minimum apartment floor areas of 30–50 square metres (depending on the zone) and minimum balcony areas of 8–10 square metres have aroused public debate. Studies (MRCagney, 2014) concluded that these proposed apartment and balcony size rules are unlikely to generate improvement in well-being that exceeds their costs. However, such studies have not included the costs and benefits to the wider Auckland community: for example, if no private open space is provided, then the council and ratepayers may need to provide additional open space in urban areas.

The New Zealand Productivity Commission in its draft report *Using*

Land for Housing recommended curtailing councils' ability to set rules in district plans relating to balconies and private open space requirements and minimum floor areas of apartments, and leaving the market to respond to consumer preferences (New Zealand Productivity Commission, 2015, p.120). Auckland Council in its response said that local government, with its local democratic mandate, should be able to tailor local rules, taking account of all benefits and costs. Other rules, such as ceiling heights, have aroused similar debates. The council has decided to provide an incentive regarding balconies by decreasing the minimum floor areas of apartments if a balcony is provided. This is for

and called for a housing action plan to be developed and implemented urgently. The housing action plan was completed with multi-sector input within six months and released in December 2012. It sets out the tools the council can use to influence housing supply and affordability. Most of the actions are now well advanced or completed.

The Auckland Housing Accord, agreed between the government and Auckland Council in September 2013, provided for the establishment of special housing areas (SHAs) and for fast-track consenting and approval processes. It set a target of 39,000 consented dwellings and sites by the end of three years, and specified requirements for affordable housing. The

an independent housing fund agency to philanthropic investors: an action in the housing action plan. This enables community housing providers to access finance at cheaper rates (about 5%). Third, the council has replaced two existing council-controlled organisations with a new organisation, Panuku Development Auckland. It will lead brownfield redevelopment (residential, commercial and mixed), develop underutilised public land holdings and leverage private sector development, at scale. Panuku Development Auckland will redevelop areas in partnership with private sector developers, iwi and government.

Fourth, in the 2015-25 long-term plan and budget a new council infrastructure fund was established, providing \$35 million per annum for the next ten years to local infrastructure for SHAs and other residential growth areas. It is financed by Auckland Transport, and money can be recouped from development contributions paid by property developers in the local area as each of their developments is completed.

There have been some difficulties in putting all of these measures in place. While there were initial public differences between the government and council, the agreement on the Auckland Housing Accord has provided the basis for a collaborative relationship. There were also concerns from council about adequate infrastructure funding to support SHAs, which the council infrastructure fund (described above) has addressed. Issues with timing of provision of bulk infrastructure are not fully resolved.

Difficulties have also arisen in working with local boards on SHAs because of the very limited time for community engagement, given that delivery has to be at pace. It is demanding for local boards when SHA requests must remain confidential for commercial reasons, since boards want to be open with their communities. Another challenge has been the development time lag. It takes 12 months to two years, depending on location, to get housing on the ground.

On 24 August 2015 the deputy governor of the Reserve Bank said: 'There are good reasons to think that the Auckland market poses an increasing

[Under The Auckland Plan, the transport network] ... will require an additional \$12 billion over the next 30 years to invest in roads, rail, ferries, busways and cycleways.

consideration in the mediation conducted by the independent hearings panel.

The deputy governor of the Reserve Bank commented on the high cost of the land component (60%) in house prices in Auckland, and noted that the council has the opportunity (through increasing the designated areas for high-density residential development) to allow greater numbers of dwellings per unit of land, and therefore more affordable housing (Spencer, 2015a). The council must recognise that a decision in favour of stricter planning and land-use controls involves a trade-off against lower house prices and the greater productivity and economic growth that comes with greater density.

The independent hearings panel on the Auckland Unitary Plan is currently considering the submissions received on the residential zone rules, and is mediating with all parties.

Housing

Housing is the second, related, issue. The Auckland Plan referred to a housing crisis

accord was supported by the Housing Accords and Special Housing Areas Act 2013, which also applies to other cities. Auckland exceeded the target of 11,000 consented dwellings and sites in the first year of the accord. By the end of June 2015 Auckland had established 97 SHAs, with the capacity to yield more than 47,000 homes over ten years.

Another target in the Auckland Plan is to '[i]ncrease residential dwelling construction consents from 3,800 in 2011 to at least 10,000 on average per annum from 2020'. In 2014/15 new dwellings in Auckland were built at a rate of 8,300 per annum (compared with fewer than 4,000 per annum in 2010/11).

Other initiatives by the council help housing supply and affordability. First, Auckland Council and the government are joint shareholders in the Tāmaki Redevelopment Company, which aims to create 6,000 homes over a 20-year period, with associated economic and social development benefits. Second, in 2015 Auckland Council agreed to provide guarantees on bonds issued by

threat to financial stability' (Spencer, 2015b). Auckland Council, with government and the development sector, is working on a range of supply and demand measures to reduce this risk.

Transport

The third issue is transport. The Auckland Plan contains a transformational shift: 'Move to outstanding public transport within one network.' It will require an additional \$12 billion over the next 30 years to invest in roads, rail, ferries, busways and cycleways. The plan prioritises the City Rail Link and notes that new funding tools will be needed to pay for the required \$2.4 billion capital cost.

Significant investment in the public transport system, including electrification of the rail network and new electric trains, has seen passenger patronage increase from 60 million trips in 2010 to 76.5 million trips in the 12 months to January 2015. Rail passenger numbers reached 13.8 million in the year to January 2015, an increase of 20% over the previous 12 months. The draft 2015-25 long-term plan invited feedback on whether the public supported a basic transport network or preferred further investment to deliver the proposed Auckland Plan transport network. In submissions and an independent public opinion survey, the Auckland Plan transport network was supported over the basic transport network at a ratio approaching 2:1. The feedback also showed that the public supported a motorway user charge option over an increased fuel taxes and rates option. The response provided a clear mandate to council to raise the extra funds needed.

The next step for the council is to work with central government to agree on how Auckland can raise the required transport funding to deliver the Auckland Plan transport network. This is likely to require legislative change and could take some years. In June 2015 the council agreed to an accelerated transport programme with extra investment of \$523 million over the next three years, derived from a three-year interim transport levy on residential and business ratepayers, central government contributions and additional council borrowing.

Economic growth

The fourth issue is economic growth. The Auckland economy has largely relied on supplying goods and services to the New Zealand domestic market. To grow at the rate Auckland needs it must add a much stronger export focus, while also retaining its role in the domestic economy. The export focus requires developing and selling high-value goods and services to high-growth sectors (e.g. food technology) of rapidly growing economies (such as China). This will require a fundamental change to the Auckland economy.

The council-controlled organisation Auckland Tourism, Events and Economic Development (ATEED) has taken responsibility for implementation of

future. Several factors contributed to this successful planning. The inaugural chief executive, Doug McKay, and the author made an early agreement about the pace of planning. The maxim for plans was 'simple, fast, bold and innovative'. One reason was for Auckland to be able to move quickly from planning to implementation. The Auckland Plan was adopted after 17 months; in comparison, the London spatial plan took four years. Some district plans in New Zealand, for much smaller and less complex cities, have taken up to ten years to adoption of the plan. In contrast, the Proposed Auckland Unitary Plan, which is a combined regional policy statement, regional coastal plan and district plan, took only 18 months to

The Auckland Plan was adopted after 17 months; in comparison, the London spatial plan took four years.

the economic development strategy. Initiatives have included investing in an innovation hub and technology precinct in the Wynyard Quarter, which is bringing together technology firms, business start-up incubators and research institutions – encouraging exchange of ideas, product development, commercialisation and export expertise – in one place. This approach is being replicated in other sectors: for example, food innovation, health services for export, clean technologies, and screen innovation and production.

The Auckland Plan target is 5% per annum GDP growth over 30 years. In 2014/15 Auckland's GDP grew at 3.7%, creating 37,000 new jobs. This compares with Auckland's GDP growth in 2010, as it came out of the global financial crisis, of -1.2%.

The final section of this article covers the author's reflections, with the benefit of hindsight, on the features of the planning process; independent assessments; lessons for other regions; and policy lessons.

Features of the planning process

Auckland's new planning system has given the city-region a clear blueprint for the

develop for notification. This rapid pace may have shaken the former planning paradigm in New Zealand.

The plans were *evidence-based*. Comprehensive data-gathering informed the plans around, for example, the demographic change covering the projected regional population growth of Auckland, its ageing population, and the rapid change of Auckland as a super-diverse city with 40% ethnic migrants.

The levels of *community engagement* were unprecedented. The Auckland Plan, Proposed Auckland Unitary Plan and 2015-25 Long-term Plan each involved tens of thousands of Aucklanders through public meetings, website visits, submissions and social media, including Facebook, Twitter and online panels. Interactive digital models gave the public the opportunity to help shape their city and its ten-year budget. These innovations involved citizens in the co-design and delivery of planning and policy. This engagement directly addressed one of the two systemic problems in Auckland identified by the royal commission, that '[c]ommunity engagement was poor'.

A *bold* approach was taken to setting visions, goals and targets, and focusing on game-changers such as the transformational shifts in the Auckland Plan. Innovative policy responses were applied to persistent, wicked problems. One such example is the Southern Initiative. Cross-sectoral *collaboration* – joined-up thinking and action involving council, central government, iwi, business, universities, community organisations, interest groups and the wider public – was core to all plans. *Implementation* strategies were fully integrated into all the plans, and the 2015-25 long-term plan was explicitly aligned to the Auckland Plan for prioritisation of strategic resource allocation.

... there are some lessons from Auckland's experience ... [w]rong information about Auckland was put in the public domain as part of campaigns against amalgamation in other regions.

Independent reviews of the Auckland 'super city'

The Auckland planning framework has been assessed by several independent reviews. The controller and auditor-general, in her review of the transition and first two years of Auckland Council, commented on the Auckland Plan:

We heard from everyone we spoke to about the unifying and focusing benefits of the Auckland Plan. The Plan has provided a coherent strategic regional direction, including a sense of purpose, a sense of regional identity, and recognition of Auckland's national significance. This direction has a lot of organisational, stakeholder, and public support. (Controller and Auditor-General, 2012, p.25)

Mai Chen interviewed people involved in the creation of the Auckland Council

for her book *Transforming Auckland*, and observed:

As noted by David Shand (former member of the Royal Commission), 'There is now a feeling in Auckland, and across the rest of New Zealand, that there is an Auckland Council that matters'. (Chen, 2014, p.6)

The international advisory committee for the fourth New York regional plan compiled a report on current global thinking and practice about how leading metropolitan regions are addressing long-term challenges. This was based on case studies of 12 global city-regions:

London, Paris, New York, Tokyo, Hong Kong, Singapore (the 'big six'); Auckland, Sydney, Barcelona, Vienna (four 'new' world city-regions); and Moscow and Sao Paulo (two 'emerging' global city-regions). On the challenge of regional planning and governance, they listed Auckland and Paris as top of the 12 city-regions, with a 'single, integrated regional plan delivered by a regional authority':

Recognition of the regional dimension of growth is a vital step in many institutionally fragmented regions. Auckland made a decisive step in 2010 with the merger of its region's eight councils into one 'super city' under a new executive mayor. The organisational transformation required transformational governance and management changes, but was managed smoothly. Mayor Len Brown, the first mayor of the new regional Auckland Council was then

able to build a single comprehensive strategy: 'The Auckland Plan', produced only 17 months after amalgamation. The Council's services and activities are delivered by Council-controlled organisations – corporate entities with board members appointed for their business acumen. (Clark and Moonen, 2015)

Auckland's rating in the world's most liveable cities surveys in 2015 included:

- Mercer Survey: 3rd (up from 4th in 2010)
- Economist Intelligence Unit: 9th (up from 10th in 2010)
- *Monocle* magazine (UK): 17th (up from 20th in 2010).

The recognition of Auckland's achievements through international and national awards is also based on independent assessments. Auckland was rated the third best sporting city in the world in 2014, behind London and Melbourne, by the SportBusiness Ultimate Sports City award. Lonely Planet's 2014 *Best in Travel* guide named Auckland as one of the top ten cities in the world to visit. Auckland's waterfront won the top award for 'excellence on the waterfront' at the 30th annual Waterfront Centre Conference in Washington DC in 2012, and other top international awards.

Numerous national awards have also been given to the Auckland Plan, City Centre Masterplan, Waterfront Plan and Proposed Auckland Unitary Plan by the New Zealand Planning Institute, New Zealand Urban Design Institute, New Zealand Institute of Landscape Architects and the Institute of Public Administration New Zealand.

Lessons for other regions

It would not be appropriate for this article to comment on what other regions may choose to do regarding amalgamation. However, there are some lessons from Auckland's experience that other regions may consider. Wrong information about Auckland was put in the public domain as part of campaigns against amalgamation in other regions. In fact, there have been clear benefits to Auckland from the amalgamation and the planning framework.

Rates

Auckland Council inherited from the eight legacy councils an average rates increase of over 9% in 2010/11, and a proposed average annual rates increase of 6% in following years. The council has lowered these figures considerably. In the 2015–25 long-term plan, adopted in June 2015, the budget includes an average general rates increase of 2.5% for 2015/16, followed by a rise of 3.2% in 2016/17 and 3.5% for each of the remaining years in the ten-year budget.

Efficiency savings

The council predicts \$2.64 billion of efficiency savings during the ten years of the 2015–25 long-term plan, or an average of \$264 million per year.

Debt

The value of council's assets will grow at a much faster rate than debt over the next ten years: average annual debt will increase by \$466 million per year, but assets will grow by an average of \$1.7 billion per year. The council runs a disciplined debt management strategy based on prudential ratios aligned with maintaining an AA credit rating (stronger than that of all New Zealand banks).

Local boards

Local boards have real power to negotiate local service standards, manage local facilities and parks, host local events and prepare local board plans. Local leadership can propose local bylaws, and provide input to council-controlled organisations and economic development plans. Their budgets are real, and they have autonomous decision-making authority over one in every four dollars of council's core budget spent in their local areas.

Council-controlled organisations

Auckland Transport, ATEED, Watercare, Panuku Development Auckland, Regional Facilities Auckland and Auckland Council Investments Ltd deliver major infrastructure and services across Auckland. The council-controlled organisation model has been very successful in delivering major infrastructure and services.

City-regional planning and implementation

Auckland has a single, strategic spatial plan for the region – the plan for Auckland, not just Auckland Council. For the first time, regional investment planning by council, government, infrastructure providers, iwi, and commercial and housing developers over 30 years is aligned. This is a major improvement over the previous eight separate councils' strategic plans, based on historic local government boundaries which bore no particular relationship to the regional economic ecosystem.

Working with central government

Under the previous regime government had to speak to eight councils with potentially eight different points of view.

Special role of Auckland in the New Zealand economy

Auckland is New Zealand's only city of international scale. Auckland is competing in the global marketplace for talent and investment with cities like Sydney and Melbourne. The success of Auckland is critical to New Zealand's success. That is why central government might want to seriously consider intervention if it believes 'bad' planning decisions are jeopardising national objectives. There could have been a better policy dialogue between council and government about what Greg Clark called 'the natural tension between a global city and the nation state' (Clark and Moonen, 2015). There are still big challenges for Auckland

Redevelopment opportunities in inner suburbs under the Proposed Auckland Unitary Plan were set to remain low. However, they are likely to increase following council's revised position on residential zoning to allow for more density.

Government leaders can now pick up the phone and speak to one council leader. Councillors meet with Cabinet ministers annually; the State Services Commission has recently created a deputy commissioner role in Auckland to strengthen the working partnership; and the government and council have successfully collaborated on several partnerships, such as GridAKL, Te Papa South, the Auckland Housing Accord and SHAs, the Auckland Co-design Lab, a single integrated transport network, major sporting events such as the Rugby World Cup 2011 and Cricket World Cup 2015, and the Maunga Authority.

Policy lessons

On reflection, the following policy lessons emerge from the planning process.

to meet the target of 5% per annum GDP growth. It involves a shift from city-region to successful global city.

Tackling the housing affordability crisis head-on

The council has been at the forefront of thinking on ways to address housing supply issues, with its work on the Auckland Plan, housing action plan, future urban land supply, Auckland Housing Accord and special housing areas (with government), the Proposed Auckland Unitary Plan, and promoting quality urban design. The mayor and deputy mayor called for council to take a more front-foot approach on broader supply and demand issues, and the council's chief economist was commissioned to lead an economic report on housing supply, choice and affordability. The report calls for the

council and government to work together to achieve a home-buyer's price-to-income ratio of 5:1 by 2030 (it is currently 9–10:1) (Parker, 2015). The report is not council policy, but it will inform council's ongoing strategy for action and advocacy.

Becoming a high-quality urban city

Population densities generally increase as one gets closer to a city centre. However, Auckland's population density, at some 32 people per hectare in inner suburbs, is low by international measures. Auckland does not have an urban area as such, as suburbia is adjacent to the city centre. Auckland's current low population density in its inner suburbs can be attributed to the legacy council planning regulations

priced in the lowest quartile, and 30% in the upper quartile. Today only 5% of new homes are priced in the lowest quartile and nearly 60% are priced in the upper quartile. Prices and rents are rising disproportionately at the bottom end of the market due to lack of supply. Planning rules are seen to be adversely affecting the poorest and most vulnerable people. The weighing of distributional impacts against community interests should have been brought into the analysis earlier, but is being considered now.

NIMBYism and intergenerational equity

In the community meetings and media commentary on the draft Unitary Plan, groups such as Auckland 2040 argued

The recent OECD report (to government) made this recommendation on planning issues:

Provide guidance to regional authorities in the implementation of environmental and planning regulations, including the Resource Management Act. Reduce their economic costs and scope for vested interests to limit competition or thwart rezoning and development that would be in the wider public interest. (OECD, 2015)

NIMBYism has been identified as one of the reasons for a bias towards the present at the expense of longer-term future thinking (Boston and Stuart, 2015). Auckland could follow Vancouver's example and adopt the alternative acronym QIMBY (quality in my back yard). That is, there is no reason to fear intensification in suburbs, provided it is based on quality urban design and amenities. Indeed, that is the principle in the Auckland Plan and Proposed Auckland Unitary Plan. This would require a shift in thinking, from NIMBY to QIMBY.

When the Auckland Plan committee made decisions on the notification of the Proposed Auckland Unitary Plan in August 2013, local board chairs were present in the council chamber and able to speak to matters under debate, but did not have a vote.

for the isthmus area. Redevelopment opportunities in inner suburbs under the Proposed Auckland Unitary Plan were set to remain low. However, they are likely to increase following council's revised position on residential zoning to allow for more density. To ensure adequate supply, choice and affordability of housing, Auckland needs to shift from being a suburban city to a high-quality urban city (Parker, 2015).

Distributional impacts

Poor urban planning is seen as one of the drivers of inequality (English, 2015). Regulations that drive up the price of housing, such as the current urban limits, and minimum lot sizes which prevent subdivision below a certain size, reduce opportunities to build affordable homes. Twenty-five years ago around 30% of new homes coming into the market were

strongly against intensification in the low-density inner suburbs. Their voice was influential in the council's decision to tighten up proposed changes to density provisions in the notified plan. That decision benefited current homeowners, but reduced affordable choices for current or future first-home buyers, or people from lower socio-economic groups wanting to locate closer to the city centre. It acted as a transfer of wealth from future generations to the current generation. Another group, Generation Zero, articulated this point well, but did not get much traction in the debate. A higher quality of public debate could have better informed the community that a 'quality compact city' strategy could deliver greater density and more affordable housing while also achieving quality living through good urban design.

Section 32 analysis

The provisions of section 32 of the Resource Management Act require cost-benefit analysis of proposed rules. For example, the council's analysis of minimum car parking requirements in Auckland showed that the costs of the existing planning rule exceeded the benefits by a factor of at least six. Changes have now been made to this rule, but it raises the question of how it was adopted in the first place. The local government sector needs to build its economic analysis capability. At present such analysis is often handed to consultants. If a standardised land-use evaluation methodology was available, it would reduce barriers to good economic analysis by reducing costs.

Role of local boards in regional policy

The Auckland governance reforms made a clear distinction between the role of the governing body in setting regional policies, and the role of local boards in local services, such as facilities and parks,

local service standards, local board plans, and representing their communities' views. In order to fulfil those different roles, local boards were involved directly in providing policy advice: for example, local board chairs were members of the Unitary Plan committee. When the Auckland Plan committee made decisions on the notification of the Proposed Auckland Unitary Plan in August 2013, local board chairs were present in the council chamber and able to speak to matters under debate, but did not have a vote. These arrangements were appropriate given the respective regional and local decision-making roles of the governing body and local boards.

Transport

There were initial public differences between the government and council on government funding support for the City Rail Link. A contributing factor was substantial differences between council officers and government officials regarding the calculation of the wider economic benefits of the link. In 2013 the government agreed to cost-sharing on the City Rail Link, and timing issues are being resolved. The early stages of the rail tunnel are proceeding in 2015 as part of the downtown development project. Another issue of public disagreement related to road pricing that involved charges on the use of existing motorways. Road pricing, such as London's congestion charges and Singapore's electronic variable road pricing system, is accepted international practice as a demand management tool. Auckland Council's strategy to address congestion has been clear: to put in place an efficient and accessible public transport system, then to apply demand management tools to incentivise motorists to shift from private cars to public transport, and encourage mode shifts to cycling and walking. On 27 August 2015 the minister of transport and the mayor of Auckland announced the Auckland Transport Alignment Project, a year-long joint project between government and council. The scope encompasses roads, rail, public transport, personal mobility devices, walking, cycling, new technologies such as driverless cars, network optimisation and demand management. The objectives are

to support economic growth and increase productivity by ensuring improved access to employment; improve congestion; improve public transport's mode share; and ensure that any increases in financial costs will deliver net benefits to users of the transport system. The challenge is a shift from congestion to accessibility.

Incentives to grow

The revenue incentives for growth to councils are limited. When Auckland grows the council takes on more transport and other infrastructure demands, to be funded from a limited revenue base from rates. Councils are under pressure not to invest if they think a growing city is going to push up rates for existing ratepayers.

Auckland's housing crisis; allowed more time for consideration of the feedback on the draft Unitary Plan; avoided an election year for decisions on the proposed Unitary Plan; put more early time and resources into the section 32 cost-benefit analysis of rules, including how to quantify the benefits for the wider public good; made more use of research, photographs, and real examples of quality intensification to address NIMBYism; and created more opportunities for the younger generation's voice to be heard.

Conclusions

These reflections and analyses lead to five conclusions. First, the Royal Commission on Auckland Governance identified two

... Auckland has been recognised internationally as a top city-region in the world for regional planning and governance, for having 'a single, integrated, regional plan delivered by a regional authority' ..

Various parties, including the OECD, the New Zealand Productivity Commission, the New Zealand Initiative and Local Government New Zealand, have argued that local government needs to share in a revenue base which benefits from increased economic activity, to help pay for increased infrastructure and services. Examples could be greater use of targeted rates to capture some of the uplift in value that benefits a whole neighbourhood from new infrastructure, or road pricing tools such as congestion charges, which serve as a demand management tool and could provide a revenue source for funding infrastructure for housing supply. This could provide incentives for communities that want to grow.

With the benefit of hindsight, some things might have been done differently

The council might have: provided more clarity to the public from the beginning about the fundamental drivers of

broad systemic problems in the existing Auckland local government arrangements: regional governance was weak and fragmented, and community engagement was poor. Both have been resolved, through the governance reforms and unprecedented community engagement in the plans for Auckland. Second, the Auckland Plan, Economic Development Strategy, City Centre Masterplan, Waterfront Plan and Proposed Auckland Unitary Plan, adopted by council within its first three-year term, have together created the platform for the growth of Auckland over the next 30 years.

Third, Auckland has been recognised internationally as a top city-region in the world for regional planning and governance, for having 'a single, integrated, regional plan delivered by a regional authority' (Clark and Moonen, 2015). Fourthly, there are still major issues to be resolved, in particular so that Auckland will achieve four major shifts:

from city-region to global city, and a major attractor of investment and talent; from suburban city to high-quality urban city, with increased intensification in the inner suburbs and on the isthmus; from NIMBY (not in my back yard) to QIMBY (quality in my back yard), with increased supply, choice and affordability of housing; from congestion to accessibility, with the best mix of investment in public transport, roads, cycling and walking, and demand management.

Last, while the governance reforms and the planning framework have laid the foundation for Auckland's quest 'to be the world's most liveable city', the four major

shifts above will need sustained effort by council, government, private sector, iwi and communities, for Auckland to deliver on that vision for its citizens and for its contribution to the future success of New Zealand.

Acknowledgements

I would like to acknowledge my managers who led the development of respective plans – Ree Anderson, Auckland Plan; Harvey Brookes, Economic Development Strategy; Ludo Campbell-Reid, City Centre Masterplan; Penny Pirrit, Proposed Auckland Unitary Plan – for their helpful comments on a draft of this article. Thanks

are due also to Geoff Cooper, Auckland Council's chief economist (currently on sabbatical), and Chris Parker, Auckland Council's current chief economist. I would also like to acknowledge John Dalzell, former chief executive of Waterfront Auckland and now interim chief executive of Panuku Development Auckland, who led the development of the Waterfront Plan. Thanks are due in particular to Stephen Town, chief executive of Auckland Council. The views expressed in this article are those of the author.

References

(Note: all documents referenced to Auckland Council can be found at: www.aucklandcouncil.govt.nz/EN/planspolicies/projects/plansstrategies/theaucklandplan/Pages/theaucklandplan.aspx.)

Auckland Council (2011) *Auckland Unleashed: the Auckland Plan discussion document*, Auckland: Auckland Council

Auckland Council (2012a) *The Auckland Plan*, Auckland: Auckland Council

Auckland Council (2012b) *Auckland's Economic Development Strategy*, Auckland: Auckland Council

Auckland Council (2012c) *City Centre Masterplan 2012*, Auckland: Auckland Council

Auckland Council (2013) *The Proposed Auckland Unitary Plan*, notified 30 September, Auckland: Auckland Council

Boston, J. and S. Stuart (2015) 'Protecting the rights of future generations: are constitutional mechanisms an answer?', *Policy Quarterly*, 11 (2), pp.60-79

Chen, M. (2014) *Transforming Auckland: the creation of Auckland Council*, Wellington: LexisNexis

Clark, G. and T. Moonen (2015) 'International background report for the New York fourth regional plan: global city regions: case studies and good practice – how are the world's leading regions tackling their long term challenges?', unpublished

Controller and Auditor-General (2012) *Auckland Council: transition and emerging challenges*, Wellington: Office of the Controller and Auditor-General

Council of Europe (1983) 'European Regional/Spatial Planning Charter – Torremolinos Charter', adopted by the European Conference of Ministers Responsible for Regional Planning, 20 May at Torremolinos

English, B. (2015) 'Housing affordability', speech at Victoria University of Wellington, 29 September

Grimes, A. and Y. Liang (2009) 'Spatial determinants of land prices: does Auckland's metropolitan urban limit have an effect?', *Applied Spatial Analysis and Policy*, 2 (1), pp.23-45

Hill, G. (2008) 'The effectiveness of the Auckland metropolitan urban limit-ring-fencing urban development', paper presented at the Environmental Defence Society conference, 11–12 June

MRCagney (2014) *The Economic Impacts of Minimum Apartment and Balcony Rules*, Auckland: MRCagney

New Zealand Productivity Commission (2015) *Using Land for Housing*, draft report, Wellington: New Zealand Productivity Commission

OECD (2015) *OECD Economic Surveys New Zealand June 2015: overview*, Paris: OECD

Parker, C. (2015) *Housing Supply, Choice and Affordability: trends, economic drivers, and possible policy interventions*, Auckland: Auckland Council

Royal Commission on Auckland Governance (2009) *Report: Royal Commission on Auckland Governance*, vol. 1, Auckland: Royal Commission on Auckland Governance

Spencer, G. (2015a) 'Action needed to reduce housing imbalances', speech to the Chamber of Commerce, Rotorua, 15 April

Spencer, G. (2015b) 'Investors adding to Auckland housing market risk', speech to the Northern Club, Auckland, 24 August

Trubka, P., P. Newman and D. Bilsborough (2013) *Assessing the Costs of Alternative Development Paths in Australian Cities*, Fremantle: Sustainability Policy Institute, Curtin University

Waterfront Auckland (2012) *The Waterfront Plan 2012*, Auckland: Waterfront Auckland

Zheng, G. (2013) *The Effect of Auckland's Metropolitan Urban Limit on Land Prices*, research note, Wellington: New Zealand Productivity Commission

Sir Geoffrey Palmer

Climate Change and New Zealand is it doom or can we hope?

How to approach the issue

Climate change is a wickedly difficult problem. It involves a complex matrix of scientific, political, social, economic and ethical considerations. While these many different intellectual perspectives are important, they also pose problems in arriving at appropriate solutions.

In order to solve the issue of climate change it is necessary to draw on many academic disciplines. Virtually all the sciences are engaged: biology, chemistry, geology, and physics and atmospheric science, ecology, genetics, mathematics and meteorology; also geography, a discipline that spans both natural and social sciences. Engineers are

also increasingly important. Philosophy, ethics, feminism and anthropology all offer insights that are valuable on this most difficult issue. Economics and the role of the market in allocation of resources looms large in climate change, but when it comes to climate change the market fails to capture many of the

values and contributions that are at play. Successful analysis is all about asking the right questions.

Ecosystems provide many services for all of us, but we are oblivious to many of them. The global atmosphere is vital to life on this planet. It is an asset that all countries hold jointly. It can be looked upon as a global commons. We know about the tragedy of the commons. As Garrett Hardin pointed out in 1968, freedom in a commons brings ruin to us all (Hardin, 1968). How does the market cope with pollution and destruction of a natural feature as large as the atmosphere? Badly, is the short answer. So regulation is necessary, both international and domestic.

But in the end, a policy has to be developed to combat climate change. And the key element with this and other policies lies in the political will being present. So far on this issue both internationally and domestically the will is absent. If politics is the art of the possible, then the climate change challenge may be testing us beyond the collective means at our disposal. New Zealand's political response has been lamentable so far, and it is getting late in the day if success is to be achieved in combating

Sir Geoffrey Palmer QC is a Distinguished Fellow in the Faculty of Law and Centre for Public Law at Victoria University of Wellington and Global Affiliated Professor of Law, University of Iowa. This article is based on an address to a meeting co-sponsored by the Wise Response Society and the Division of Sciences, the Faculty of Law, the Centre for Sustainability and the Department of Social and Preventive Medicine of University of Otago on 5 October 2015.

climate change. We have made little progress internationally since the 1992 United Nations Framework Convention on Climate Change was agreed at Rio de Janeiro at the Earth Summit. I went to the meeting and here is what I wrote about it at the time in the *Washington University Law Quarterly*:

The biggest diplomatic gathering in the history of the world which more world leaders attended than any international conference before did not summon up the collective political resolve necessary to deal with the global environmental challenge. Progress was simply insufficient due to a failure of the political will. (Palmer, 1995, 1992a)

... a bland and general brush-off suggests ... policy in this country is driven not by evidence but rather by short-term political considerations.

Under the climate change convention there have been 20 conferences of the parties since 1992 and exceedingly little of substance to show for it; certainly nothing that even begins to solve the problem. It is 23 years since Rio. We do not have another 23 years to solve this problem. Sharp reductions in the emissions of greenhouse gases quickly are required in order to avoid doom. We can accomplish the goal, but it will not be easy.

I was minister for the environment when the first report of the Intergovernmental Panel on Climate Change was published, and I announced in August 1990 the New Zealand policy to reduce emissions.¹ Building upon my experience as minister and the international meetings I had attended, I began teaching international environmental law in the United States. I wrote quite extensively in the international journals on the subject, and produced with two American colleagues a law school teaching text, now in its third edition (Carlson, Palmer and Weston, 2012).² Watching developments

over the years has filled me with an increasing sense of worry as to whether the world will ever successfully conquer this problem.

Calculus of the risk

I want to suggest that lawyers too have something to contribute to the debate. To succeed in combating anthropogenic climate change, regulatory mechanisms, both international and national, are required urgently. The instrument choices, their drafting in law, their negotiation, compliance and enforcement are legal issues. These are issues about which rigorous analysis is required if judgements are to be made concerning the adequacy of progress. Another legal issue is the domestic and international possibilities of

legal action should the responses continue to be inadequate.

Let me offer one legal approach at the beginning. Years of teaching torts, the law relating to civil wrongs and the allocation of liability, persuades me that climate change, like many other problems, is all about risk analysis. A calculus of the risk analysis goes like this:

1. What is the probability that the atmosphere will heat up beyond 2°C as a result of anthropogenic climate change? (P)
2. How grave will the injuries and consequences be if the eventuality occurs? (L)
3. What is the cost and burden of taking adequate precautions to ensure that the warming does not occur? (B)

The matter can be looked at in algebraic terms: if the burden and costs of mitigation (B) are less than the probability of climate change occurring, multiplied by the consequences if it does – that is to say, if B is less than L

multiplied by P – then we should take steps to stop it. It will be much cheaper in the long run to do so.³

To answer question one we must look at the science, and the science is clear. There really isn't much need to review it in detail. It is well known and has been exhaustively reported on for many years since 1990 by the Intergovernmental Panel on Climate Change in voluminous reports. One no longer hears fearful prognostications by those who doubt the science.

Professor James Hansen of Columbia University, formerly of NASA, now argues that the target of keeping under 2°C temperature rise is a dangerously inadequate target. In a 2013 paper he argued, with other colleagues, that the dangerous effects of climate change will start occurring at a temperature rise of 1°C. While the 2°C target is now almost out of reach, or becoming so, he argues, a 1°C increase will lead to a massive destabilisation. The abstract of the paper says:

Rapid emissions reduction is required to restore Earth's energy balance and avoid ocean heat uptake that would practically guarantee irreversible effects. Continuation of high fossil fuel emissions, given current knowledge of the consequences, would be an act of extraordinary witting intergenerational injustice. Responsible policy making requires a rising price on carbon emissions that would preclude emissions from most remaining coal and unconventional fossil fuels and phase down emissions from conventional fossil fuels. (Hansen et al., 2013, p.1)

Associate Professor Ralph Chapman of Victoria University of Wellington has recently written a wonderful little book entitled *Time of Useful Consciousness: acting urgently on climate change* (Chapman, 2015).⁴ It is tightly written, scientifically accurate and comes from an informed policy point of view. He reaches similar conclusions to Hansen, emphasising the risk of breakdown in governance as temperatures rise.

I note that one of the co-sponsors of this address, Wise Response, made a detailed submission to Parliament petitioning some action on the point. That petition required that 'a holistic assessment should be undertaken of the range of risks that threaten New Zealand's future social, economic and environmental security' so that the risks could be addressed and the potential consequences averted (Finance and Expenditure Committee, 2015). The petition was rejected. It also called for cross-party support for that policy. The majority of the Finance and Expenditure Committee said that work was going on within the government and making good progress. Such a bland and general brush-off suggests that policy in this country is driven not by evidence but rather by short-term political considerations.

So, what is the magnitude of the predicted consequences of anthropogenic climate change? They include:

- damage to ecosystems and loss of biodiversity and species;
- damage to agricultural and forestry production through drought, forest fires, changes in precipitation, and increases in temperatures that will change land use;
- increases in sickness and disease from heat-related illnesses and death and the spread of infectious diseases;
- increased acidification of the oceans due to greater uptake of carbon dioxide, with dangers to aquatic life;
- damage to human welfare through emergencies caused by greater extreme weather events. The need for strengthened infrastructure for buildings, coastlines and roads will be considerable;
- life in a number of small island nations and some more populous ones is likely to be severely disrupted and a large number of people displaced resulting from increased sea levels. Increases in sea levels are likely to reach a metre by the end of the century.

Looking at the calculus of the risk as an equation in the way I have suggested, the decision to mitigate seems somewhat obvious. I cannot provide estimates of the costs if we fail to mitigate, but their

magnitude is great. Warming above 2°C, so the science tells us, spells catastrophe; or at least that was what we used to think. Now it appears the science says anything over 1.5°C spells disaster. Analysis using the precautionary principle, an established principle of international environmental law, would lead to the same conclusion.

There are two sides to the climate change issue, mitigation and adaptation. Both will be required. Both will be expensive. If there is no mitigation, the result for this planet and the people who inhabit it will be a tragedy. The difficulty with this tragedy is that it is occurring in slow motion. You cannot see it. Television doesn't easily depict it, unlike the current refugee crisis in Europe, where people's passions are moved by the pictures they

to mitigate. Economies depend upon the capacity of ecosystems to support life. The bottom line in this debate seems clear. We cannot wait until adversity sets in because it will then be too late to stop it.

New Zealand's current low-key approach to the whole issue of climate change will need to change, and change quickly. Because we do not have solutions yet for methane is no excuse for failing to do anything effective to reduce carbon emissions. Serious issues about the use of fossil fuels in energy and transport, and emissions of long-living nitrous oxide from ruminant animals, all require attention. While there may have been a prospect earlier that New Zealand could have been positioned as a world leader

New Zealand policy exhibits an indifference to the phenomenon of climate change both at the international level and domestically

see on the television screen. Climate change is not of this order, or at least not yet.

We have known since 1992 when the United Nations Framework Convention on Climate Change was negotiated and finally agreed at the conference at Rio de Janeiro that 'stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' is required. Those are the words of the convention itself in article 2. And it goes on to say such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. Much of the fear about doing anything decisive about climate change lies in the fear of adversely affecting economic growth. It is worth remembering that the capacity of the economy to produce anything will be drastically reduced if nothing is done

in renewable energy and started making progress in this space, it now seems that we are slow 'followers' on the issue, and we are in bad company. New Zealand policy exhibits an indifference to the phenomenon of climate change both at the international level and domestically. Our weak domestic policies have weakened our ability to be progressive at the international level and assist in the production of successful outcomes in Paris.

While New Zealand will not fare as badly as other countries, particularly Australia, in practical terms New Zealand will experience:

- increasing frequency and intensity of flood damage to settlements and infrastructure;
- droughts in the east and increased wildfire risk to ecosystems and settlements;
- big consequences for climate-sensitive primary industries;
- sea level rise and coastal inundation; and

- species loss and changes in land use. (Reisinger and Kitching, 2014, p.1413)

The point here is that, while the burdens of climate change will fall unequally upon the nations of the world, they will all have to cooperate together to be successful in combating the effects. Further, we cannot wait for top-down changes. Individuals, communities and cities can all take decisions to lessen the risk. This is beginning to occur.

What are the prospects for success at Paris at the end of 2015?

International negotiations on climate change have been progressing fitfully for more than 20 years. They are planned to move to a climax in Paris in December

take place. Everyone is hopeful of making progress, but whether real progress will be achieved remains dangerously uncertain.

International environmental governance is weak, and the explanation for that lies in the institutions of international law. The negotiating of treaties is dominated by the principle of unanimous consent. Nations cannot be bound to treaties to which they do not agree. The burden of state sovereignty poses obstacles to progress in every direction. Unless there are clear rules and obligations that are enforceable, the prospect of solving the problems of climate change seems remote. Securing the necessary level of voluntary agreement between nations looks difficult 23 years after the Framework Convention on

required in any domestic legal system. Nations have legislatures. They pass laws. Those laws are binding on everyone in the country, whether they agree or not. There is no international equivalent of a legislature for climate change, despite the best efforts that were made in providing for majority decisions in some aspects of the convention (Palmer, 1995, 1992b). In the absence of a legislature, climate change tends to look a bit like a classic game of the prisoner's dilemma.

The international legal order is not fit for purpose when it comes to dealing with climate change. The incubus of outdated ideas about state sovereignty too often prevents the required outcomes in climate change negotiations. The frustration, the waste of time and resources and the spinning of wheels that these negotiations involve should not be underestimated. The failures are due to the structural weaknesses of the international legal framework. That means that to secure change a great deal of political leadership will be required at Paris. A group of legal experts recently released the Oslo Principles on Global Climate Change Obligations 'to identify and articulate a set of Principles that comprise the essential obligations States and enterprises have to avert the critical level of global warming'.⁵

The good news is that there does exist a pathway that will allow this battle to be won. But we are running out of time. The longer we leave it, the harder it is going to be and the more painful will be the costs of adjustment. We probably have little more than 20 years to get it right. The tipping points are not far away. The scientific literature says to me that zero emissions by 2050 or 2060 will be necessary, depending upon the level of risk we are prepared to tolerate. In order to achieve that we are going to have to transform the economy not only of New Zealand but also in many other countries.

Much of the adjustment lies in energy policy, and in energy policy New Zealand is relatively well off. We have a high level of renewable energy as matters stand, and it could be increased quite easily and quite rapidly. Economic growth has been driven internationally to a large degree

The scientific literature says to me that zero emissions by 2050 or 2060 will be necessary, depending upon the level of risk we are prepared to tolerate.

this year. This will be the 21st conference of the parties to the convention, and the progress in curbing global emissions from those first 20 meetings has been poor. We are going backwards. Emissions in 2010 exceeded 1990 levels by 45% (Olivier et al., 2011). The Ministry of Foreign Affairs and Trade in its October 2014 briefing paper to the incoming government stated the main issue accurately and succinctly:

Climate change is the most urgent and far-reaching threat we face, and the current negotiations on climate change are the most important multilateral negotiation now under way. Positions taken by countries on climate change and their readiness to contribute to global solutions will increasingly define the way that others perceive them politically and economically. (Ministry of Foreign Affairs and Trade, 2014, p.7)

We do need to understand the legal context in which these negotiations will

Climate Change was agreed. Individual country commitments do involve specific costs now. The benefits, on the other hand, will be reaped by future generations.

The issue of fairness to future generations arises in many areas of international environmental law, but it is particularly prominent in climate change. Combating climate change can be seen as a public good: even countries that do not contribute to mitigation will receive the benefits of it. So nations are interested in ensuring in the negotiations that their own costs are outweighed by the benefits they receive from the mitigation of other nations. And deep cuts in emissions now only bring benefits years down the track. The higher the ambition, the higher the costs. The delays and the costs make it easier for domestic opponents to defeat changes politically. The strong levels of compliance required to make the agreement work will also generate political pressure and resistance.

Consent is required in the international legal system. It is not

by cheap fossil fuel energy. Since 70% of greenhouse gas emissions worldwide are from fossil fuels (about 50% in New Zealand), a transformation to a low-carbon economy is necessary in order to achieve sustainability.

The Paris negotiations revolve around Intended Nationally Determined Contributions (INDC). This is a method of trying to change the way in which the negotiations occur so that, instead of defining goals each country has to meet, which was the approach under the now outdated Kyoto Protocol, nations make an offer. And when they make that offer the results of it will not be legally binding, although better targets may become binding in the future. What is clear is that the cumulative results of all these offers look almost certain to fail to meet the 2°C goal that has been set for these negotiations.

New Zealand's Intended Nationally Determined Contribution offer was a 30% reduction from 2005 levels by 2030, which is equivalent to 11% below 1990 levels, and even then it is subject to qualifications and conditions. The internationally-based Climate Action Tracker says that with the cheap credits New Zealand has accumulated, this allows a large increase in greenhouse gas emissions of 74–94% above 1990 levels by 2020.⁶ Thus, it will not meet the government's own goal for 2050 (a 50% cut), and we have no idea how that goal is ever going to be met as matters stand.

The Royal Society of New Zealand submitted to the consultation, conducted by the government in double quick time, that New Zealand's targets should be around a 40% reduction in net emissions relative to 1990 gross emission levels by 2030 (Royal Society of New Zealand, 2015). The truth is that if every country behaved the way New Zealand has in terms of its INDC offer, the increase in temperature would exceed 3°C or perhaps even 4°C: that is to say, catastrophe.

The objective of the convention under which the negotiations are taking place is stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. This is a good place to

begin the analysis of what constitutes 'success'. Nailing down with some precision what success means in the context of these negotiations is by no means an easy task. Is success securing of a binding agreement? Or is it a binding agreement that will keep greenhouse gas emission down to 2°C and prevent anthropogenic climate change? There are engaged here important timing issues. It seems clear at the present moment that a Paris agreement will not itself produce a pathway to reducing greenhouse gas emissions so that increases are held to 2°C by the end of the century (Kolbert, 2015, p.24).⁷ Paris may, however, produce an agreement that has some binding elements. And these could produce, after important iterations in the future, an

signed on for the next phase of Kyoto. Thus, there will be no pressure on New Zealand to do anything until the Paris agreement comes into force, if there is one.

The counterfactual is that the absence of binding targets on nations means there will be no effective enforceability of the agreement, if one is reached in Paris. Commitments offered for Paris by nations on a voluntary basis, on the evidence so far, will not reduce emissions sufficiently to reach the convention objective. There are within the 84-page negotiating text provisions that will oblige parties to progressively enhance their mitigation commitments (cf text, article 15). If that occurs there is genuine hope. On the other hand, there are many low-ball and

The counterfactual is that the absence of binding targets on nations means there will be no effective enforceability of the agreement, if one is reached in Paris.

outcome that will keep within the limit. The tendency to postpone hard decisions has been very powerful in the 20 previous negotiations and we have to hope that will now change.

There exists, on the basis of the present science, a so-called 'representative concentration pathway' of 2.6 for reductions to the necessary level, but to accomplish that will require deep cuts in emissions quickly. Some issues arise in that connection as to what a binding agreement is. The Intended Nationally Determined Contribution pledge can be characterised as a bottom-up negotiation in comparison with previous efforts. This is the new element in Paris talks and deserves attention as to both its strengths and its weakness. These are finely balanced. The unfortunate experience with the Kyoto Protocol meant that not only were the developing countries not in the scheme, but also the binding targets established have not been met (the US and Canada being the standouts), and many, including New Zealand, have not

inadequate INDC offers on the table, of which New Zealand's is one.

For the future, the practical issues of enforceability of any agreement, monitoring and verification become topics of vital importance. The problem of enforcement looms large over the entire enterprise and the weakness of international law must be understood. Reporting and monitoring provisions in the agreement will be critical in order to measure the outcomes from Paris and to discover whether sufficient is being achieved. Compliance – and underlying that, ambition – is a critical issue.

While the Paris approach is new, considerable obstacles need to be overcome for it to succeed. One of these is the conditional nature of many of the commitments so far filed with the secretariat. After Paris, much will remain to be done later. Whether that will occur within the rather small time available to avoid a tipping point remains speculative. In my view we have little more than 20 years to get on the sustainable pathway.

The topics in the Paris text that require agreement are many, complex and potentially divisive. Published in February were 84 pages of horrendously complicated negotiating text surrounded with square brackets, and numerous options that are wide enough to embrace both success and failure on each of the topics. Analysis of the negotiating dynamics and the options in the text is necessary in order to arrive at a judgement about the likelihood of successful negotiations. The issues are not simple:

- mitigation, adaptation, and loss and damage;
- the critical importance and

carbon emissions in some areas of industry, notably steel-making;

- transparency, reporting, accounting and monitoring;
- the overall issue of fairness of the agreement as a whole requires attention.

There have been some positive expressions of political hope out there and they are increasing. That is good, because political will is going to be required in copious quantities.

The accord reached between the United States and China has increased the likelihood of a positive outcome at

International law is notoriously weak on compliance and there will be a lot of room here for backsliding, gaming and prevarication and opportunity for the securing of rewards for free-riding nations if care is not taken. Further endless iteration will mean that we run out of time and cannot mitigate, thus relying on adaptation only, or what one of the early policy pronouncements by President George H.W. Bush called 'No regrets'. Well, there will be plenty of regrets if that ends up being the default position for the whole planet.

New Zealand's domestic law

The complicated interrelationship between international law and domestic law makes it harder to fashion adequate climate change law. New Zealand is bound by treaties it has ratified, but it does not ratify until it has converted the international obligation into domestic law, usually by statute. In legal terms, climate change is a problem of trans-boundary air pollution that requires international action to combat, but the international law and domestic law do not move in harmony with one another. Do we wait until there are binding international obligations to repair our domestic law? That seems to be the approach at present, but prudence would suggest we should get our domestic law in shape and we haven't.

Two prime New Zealand statutes govern most actions on climate change. These are the Resource Management Act 1991 (RMA) and the Climate Change Response Act 2002. The latter act contains the Emissions Trading Scheme (ETS), such as it is. In relation to climate change, both these statutes are highly problematic, deficient and in need of urgent attention. New Zealand domestic law on climate change exhibits characteristic weaknesses of the New Zealand law-making system. Statutes are frequently amended massively, leading to increased incoherence in the statutory scheme. There is often insufficient care taken in the preparation of new statutory schemes, legislation gets rushed and there is a focus on getting it through rather than getting it right. The New Zealand statute book speaks with many voices on climate change and there exist still a number

International law is notoriously weak on compliance and there will be a lot of room here for backsliding, gaming and prevarication and opportunity for the securing of rewards for free-riding nations if care is not taken.

complications surrounding the 'common but differentiated responsibility issues' and how to ensure that all nations, including less developed countries, make reductions in emissions sufficient to stave off disaster, and that the countries that lack capacity are supplied with the means to comply;

- the provision of substantial financial assistance to enable developing countries to change their economies, and allocating the financial burdens among developed nations: how that money will be raised and controlled is critical and the subject of some serious differences between nations;
- technology development and transfer and building the capacity of developing countries to cope is vital. In this respect, decisions relating to renewable energy and reducing reliance upon coal and petroleum need to be addressed, coupled with the absence of technology to reduce

Paris. But whether the commitments will be sufficient to meet the problem cannot be assessed now and will not be capable of being assessed until the Paris agreement is fully completed, if it is. The economic consequences of what may be agreed are likely to be the main drivers at Paris, together with the state of domestic political opinion in the various negotiating states.

The upshot, in my opinion, is that the negotiations in Paris will have to be followed by a lot more negotiations later in order to ensure that the desired target ultimately will be met. An effective agreement requires five essential elements: (1) all nations have to be in the agreement; (2) the membership must be stable over time; that is to say, countries cannot leave to avoid their obligations; (3) all will have to accept deep reductions in emissions; (4) compliance levels will need to be very high (Hovi, Skodkin and Aakre, 2013); (5) the agreement has to be ratified, and there will need to be incentives not only to ratify but also not to leave.

of provisions enabling and providing incentives for fossil fuel exploration.

The RMA was designed and implemented before the magnitude of the climate change problem was fully apparent. The bill was introduced in 1989. Amendments have been made to try and take the issue into account to some degree, but these have been insufficient and have raised more problems than they have solved.

The unsatisfactory nature of the law has caused expensive and lengthy litigation, including at least two journeys to the Supreme Court. In *West Coast ENT Inc v Buller Coal Ltd* the Supreme Court had before it the provisions of the Resource Management (Energy and Climate Change) Amendment Act 2004.⁸ The amendment act directs those operating under the RMA to have particular regard to the efficiency of the end use of energy and the benefits derived from the use and development of renewable energy. However, the amendment act also introduced provisions prohibiting consent authorities from considering the effects of greenhouse gas emissions on climate change when making rules to control discharges into air and when considering an application for a discharge permit (sections 70A and 104E). The amendments required consents and conditions to follow any national environmental standard to control the effects on climate change of the discharge into the air of greenhouse gases. This amendment was to avoid having regional councils arriving at different standards around New Zealand and to avoid double regulation. But in an obvious policy failure by both Labour- and National-led governments, no such standard has ever been promulgated. New Zealand's key environmental statute is disabled from considering what is a critical issue relating to climate change.

While mitigation of global warming under the RMA is important and the law as it stands is clearly deficient, the statute is also the prime mechanism by which climate change adaptation must be addressed in New Zealand. Here the approach of central government has been to leave it to local authorities, with little help or guidance (Ministry for the Environment, 2008b).⁹

No signals are given that central government regards the issues as a priority. The Ministry for the Environment is currently in the process of updating its climate change adaptation guidance for local government, but that is not enough. What is required in my opinion is a national environmental standard promulgated under the RMA to avoid having councils argue the science and re-litigate with their communities over and over again, as recently seen in Christchurch.

The range of future difficulties that will have to be dealt with under the RMA, the Building Act 2004, the Civil Defence and Emergency Management Act 2002,

Fortunately, however, some good work is starting to emerge in cities such as Auckland and Wellington, which are now moving ahead of central government.

The Climate Change Response Act and the Emissions Trading Scheme

The Climate Change Response Act 2002 was amended in 2008 to initiate the Emissions Trading Scheme. The act started life as a serious response to the climate change problem, but it has suffered the fate of many statutes in New Zealand. When the government changed it was massively amended, several times. It has lost coherence. It was substantially

The complexity of the institutional arrangements, the powers of the minister, the chief executive, the registrar, the inventory agency, and the wide powers to direct under section 8A fill me with dread as a lawyer.

the Land Drainage Act 1908 and the Soil Conservation and Rivers Control Act 1941 as a result of climate change will include:

- inundation of coastal land by the sea;
- increased flooding and slips;
- building on land subject to hazards and floods;
- catchment management and river protection works;
- the provision of robust infrastructure;
- future settlement patterns and changing demographics; and
- planning changes as a result of climate change.

Serious quantities of risk analysis are required. One would have thought a properly thought through national strategy with a strong emphasis on community engagement was required. But there is no sign of one. Local authorities are left to struggle through the thicket with little help and no direction (see Ministry for the Environment, 2014b).

weakened, obligations were deferred and the changes favoured emitters. The act suffers now from a myriad of public law problems. When I was teaching the statute last year I found that it was a treasure trove of doubt, difficulty and obstacles. It creates a ministerially approved market for emissions trading. The power of the minister and of other authorities responsible to him or her to change almost every detail of the market does not inspire confidence in investors. Who wants to participate in a market that can change at any time at the whim of a minister?

Advising participants in this market is a legally fraught undertaking. And I am not here dealing with the act's lack of bite in reducing greenhouse gas emissions. I am talking about the words, fish-hooks and traps contained in the 481 pages of the statute. The complexity of the institutional arrangements, the powers of the minister, the chief executive, the registrar, the inventory agency, and the wide powers to direct under section 8A

fill me with dread as a lawyer. As a law it is not fit for purpose.

Added to that, the statute has had almost no effect in reducing New Zealand's greenhouse gas emissions. The failure to set a carbon price is fundamental, coupled with the piecemeal and delayed decisions in implementing it. Agriculture, the sector that emits more greenhouse gases than any other, receives a free ride. New Zealand has an unusual emissions profile in that nearly half of our total emissions are produced by agriculture, mainly methane and nitrous oxide from farm animals and some nitrous oxide from farm fertiliser. But carbon dioxide

The weaknesses of the New Zealand Emissions Trading Scheme are notorious.¹¹ Among its problems are:

- it will have a negligible effect in reducing domestic emissions under its current settings;
- the only reason New Zealand will meet its Kyoto commitment for 2008–2012 will be units acquired under Kyoto from short-term forestry absorption, not that New Zealand has been reducing its gross emissions; New Zealand's gross emissions are in fact increasing;
- forestry trading seems to be at a standstill;

... the ministry points out that New Zealand has a long-term target of reducing its net emissions to 50% below 1990 levels by 2050.

from the energy sector has grown by 45% compared to 1990 emissions. On current settings the Emissions Trading Scheme, the main instrument for reducing emissions, will reduce gross emissions by 0.4% in the year 2030 compared with the situation if the government had taken no action (Sustainability Council of New Zealand, 2014).¹⁰

We seem prepared to ignore in New Zealand the basic economic principle that all polluters need to face the full cost of their actions as a deterrent, so that externalities are avoided and the public is not subsidising polluters. Any emissions trading scheme based on a cap-and-trade system requires a cap on the total amount of emissions. The New Zealand system does not have one. The weak price signal has had negative impacts in the forestry sector. The price of carbon is currently not sufficient to deter deforestation or incentivise new planting. The failure to set a proper carbon price has been seriously criticised by the parliamentary commissioner for the environment, a person with statutory independence (Parliamentary Commissioner for the Environment, 2012).

- since New Zealand did not sign up for a second Kyoto commitment, New Zealand emitters have now lost access to Kyoto's flexible mechanism;
- a failure to implement recommended general quantitative limits on offset use: buying cheap units elsewhere means no pressure comes on domestic emitters to reduce emissions;
- there are few incentives provided to invest in de-carbonisation. Indeed, the carbon bill New Zealand will face is effectively being socialised. The oil, coal and dairy industries are all being subsidised in this sense, but renewable energy is not;
- it is unlikely that any emissions trading scheme can produce zero emissions, yet that is what the science requires for success (see Richter and Chambers, 2014; also Macey, 2014).

The record New Zealand has on reducing its carbon emissions suggests that a carbon budgeting process is required which details the expected carbon flows and indicates how these can be reduced by practical actions. The ETS should be strengthened, and this

would be an ideal time given the low price of oil. New Zealand needs to start investing in a low-carbon infrastructure and make a commitment to a zero fossil fuel electricity sector. Transport needs attention, and so does forestry. Some attention to agricultural fertiliser will have benefits not only for climate change, but also water quality. It is positive that New Zealand is leading international research on agricultural emissions.

No convincing explanation has been offered by the government for its existing domestic climate policy. Certainly the Ministry for the Environment's briefing papers to the incoming government are clear about the challenges. The officials told the government:

New Zealand's greenhouse gas emissions are small on a global scale (0.15%), however in 2011, our emissions per capita were ranked 22nd highest in the world, and 6th in the OECD. In 2015, the government will participate in negotiations to agree a new international climate change agreement on reducing global greenhouse gas emissions from 2020. New Zealand faces domestic and international pressure to make credible commitments in the face of increasing scientific evidence that urgent and substantial global action is required. (Ministry for the Environment, 2014a, p.4; see also Ministry for the Environment, 2008a)

Later in the briefing paper the ministry points out that New Zealand has a long-term target of reducing its net emissions to 50% below 1990 levels by 2050. However, it remarks that 'our gross emissions have increased by 25% since 1990, and are projected to rise substantially in the time to 2050, based on current settings' (Ministry for the Environment, 2014a, p.21). How will we get there from here? To set a target with no indication of how it will be reached seems irresponsible policy to me.

Some constitutional points

The New Zealand system of democratic politics concentrates remorselessly on the short term. General elections occur every

three years. Increasingly, decision-making is based not on evidence or facts but upon political considerations concerning what focus groups and public opinion polls suggest are the preferences of the public at any given time. The imposition of increased costs, taxes or expenditures are never popular. The problem with climate change stems from the reality that the longer we leave adjustments towards a low-carbon economy, the harder the changes will be to make.

There seems to be in our present structures of governance an inability to pursue a long-term vision for the country over time and to assess how we are doing, and to make adjustments. The system of governance seems increasingly concentrated on the short term. The domination of public debate by trivia and political pyrotechnics at the expense of serious discussion of policy direction has become debilitating. Warning the public of the dystopian horrors that may await them and their children resulting from climate change is not likely to make politicians popular either.

What is required in dealing with an issue like climate change is to set out clearly and repeatedly what the science shows concerning anthropogenic climate change, what the consequences will be if it is not mitigated and what the policy plan to deal with the adverse consequences is. On an issue like this it is no use following the example of Mr Micawber by ignoring it and waiting for something to turn up. What will turn up will be damaging to everyone in the end. What is required is political leadership.

Political polarisation on the issue must be avoided. New Zealand in this regard needs to develop a cross-party consensus policy of the type that was agreed in the United Kingdom before the last general election between the prime minister, the deputy prime minister (leader of the Liberal Democratic Party) and the leader of the opposition. They signed on to a climate change policy pledge before the May 2015 general election (Clark and Pickard, 2015). They agreed to a fair, strong, legally binding global climate deal which limits temperature rises to below 2°C. They agreed to work together across party lines to agree on carbon budgets in

accordance with the UK Climate Change Act 2008. And they agreed to accelerate the transition to a competitive, energy-efficient, low-carbon economy and to end the use of unabated coal for power generation. As a strong supporter of MMP, I am at a loss to explain why such an approach cannot be achieved in New Zealand.

Regulatory lurches on the issue, following changes in government, is exactly what New Zealand does not need. But it is exactly what we have had. Anyone who doubts it should watch the wonderful New Zealand documentary *Hot Air* (Barry and King-Jones, 2014)

The doctrine of parliamentary sovereignty and the absence of any constitutional protection for the environment make this difficult in New Zealand, more difficult than in other countries.

analysing climate change politics in recent years in New Zealand. The vested interests, the lobbying and the pressures have been intense. They have aimed to prevent policies being adopted to address the problem and to reverse them when they have been adopted. What those economic interests so determined to stave off change need to remember is that the economy will be seriously incapacitated unless mitigation is pursued. Profits will dry up.

I am often asked: should the policies of the New Zealand government continue to fall short, what legal remedies are available in the New Zealand courts to nudge ministers into the appropriate action. The doctrine of parliamentary sovereignty and the absence of any constitutional protection for the environment make this difficult in New Zealand, more difficult than in other countries. There are, nevertheless, a number of avenues that could be pursued if the performance does not markedly improve after Paris.

Included among these are a complaint to the Waitangi Tribunal, and judicial review of ministerial decisions for failure to take account of mandatory relevant considerations or taking into account irrelevant considerations. Section 5 of the Resource Management Act may offer some assistance, and there is the application of the American public trust doctrine that had its origins in the English common law, and the New Zealand Bill of Rights Act.

Let us hope it does not come to litigation. The situation needs to be examined closely when the new policies are announced after Paris, because

assuredly new policies are going to be required. I do not think it is helpful to the cause to develop the various legal theories on offer in detail in public now. Suffice it to say I know there are many concerned lawyers examining the options.

Small island developing states

I cannot end this address without some reference to the plight in which small island states find themselves. Widespread coastal flooding from the sea and water rising as high as a metre by the end of this century will have terrible consequences, and some of these nations may go out of existence altogether. It could even happen more quickly, as some scientists are now predicting, based on the melt in Antarctica. In many countries large numbers of people live near the coast.

I said at the University of Papua New Guinea in May 1989:

In our neighbourhood are many small nations, rich in history, culture

and language. There are several nations in the Pacific region that are made up totally of atolls. The entire land base of these vital, unique and important countries may one day be physically destroyed. (Palmer, 1990, p.70)

In that respect, I suggest the attitude adopted by Australia and New Zealand at the meeting of the 2015 Pacific Forum was most unfortunate. The destruction of entire cultures in our neighbourhood is a serious matter and commands our attention and compassion.

The risks of climate change and the danger to the very existence of a number of nations, plus widespread human displacement of peoples, is going to lead to a security situation of the most serious proportions. This issue has been raised in the United Nations Security Council on four occasions, most recently in June this year, while New Zealand was in the chair. The Security Council has failed to grasp the nettle. If the climate change talks in Paris fail it is likely that in the course of time the Security Council will be confronted with unmanageable geopolitical security issues.

Conclusion

I want to end with some quotations from Pope Francis's encyclical letter *On Care for our Common Home* of 24 May 2015. I

am not a religious person, but profound moral questions inhabit the climate change space we occupy.

The climate is a common good, belonging to all and meant for all.

Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it.

The problem is aggravated by a model of development based on the intensive use of fossil fuels, which is at the heart of the worldwide energy system.

Our lack of response to these tragedies involving our brothers and sisters points to the loss of that sense of responsibility for our fellow men and women upon which all civil society is founded.

The exploitation of the planet has already exceeded acceptable limits and we still have not solved the problem of poverty.

- 2 The book has an accompanying volume of relevant international treaties that runs to 1,500 pages.
- 3 *United States v Carroll Towing Co* 159 F.2d 169 (2d Cir, 1947).
- 4 Professor Chapman was kind enough to read a draft of this article and assist me with comments.
- 5 Oslo Principles on Global Climate Change Obligations, released at a symposium at Kings College, London, 30 March 2015, <http://www.osloprinciples.org/principles/>.
- 6 <http://climateactiontracker.org/countries/newzealand>.
- 7 The head of the convention secretariat is quoted as saying: 'If anyone comes to Paris and has a eureka moment – "Oh my God, the I.N.D.C.s do not take us to two degrees!" – I will chop their head off anyone who published that. Because I've been saying this for a year and a half.'
- 8 *West Coast ENT Inc v Buller Coal Ltd* [2013] NZSC 87, [2014] 1 NZLR 32.
- 9 There have been substantial developments in the available scientific understandings of the hazards since 2008, contained in voluminous reports of the IPCC.
- 10 I acknowledge the help Simon Terry, researcher of this report, has given me with this article.
- 11 The *Climate Change Performance Index: results 2015*, published by German Watch and Climate Action Network Europe, is a research-based effort using 300 energy and climate experts from all over the world. It now includes emissions from deforestation. The index has been produced in each of the previous ten years. The index rates 58 states that are responsible for more than 90% of energy-related carbon dioxide emissions. The first three positions in the index are blank because no country is judged sufficiently meritorious. Australia ranks second to bottom at 60th. New Zealand ranks at 43rd, one place above the United States. For climate policy we are 'very poor'. In 2007 it should be noted that New Zealand ranked 22nd. China ranks one below the United States. The top two countries are Denmark and Sweden. It should be stated that the Index may lack scientific rigour – it does little more than state the underlying raw data, emissions per capita, change in emissions and share of renewables. It lacks credibility to say New Zealand has a worse climate policy than Egypt, Algeria, India and Iran. The index also assigns an arbitrary low rating to the share of renewable energy. Nonetheless, the index causes reputational damage to New Zealand. For the critique of the index and other observations I am indebted to Professor David Frame, Director and Professor of Climate Change, School of Geography, Environment and Earth Sciences, Victoria University of Wellington. See Burck, Marten and Bals, 2014.

¹ The strategy adopted by the government in 1990 called for priority to be given to reducing the emission of greenhouse gases, rather than focusing on adaptation. The announced aim was a 20% reduction of 1990 carbon dioxide emissions by 2005, as an interim objective. The ministries of Commerce, the Environment and Transport were required to work together to develop a carbon dioxide reduction plan, in consultation with other government agencies, local and regional government and NGOs. The strategy also required the pursuit of an increased use of renewable energy resources in New Zealand. See Palmer, 1990, pp.59-73.

References

- Barry, A. and A. King-Jones (2014) *Hot Air: climate change politics in New Zealand*, <http://www.hotairfilm.co.nz>
- Burck, J., F. Marten and C. Bals (2014) *Climate Change Performance Index: results 2015*, Bonn: Germanwatch
- Carlson, J.C., G. Palmer and B.H. Weston (2012) *International Environmental Law and World Order* (3rd edn; first published 1994), St Paul: West
- Chapman, R. (2015) *Time of Useful Consciousness: acting urgently on climate change*, Wellington: Bridget Williams Books
- Clark, P. and J. Pickard (2015) 'UK political leaders in joint pledge on climate change', *Financial Times*, online edn, 14 February
- Finance and Expenditure Committee (2015) 'Petition 2011/106 of Sir Alan Mark: report of the Finance and Expenditure Committee', Wellington: New Zealand Parliament
- Hansen, J. et al. (2013) 'Assessing "dangerous climate change": required reduction of carbon emissions to protect young people, future generations and nature', *PLOS One*, doi: 10.1371/journal.pone.0081648
- Hardin, G. (1968) 'The tragedy of the commons', *Science*, 162 (3859), pp.1243-8
- Hovi, J., T. Skodvin and S. Aakre (2013) 'Can climate change negotiations succeed?', *Politics and Government*, 1 (2), pp.138-50
- Kolbert, E. (2015) 'The weight of the world', *New Yorker*, 24 August
- Macey, A. (2014) 'Climate change: towards policy coherence', *Policy Quarterly*, 10 (2), pp.49-56
- Ministry for the Environment (2008a) *Briefing for Incoming Ministers: all-of-government climate change programme*
- Ministry for the Environment (2008b) *Climate Change Effects and Impacts Assessments: a guidance manual for local government in New Zealand* (2nd edn), Wellington: Ministry for the Environment
- Ministry for the Environment (2014a) *Environmental Stewardship for a Prosperous New Zealand*, Wellington: Ministry for the Environment

Ministry for the Environment (2014b) *New Zealand's Framework for Adapting to Climate Change*, Wellington: New Zealand Government

Ministry of Foreign Affairs and Trade (2014) *Briefing to the Incoming Minister*, 6 October

Olivier, J.G.S., G. Janssens-Maenhout, J.A.H.W. Peters and J. Wilson (2011) *Long-term Trend in Global CO₂ Emissions*, The Hague: PBL Netherlands Environmental Assessment Agency; European Commission

Palmer, G. (1990) *Environmental Politics: a greenprint for New Zealand*, Dunedin: John McIndoe

Palmer, G. (1992a) 'The Earth Summit: what went wrong at Rio', *Washington University Law Quarterly*, 70 (4), pp.1005-28

Palmer, G. (1992b) 'New ways to make international environmental law', *American Journal of International Law*, 86, pp.259-83

Palmer, G. (1995) *Environment: the international challenge*, Wellington: Victoria University Press

Parliamentary Commissioner for the Environment (2012) 'Submission on the Climate Change Response (Emissions Trading and Other Matters) Amendment Bill', September, www.pce.parliament.nz

Reisinger, A. and R.L. Kitching (2014) 'Australasia', in Intergovernmental Panel on Climate Change, *Climate Change 2014: impacts, adaptation and vulnerability: part B: regional aspects*, Cambridge: Cambridge University Press

Richter, J.L. and L. Chambers (2014) 'Reflections and outlook for the New Zealand ETS: must uncertain times mean uncertain measures?', *Policy Quarterly*, 10 (2), pp.57-66

Royal Society of New Zealand (2015) 'Setting New Zealand's post-2020 climate change target', 3 June, <http://www.royalsociety.org.nz/media/2015/06/Comments-on-setting-New-Zealands-post-2020-climate-change-target.pdf>

Sustainability Council of New Zealand (2014) *New Zealand's Climate Change: targets, projections, and liabilities* (2nd edn), Wellington: Sustainability Council of New Zealand

Fast-track your career in the public sector with a top-level professional qualification with a:

Master of Public Policy *or a* Master of Public Management

- Try the graduate pathway professional programme for a Masters in Public Policy or Public Management with the School of Government.
- This is a one-year course after the completion of a Bachelor qualification.
- Public policy and public management are examined at the postgraduate level.

School of
Government

for more details visit victoria.ac.nz/sog/study



Jason Raven

Financial Incentives to Work

the size of the margin between benefit and in-work incomes

Introduction

Financial incentives to work are an important consideration for policy makers in the realm of welfare and tax policy.

Dominating one corner of the classic ‘iron triangle’ used by policy advisors to illuminate trade-offs between incentives to work, income adequacy and fiscal cost, poor financial disincentives to work can contribute to ‘trapping’ people in poverty. Further, as modern welfare systems have become increasingly ‘active’, with a strong focus on work and increased independence from the state, positive financial incentives have increasingly come to be seen as an important precondition for the effective operation of the welfare safety net.

Jason Raven is a policy advisor for the Ministry of Social Development.

This article uses case studies and international comparisons to study temporal trends in financial incentives to work in New Zealand. It then tests those trends using a sensitivity analysis. The article concludes that the gap between benefit rates and incomes from work (i.e. paid employment) is relatively large, at least in a historical context. However, while the size of the gap may be large, it has been fairly stable for families with children since 2006, even in the face of rising before-tax and after-transfer incomes. This is due to a range of factors, including the abatement of Working for Families (WFF) and other payments as incomes rise, and the non-adjustment of some transfer payments for changes in consumer prices.

Background

Economists commonly use two main measures of financial incentives to work:

- incentives at the ‘intensive margin’, which consider the financial incentive to work a little more, or a little less – to earn another dollar or work another hour;
- incentives at the ‘extensive margin’, which consider the financial incentive to make the big decisions – to

work at all or not to work, to work part-time or full-time. The usual measure of the extensive margin is the 'replacement rate', which looks at the proportion of a person's in-work income that could be replaced if they moved instead onto a benefit: essentially, the size of the gap between benefit and work incomes.

Although both approaches are important, this article concentrates on financial incentives to work at the extensive margin, and asks the question: how have the incentives to work versus remain on a benefit changed in New Zealand over the course of the last decade or two?

The factors that affect the size of the gap between benefits and income from work are the remuneration and transfer payments available when in work versus the support available while out of work. In New Zealand the key supports available for those out of work include the main benefits, the family tax credit for the care of children, and the accommodation supplement.¹ Additional ongoing hardship assistance is available for some people through temporary additional support, and one-off grants and loans are also available for specific costs. For people in employment, remuneration in the form of wages and salaries is usually the primary source of income, but transfer payments from the government, including the accommodation supplement and WFF,² also form a significant part of the package for many people.

In this article the basic income definition includes income from benefits, wages, the accommodation supplement and WFF. I call this 'take home' income to reflect that it is disposable income after adjusting for taxes and transfer payments. Later in the article I also look at income after housing costs are deducted: this measure is simply the 'take home' income with housing costs removed. Following the initial analysis, I add certain other income sources to test the sensitivity of the main findings.

Before launching into the analysis, it is important to put the role of financial incentives in their proper context. Financial incentives are only one factor that influences employment decisions.

Many other factors, such as the availability and suitability of child care, in-work costs, personal preferences, availability of work, health status, other barriers to work, and the structure of the transfer payments themselves, also play a role. Financial incentives are not the only factor that affects employment decisions; nor are they necessarily the most important factor. But they are nevertheless an important policy consideration, for two reasons:

- A weak financial incentive to work risks creating poverty traps, where people are better off remaining on benefits than engaging in employment or human capital development.

vary according to many factors, including family type, benefit type, wage levels, hours worked, geographic location, type of assistance received, and number of children. While this means that exact measures of work incentives cannot be generalised to large groups of the population, many of the high-level trends can. This article concentrates on these generalisable findings. It takes the approach of using three central scenarios to illustrate general trends, before zeroing in on the sole-parent case to conduct a sensitivity analysis to ensure that the high-level trends observed can reasonably be generalised.

While incomes increased substantially for people with children as a result of the WFF changes between 2004 and 2007, take-home incomes for working people with children in these scenarios have remained largely static in real terms since then.

- A strong financial incentive at the expense of inadequate benefit payments may mean the level of hardship among beneficiaries is unacceptable, with consequent impacts on a range of other social and economic outcomes.

Whether any particular margin is good, bad or indifferent is a normative question, and requires an expressed value set to answer. This article does not seek to speak to the adequacy of the margin between benefits and wages, but instead uses a comparison over time to understand the relative size of this margin in the context of New Zealand history, and tests these findings by making comparisons with other nations in the OECD.

Measuring the size of the income difference between on-benefit and in-work incomes

The financial (dis)incentives faced by an individual (as measured by the gap between in- and out-of-work incomes)

Method

The time period for most of the analysis is 2003–14, due to the availability of data. Most of the output is drawn from the Ministry of Social Development's 'effective marginal tax rate model', augmented by the author's own calculations where necessary. For convenience a distinction is made between people 'on benefit' and working zero hours, and 'in work' (working non-zero hours). The scenarios highlight people working 0, 30 or 40 hours. Those working 30 or 40 hours are in some cases receiving a main benefit.

The analysis is based on families renting in South Auckland, and in the base case receiving the maximum accommodation supplement for that region (a sensitivity analysis is undertaken to explore the impact of this assumption). All children are assumed to be aged under 13 years.³ In addition to receiving benefit and no market income, three in-work scenarios have been used to establish the size of

Figure 1a: Take-home income for a couple with two children

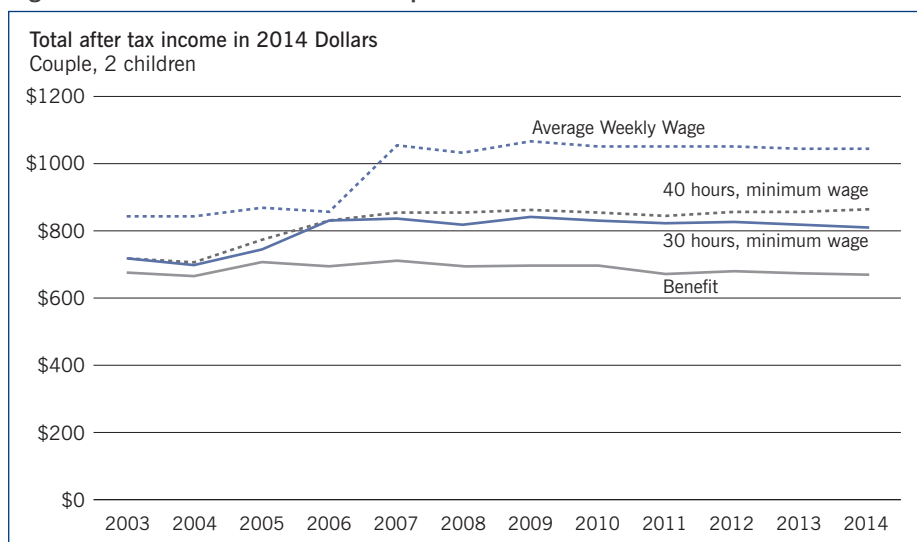


Figure 1b: Take-home income for a sole parent with two children

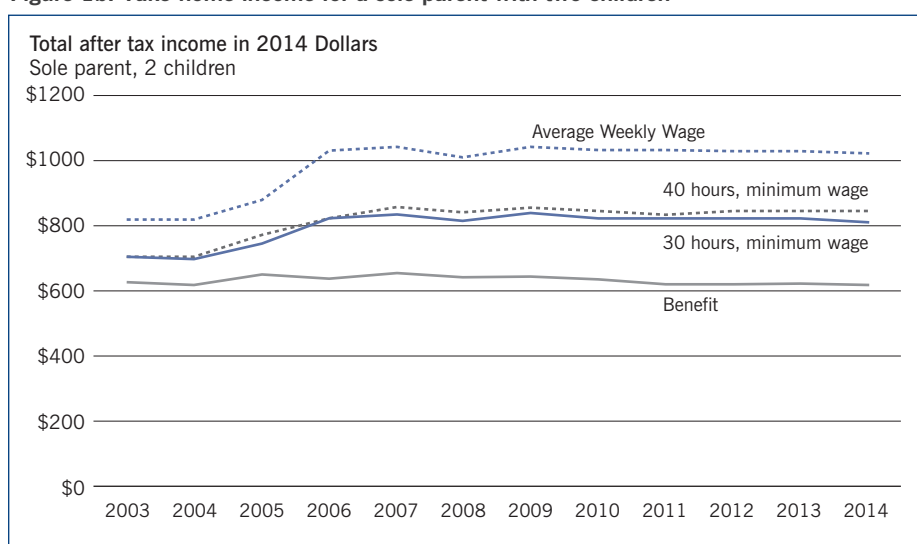
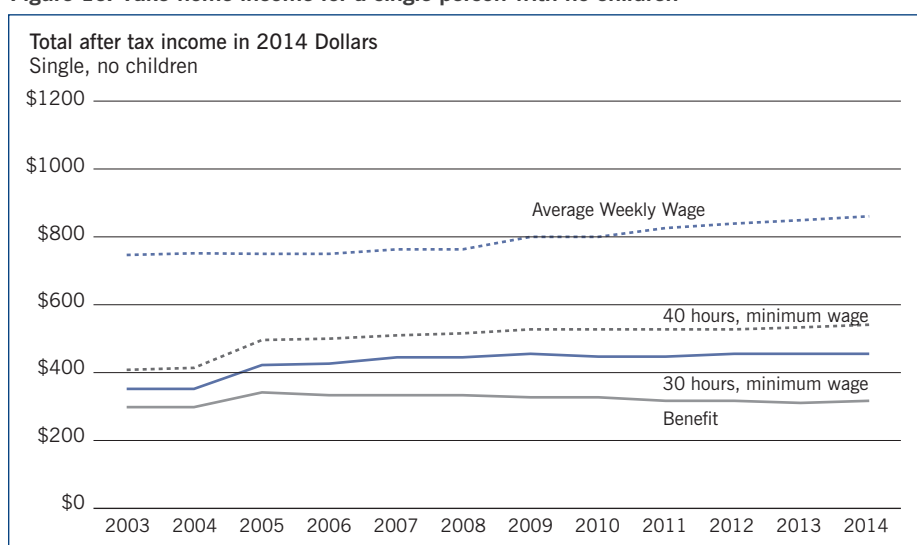


Figure 1c: Take-home income for a single person with no children



the 'gap' or margin between in- and out-of-work incomes: working 30 hours per week at the minimum wage; working 40 hours per week at the minimum wage; and working 40 hours per week

and earning the average ordinary-time weekly wage. For couples it is assumed that the hours are worked entirely by one partner. Incomes are before housing costs unless otherwise stated. Hours less

than 30 per week result either in it being more beneficial for the family to remain on a benefit (in the case of couples), or exactly the same level of in-work income as for the 30-hour case (in the case of sole parents) due to the operation of the minimum family tax credit.

While this analysis is scenario-based, the high-level trends they demonstrate are generalisable, and sensitivity analysis has been conducted to ensure that these high-level findings are robust. The high-level findings hold true for most family types, and for a range of full-time employment levels and wage rates. However, the modelling is notably sensitive to:

- the transfer payments that the family is entitled to (for example, not meeting the qualifying criteria for WFF payments will have a notable impact on the size of the gap);
- whether the family is accessing all of the payments they are eligible for;
- the level of housing costs faced;
- any in-work costs faced by the family, in particular childcare, which can erode the returns from employment.

Each of these factors is explored further in the section on sensitivity analysis.

Results

The size of the gap between benefits and wages

Figures 1a–1c shows take-home income over time for three family types. The figures are CPI (consumer price index) adjusted and displayed in 2014 dollars. The graphs indicate that in these cases the take-home incomes of minimum-wage and average-wage workers with children have increased since 2003, with a marked increase following the Working for Families changes.

While incomes increased substantially for people with children as a result of the WFF changes between 2004 and 2007, take-home incomes for working people with children in these scenarios have remained largely static in real terms since then. There are a number of factors that contribute both positively and negatively to the flat trajectory for in-work take-home incomes since 2007. Tax cuts and periods of real growth in after-tax average and minimum wages over the

period contribute to widening the gap. On the other hand, while the changes to WFF payments increased the gap, they then served to constrain the growth in those incomes through the abatement regime and the non-indexation of some payments (i.e. the accommodation supplement and in-work tax credit). In particular, for families earning the average wage the increases in the average wage have been eroded by abatement of WFF and the accommodation supplement, and by the erosion of the real value of the accommodation supplement and in-work tax credit⁴ component of WFF.

For those earning the minimum wage and receiving the minimum family tax credit,⁵ increases in minimum wages do not flow through into higher real take-home incomes due to the 100% abatement rate for this payment. The very small difference between the take-home earnings of someone on the minimum wage working 30 hours per week or working 40 hours per week also demonstrates this effect. In fact, a sole parent working 20 hours a week at the minimum wage would also have a similar take-home income.

The case of the single person without children further illustrates the point. After 2006, take-home incomes for single people in work in Figure 1 increase more quickly than for those with children, due to the absence of WFF payments, and the absence of the non-indexed accommodation supplement in the average wage case. In the sole parent example explored in Figure 2, the gap has more than doubled in real terms in all cases, increasing by \$211 for the average wage case and \$142 and \$108 respectively for the 40- and 30-hour minimum wage cases.

The net effect of these various factors is that take-home in-work incomes for people without children have steadily grown in real terms, while they have remained basically flat since 2006 for people with children. Out-of-work incomes, on the other hand, have eroded slowly in real terms due to the non-indexation of the accommodation supplement. The net result of a stable or slowly growing gap is illustrated in Figure 2 for the sole-parent case.

Figure 2: Real value of the difference between work at various levels, and benefit

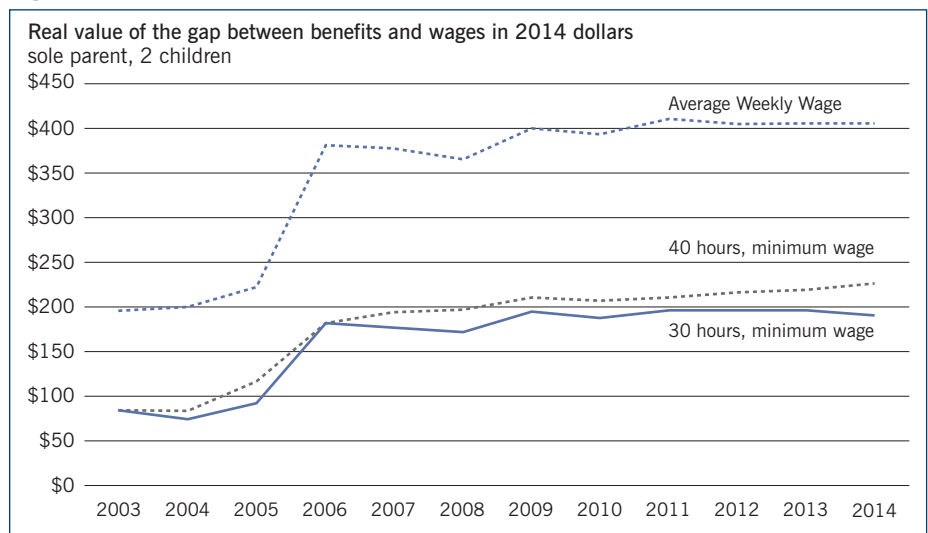


Figure 3: Impact of the Budget 2015 child material hardship (CMH) package

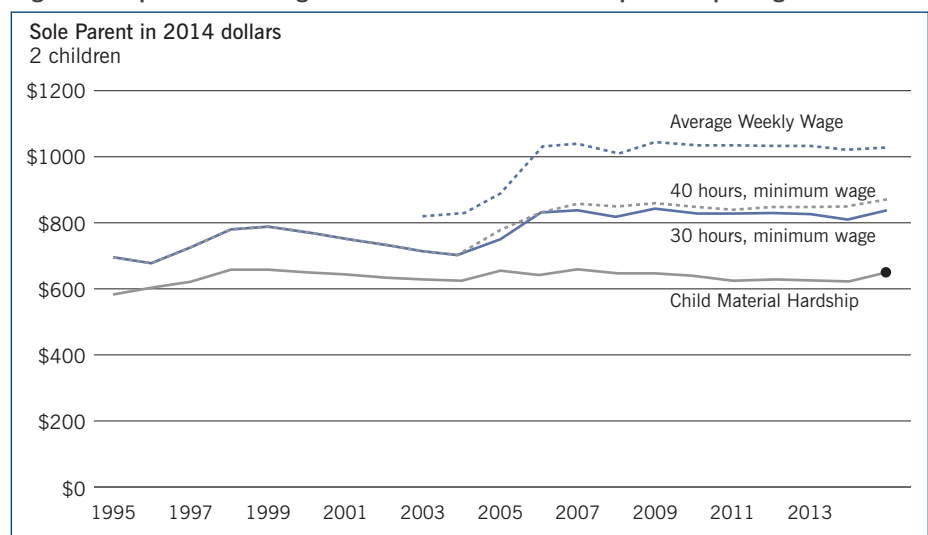


Figure 3 shows the size of the gap between benefits and wages for the sole-parent scenario used above over a longer time period. It confirms that the current gap between benefits and wages is relatively large within this extended historical context.

Impact of the Budget 2015 child hardship package

From April 2016 the Budget 2015 child material hardship package will increase benefit rates and some WFF payments (i.e. the in-work tax credit and minimum family tax credit) for families with children. Figure 3 shows the impact of this package, which will arrest and partially reverse the decline in real incomes (before housing costs) for beneficiaries. However, in the absence of further policy change the longer-term decline in beneficiary incomes will reassert itself. The package

will not have a significant impact on financial incentives to work at low wages, and will only very slightly erode the gap at higher earnings levels.

Sensitivity analysis

The high-level findings above have been tested for a range of other family types, low wage levels and rent levels. The high-level trends are robust to a broad range of different assumptions. However, the modelling is notably sensitive to:

- the level of housing costs faced;
- the transfer payments that the family is entitled to, and whether they are actually accessing those payments;
- in-work costs faced by the family, in particular child care, which can erode the returns from employment.

These sensitivities are explored further below, using the sole-parent scenario as a test case.

Figure 4: After-housing-cost incomes at lower quartile (LQ) rents

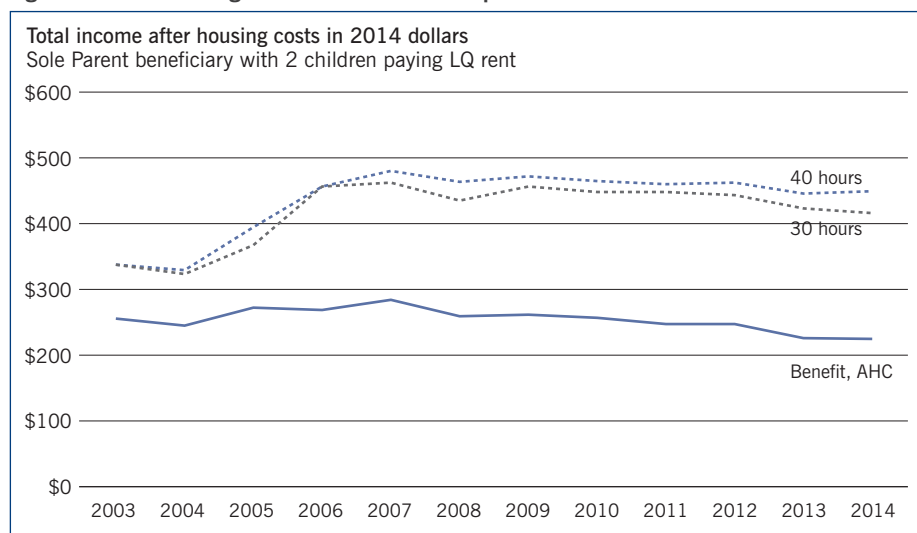
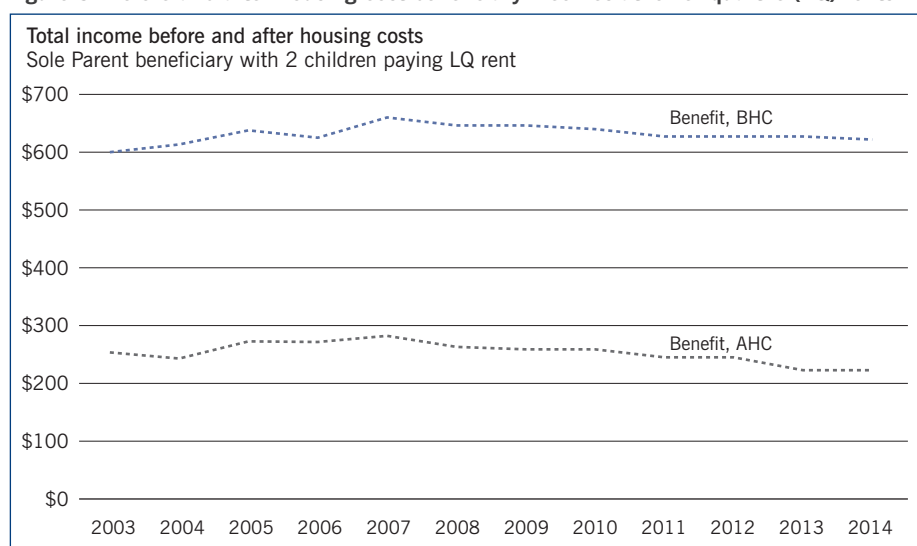


Figure 5: Before-and after-housing-cost beneficiary incomes at lower quartile (LQ) rents



Housing costs

Housing costs and housing benefits are a very important component of a family’s financial situation. So far the analysis has assumed that in each scenario the person pays the rent that triggers the accommodation supplement maxima for accommodation supplement area 2. While this is a common situation (29% of accommodation supplement renters were in area 2, and 45% of them received the maximum rate as at June 2014), a sensitivity analysis is needed to ensure that the high-level trends are not overly sensitive to this assumption, and to understand the trends in incomes after housing is paid for.

Figure 4 shows our sole parent paying the lower quartile rent for a three-bedroom home in South Auckland, and the resulting disposable income after housing costs are accounted for.⁶ The

graph indicates that while the exact size of the gap between on-benefit and in-work incomes is sensitive to the accommodation cost assumption, the same trends are evident when using this altered methodology. With this rental assumption, a downward trend in the disposable incomes of beneficiaries and low-income working people is more clearly evident, and the increase in the financial incentive to work over time is more marked. For lower rental cost locations that have experienced lower rental inflation over the time period, these trends will be less pronounced, but for almost all variations of family type, location and rent level, the downward trend will persist.

Figure 5 shows the impact of looking at incomes after housing costs compared to before housing costs (or ‘take home’). It shows a gradual widening of the gap

between before- and after-housing-cost incomes over time as rents rise and the accommodation supplement formula provides only partial compensation (due to its maximum rates, co-payment and lack of indexation).

The example above is for a sole parent in South Auckland. Altering the geographic location and family type affects the level and slope of the lines in Figure 5, but the features of the accommodation supplement formula (i.e. the different maximum rates for different family types and regions) mean that the overall downward trend persists, while the height of the lines varies considerably (higher-cost locations such as Auckland and Christchurch having considerably lower after-housing-cost incomes than lower-cost locations).

Addition of other transfer payments

The analysis in this article uses a broad but not exhaustive definition of total income, and over time New Zealand has seen a shift towards greater reliance on other supplementary payments. As a result, there is a range of relatively common additional assistance available to people which also affects the size of the gap between benefit and work incomes. The most important financial assistance that is excluded from my analysis and its impact on the basic findings is summarised below:

- Disability allowance: paid to 110,838 beneficiaries at the end of August 2015, the disability allowance has a ‘cliff-face’ abatement at relatively modest income levels (above the income levels for the minimum wage scenarios in this article, but below the average wage scenarios), but is available to beneficiaries regardless of income. Approximately 28,000 families with children receive the disability allowance. Including the disability allowance in the analysis would slightly reduce the gap in the average wage scenarios.
- Income-related rent subsidy: people in social housing receive the income-related rent subsidy rather than accommodation supplement. For subsidy recipients, assistance levels have risen in line with market rents, which reverses the downward trend

in real after-housing-cost incomes for this group. However, the abatement regime for the income-related rent subsidy is sharper, resulting in a smaller gap between benefit and work incomes for social housing tenants, higher effective marginal tax rates over a longer income range, and higher incomes for those on benefits.

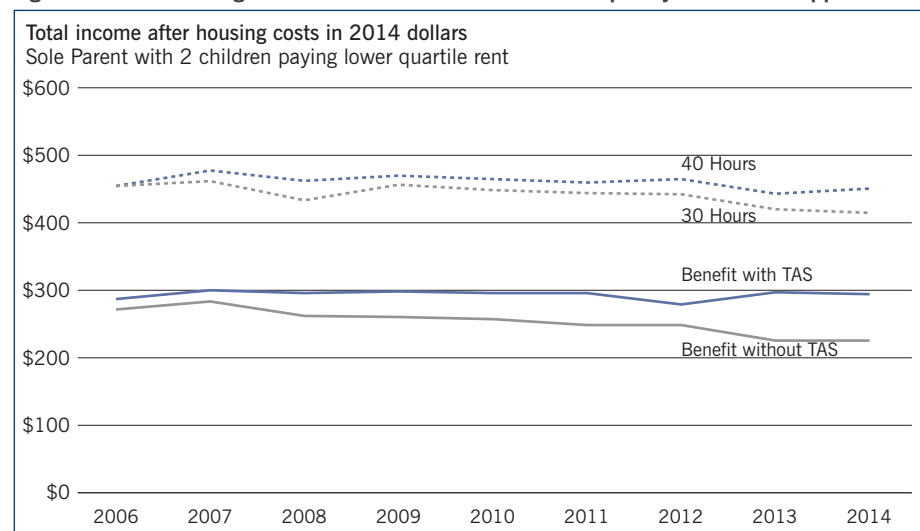
- Special needs grants and recoverable assistance: these payments effectively increase the financial help available to beneficiaries and very low income earners relative to workers on slightly higher incomes. For this analysis, these payments have a similar impact as the disability allowance on financial incentives.

Temporary additional support warrants special attention as it has a specific role in topping up incomes for people facing high essential costs such as accommodation costs. Temporary additional support is an ongoing, non-taxable supplementary payment intended as a last resort to help people with their regular essential living costs when these cannot be met from their own resources. It has a maximum rate equal to 30% of the relevant rate of main benefit. Temporary additional support is granted for a period of 13 weeks at a time, but can be renewed indefinitely.

Temporary additional support was received by 58,389 people (about one in five beneficiaries) at the end of July 2015. Accommodation costs are the largest driver of receipt of temporary additional support, followed by disability costs. Temporary additional support increases the income available for those receiving a benefit relative to people in work, and does so most significantly for those with high accommodation costs. It therefore reduces the gap between benefit and work incomes (by up to \$71 per week in the example below), and increases effective marginal tax rates for very low income people.

Figure 6 incorporates temporary additional support into the calculation, for a sole parent with two children.⁷ By and large, the impact of including temporary additional support is to eliminate the downward trend in after-housing-cost incomes for beneficiaries.

Figure 6: After-housing-cost incomes with and without temporary additional support (TAS)



This phenomenon is what some policy advisors refer to as the ‘squeezing the balloon’ effect, whereby reductions in financial assistance in one corner of the welfare system (in this case the declining real value of accommodation assistance) results in increased assistance elsewhere due to a combination of the interrelationships between different types of assistance. Effectively, temporary additional support improves the incomes of a subset of people with very limited means to support themselves, but is received by only a relatively small portion of beneficiaries.

In-work costs

The analysis above identifies trends in the size of the gap between benefits and wages, but does not give an indication of the sufficiency of the resulting gap. Crucial to this judgement are individual preferences regarding the non-financial benefits of work and the costs associated with being in work (transport, child care and clothing, for example). These costs, particularly child-care costs in the case of sole parents, are often the critical factor in determining whether there is a return from employment at all, and the size of that return.

The absence of analysis of the impact of in-work costs on the size of the gap is an important deficiency in this article that deserves further exploration.

International comparisons of replacement rates

International comparisons of financial

incentives to work are difficult to make due to different labour markets and policy settings. In particular, differences in the way payments are structured can mean that international comparisons are misleading, and significant variations in wage levels and social welfare policy settings also contribute to making between-country comparisons problematic. However, the OECD does provide data in its online database⁸ which suggests that New Zealand’s position in the OECD rankings is unremarkable, and a trend of increasing incentives to work over time is evident.

Figures 7 and 8 show replacement rates for the OECD summary measures in 2012. This is a similar approach to the discussion of the work–benefit ‘gap’ developed in this article. The OECD provides two measures which are replicated here, before- and after-housing benefits and social assistance measures. The measure used is the summary net replacement rate (NRR) – the average of net unemployment benefits’ (including social assistance and cash housing assistance) replacement rates for two earnings levels, three family situations and 60 months of unemployment.

Using the measure *excluding* social assistance and housing benefits (primarily WFF and the accommodation supplement in New Zealand), New Zealand sits in a group of countries towards the higher (i.e. lower incentive to work) end of the OECD, with countries like Germany, Australia and Sweden. The measure after accounting for housing benefits and social assistance (notably adding in WFF

Figure 7: OECD summary measures of net replacement rates (NRR) excluding housing benefits and social assistance

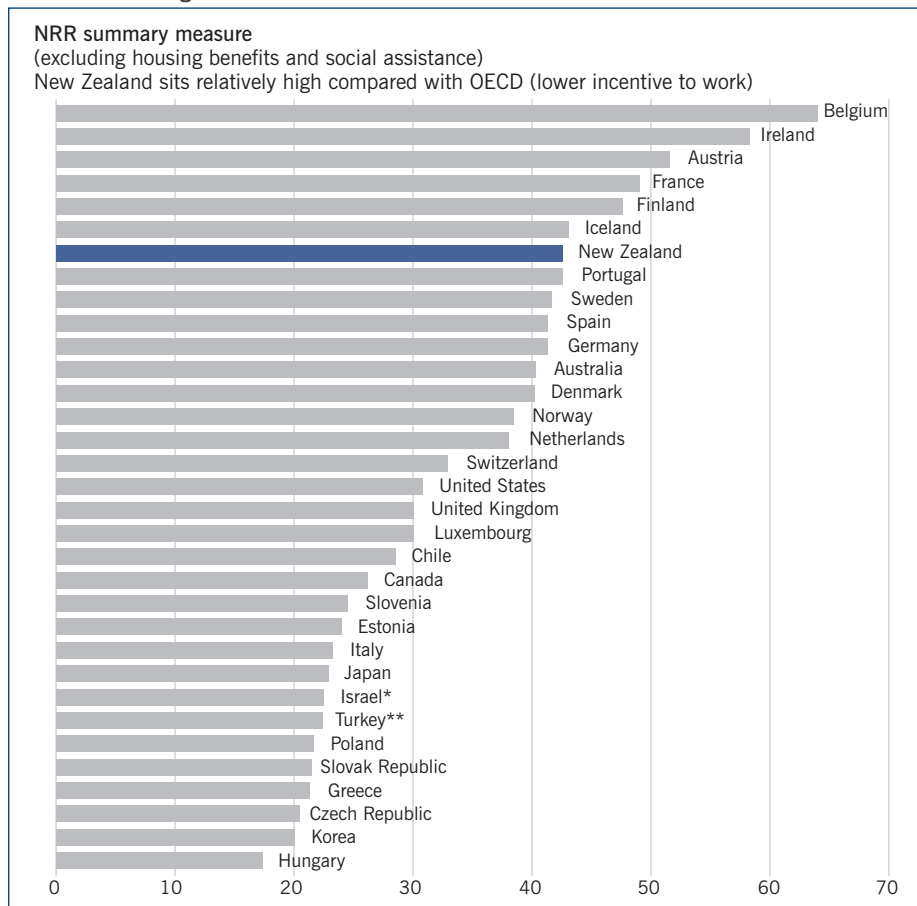
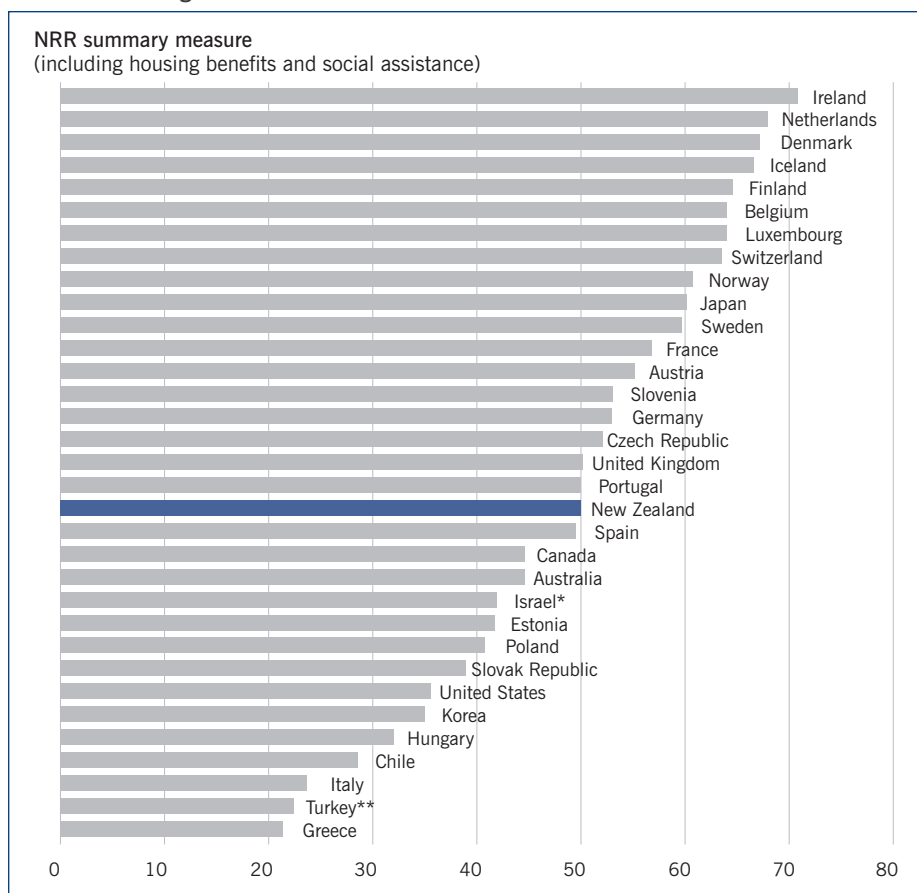


Figure 8: OECD summary measures of net replacement rates (NRR) including housing benefits and social assistance



and the accommodation supplement in the New Zealand context) shows New Zealand sitting towards the middle of the OECD, alongside the United Kingdom and slightly higher than Australia. The shift in relative ranking demonstrates the impact of WFE, and to a lesser extent the accommodation supplement, in New Zealand in lifting in-work incomes relative to out-of-work incomes.

Trends in replacement rates

Figure 9 shows New Zealand trends for gross and net replacement rates from the OECD’s benefits and wages database. A lower replacement rate implies a greater income gap between benefits and work. The generally reducing replacement rates since 2001 on these OECD summary measures indicates a strengthening incentive to enter into or remain in employment, and is consistent with the New Zealand analysis earlier in the article.

Conclusion

This article has examined the gap between the income levels of people who are receiving a benefit and those in paid employment. The primary finding is that the size of this gap is relatively large within the historical context of the last two decades, and is slowly growing as a consequence of static or slow growth in in-work incomes (for families with children) and slowly declining out-of-work incomes.

Two factors act to temper parts of this main finding:

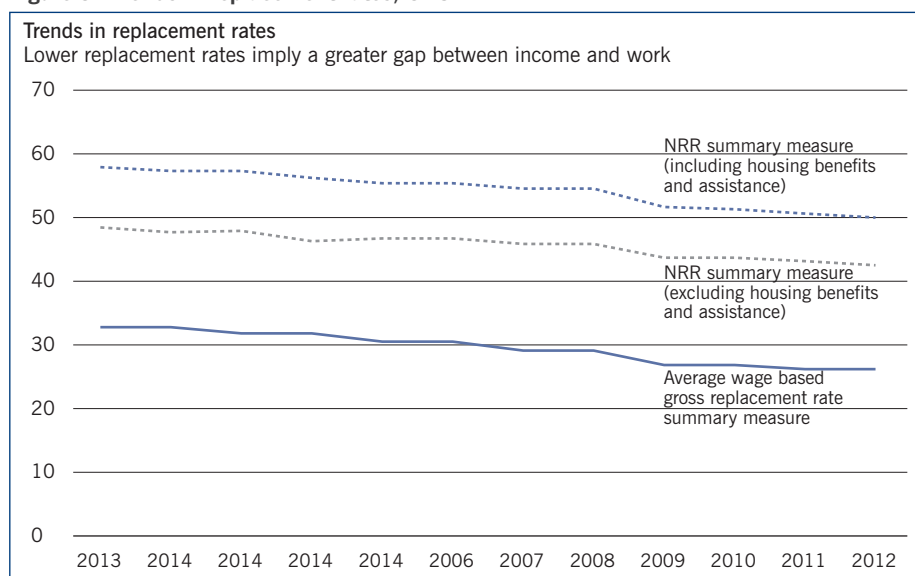
- The increases in benefit, minimum family tax credit and in-work tax credit rates announced in Budget 2015 arrest and partially reverse the downward trend in benefit incomes, but maintain the gap between benefit and work incomes at lower wage rates. Without further policy change, however, the underlying policy settings will see a return to the longer-term trends.
- The existence of other forms of financial assistance, such as income-related rents for social housing tenants and temporary additional support, prop up incomes for the beneficiaries who receive them, and

reduce the gap between benefits and wages.

Alongside the primary finding, this article also casts light on two other matters relating to the form and function of New Zealand's tax-welfare system. First, while WFF payments played a key part in increasing the gap, for minimum wage workers receiving the minimum family tax credit, increases in minimum wages do not flow through into higher take-home incomes. For average wage earners, a combination of non-indexation of the in-work tax credit and the accommodation supplement, and abatement of WFF payments, yields a similar result. Second, the fact that New Zealand's primary income support for housing costs is not regularly adjusted to address changes in the housing market means that there has been a widening gap between incomes before and after housing costs for beneficiaries and low-income renters over the last decade. As a result, the increase in the financial incentive to work over time is more marked when looking at after-housing-cost measures.

Finally, I would like to acknowledge that a key shortcoming of the analysis in this article is that it does not address the question of in-work costs. The costs of working, especially child-care costs for families with children, are a key factor in determining whether the margin between in- and out-of-work incomes is sufficient to incentivise behavioural change. The issue of the levels and trends of in-work costs is an area that warrants further investigation.

Figure 9: Trends in replacement rates, OECD



- 1 The accommodation supplement provides a partial subsidy of housing costs (rent, mortgage or board) up to a maximum. The maximum payment varies according to region and household size. While the payment is available to mortgagors and boarders, this article concentrates on the more common situation of renting.
- 2 Working for Families is made up of four main payments. The family tax credit is available to both working and beneficiary families. The in-work and minimum family tax credits are available only to families who are not on a benefit and who work a required number of hours per week, and the parental tax credit is available for to parents of a newborn child for ten weeks following birth.
- 3 The number and age of children in the family affects the family's take-home income, but generally does not affect the size of the gap between benefit and work incomes. For larger families with four or more children, however, the in-work-tax credit increases by an additional \$15 per child, which increases the gap for these families. The base rate of the in-work-tax credit is \$60 per family, and this has not been adjusted since its introduction in 2006.
- 4 The accommodation supplement maximum rates were last adjusted in 2005, while the base rate of the in-work-tax credit of \$60 per family has not been adjusted since its introduction in 2006.
- 5 According to the Budget 2015 factsheet (<http://www.beehive.govt.nz/sites/all/files/12c-english-tolley-fact-sheet-3-changes-to-working-for-families.pdf>), around 4,000 families receive the minimum family tax credit at any point in time.
- 6 Notably, from 2006 onwards someone paying lower quartile rents in this locality and situation is at the accommodation supplement maximum anyway.
- 7 Note that data is available only from 2006 as temporary additional support was introduced that year, replacing the more discretionary special benefit.
- 8 The information in this section is drawn primarily from the OECD's Directorate for Employment, Labour and Social Affairs, Benefits and Wages statistics, accessed from <http://www.oecd.org/els/benefitsandwagesstatistics.htm> on 9 September 2014.

www.oecd.org/els/benefitsandwagesstatistics.htm on 9 September 2014.

Acknowledgements

The author would like to sincerely thank Michael Fletcher, John Marney, Tony Burton, Eric Crampton, and the Ministry of Social Development's forecasting and costing team for comments and assistance in preparing this article. The views expressed in this article are those of the author, and do not represent the ministry. Any errors remain the responsibility of the author alone.

School of Government
Te Kura Kāwanatanga

New Publications

	Title	Author/Co-editors	Publication
School of Government	<i>Issues and Concerns for Asian Leadership in Policy and Governance</i>	By: Evan Berman and M. Shamsul Haque, who are co-editors of the book.	Chapter in: Asian leadership in Policy and Governance
Institute for Governance and Policy Studies	<i>Discourses of Deceit, Political Myth and Ideological Capital in Public Administration</i>	By: Michael Macaulay	Chapter in: Ethics in Public Policy and Management – Routledge Research Companion

Bill Rosenberg

The ‘Investment Approach’ is Not an Investment Approach

A centrepiece of government social policy is the so-called ‘Investment Approach’ currently being used in the Ministry of Social Development (MSD). There are active plans to expand it into other social services. The attractive concept of an investment approach to public policy has been around for many years, but is that what this approach is really advocating?

An ‘investment approach’ to the provision of social services is sometimes described as ‘spending now to reduce future costs’. But the point of social services is to provide benefits in the way of services and outcomes that society values, such as health, education, security, opportunities, increased well-being and greater equity.

The distribution of where both costs and benefits fall within society must also be considered. Unless those benefits and their distribution are improved, or at least held constant while costs are reduced, we may be no better off and it can become simply a cost-reduction exercise. Balanced consideration of both costs and benefits

in this broad sense is therefore essential in an investment approach. Under these conditions it is an attractive concept.

In contrast, the investment approach being taken by the Ministry of Social Development is a narrow and flawed one. It fails to take a balanced investment view. Far from being an investment approach to social welfare, it focuses on costs to the government, fails to incorporate either benefits or full costs, and makes invalid assumptions about outcomes for beneficiaries which are central to its logic. In its current form it is a recipe for reducing government expenditure. This narrow, one-dimensional approach has implications for MSD clients and the impact of its services on wider society, but it also has much wider significance because of the plans to expand its use.

The difference between a full investment approach and that used by MSD is summarised in Table 1.

Bill Rosenberg is the Economist and Director of Policy at the New Zealand Council of Trade Unions.

The investment approach in the MSD sense appears to be used to cover at least these aspects:

- the use of actuarial techniques to calculate a measure of future fiscal liability (referred to in MSD's context as 'future welfare liability'), which is then used for evaluation of 'success' and for policy purposes;
- the use of a large longitudinal data set to prioritise case management – or, in more general terms, policy and actions.

This article builds on Simon Chapple's earlier analysis of this development (Chapple, 2013) to look at these aspects in turn and consider their use both in MSD and in other public services.

Future welfare liability

The 'future welfare liability' (FWL) of current beneficiaries is estimated by using two decades of past and current social security records and various modelling assumptions to project each beneficiary's future use of welfare benefits¹ and their cost. Let us assume for the moment that this is a full and accurate characterisation of each beneficiary, and therefore an accurate future liability calculation. The liability is solely a fiscal liability: that is, the call the welfare benefits² and their administration are predicted to make on current and future government revenue through Vote Social Development. The reduction in size of that estimated fiscal liability is then used as an objective for policy purposes to prioritise interventions, such as stricter employment requirements for single parents and intensive supervision of young people.

Fundamental flaw: weighs costs, not benefits

The fundamental flaw with this procedure is that it looks only at costs to the government and at nothing else. Future fiscal liability is a measure solely of cost. 'Cost effectiveness', or a proper cost-benefit test, requires measures of benefits to weigh the cost against. No measure of benefit is part of the MSD approach. Minimising fiscal liability is therefore simply a policy to minimise public expenditure rather than maximise welfare.

This problem is acknowledged by the New Zealand Productivity Commission

Table 1: A full investment approach compared to the MSD investment approach

	Full investment approach	MSD investment approach
Costs		
Costs to Crown	Cost of raising taxes and administering welfare system, and other public services affected by social welfare decisions	Full costs to Vote Social Development*
Private – financial	Financial costs to individuals and firms of social welfare interventions (e.g. transport to interviews, work, child care, medical, additional training)	–
Opportunity costs	For instance, loss of leisure if employed; loss of employment income if insufficient retraining and/or time for job search	–
Non-financial	Non-financial costs to individuals, households and society (e.g. less time with family, crime, ill health, poverty, poor education levels, failure to fulfil economic/social/ personal potential)	–
Benefits		
Reduced expenditure/ increased income to Crown	Reduction in costs of raising taxes and administering public services (e.g. due to reduced need for social services); increased revenue (e.g. from taxation due to increased private incomes)	Reduced costs to Vote Social Development*
Private – financial	Financial benefits to individuals and firms from social welfare interventions (e.g. additional earnings from finding better job, additional revenue to employer, reduced medical costs)	–
Non-financial	Non-financial benefits to individuals, households and society (e.g. quality of work, reduced crime, improved physical and mental health, greater participation in society and social cohesion)	–

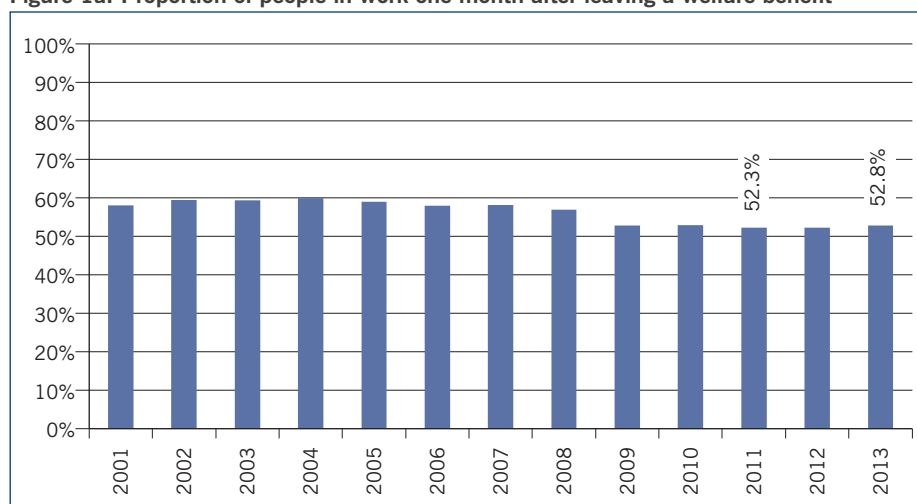
* At present the costs are solely to Vote Social Welfare, but consideration is being given to extending them.

Financial costs and benefits are considered in the 'full investment approach' on an economic basis.³ Note that the MSD investment approach evaluates costs on a future fiscal liability basis. This could be used in both cases, in which case other financial costs and benefits should be treated in a similar way, and a long-term (e.g. lifetime) approach should be taken to non-financial costs and benefits.

in its final report on commissioning of social services (New Zealand Productivity Commission, 2015, pp.224-37), which draws a distinction between the MSD's investment approach (calling it MIA) and

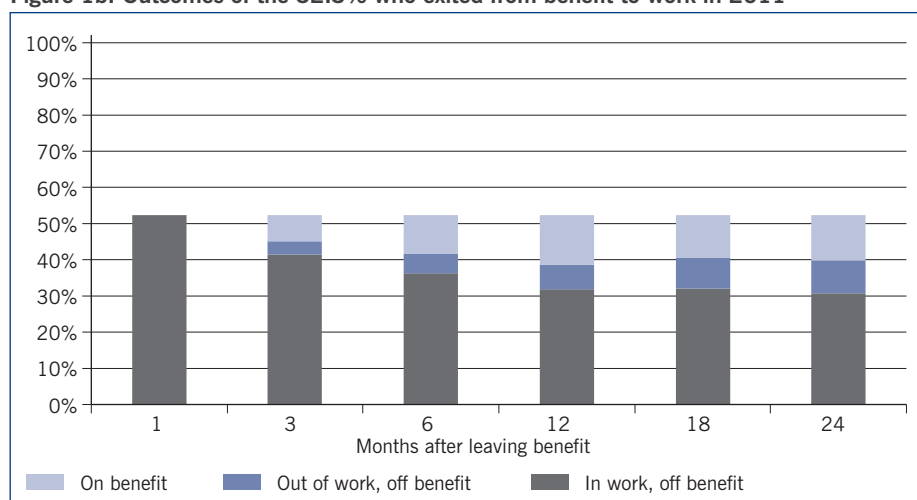
an investment approach with the qualities it desires. It says that the MIA is 'not a cost-benefit analysis', and recommends that it 'should be further refined to better reflect the wider costs and benefits of

Figure 1a: Proportion of people in work one month after leaving a welfare benefit



Source: LEED, Statistics NZ

Figure 1b: Outcomes of the 52.3% who exited from benefit to work in 2011



Source: LEED, Statistics NZ

interventions'. It warned that 'slavish application of an investment approach based purely on costs and benefits to government [like the FWL] might lead to perverse outcomes,' giving as an example that early deaths from obesity would reduce future fiscal liability. As will be seen, other examples arise as the approach is being implemented by MSD.

Is future welfare liability a valid proxy for benefits?

Yet the commission also states that '[t]here are good reasons for believing that FWL is strongly correlated with what society does care about, at least for the social services to which it is currently applied – primarily employment services.' This is similar to MSD's and the government's justification for its use of FWL. The commission argues that '[t]he service is aimed at getting people into work, and people who get and stay in work will likely have lower future welfare

costs. Further, being employed is strongly correlated with better social outcomes.' So the argument is that, despite being a measure of cost, FWL is a proxy for at least some benefits because it is associated with getting people into work.

The only evidence the commission cites for this is an assertion by the Welfare Working Group and results of Statistics New Zealand's general social survey showing greater self-rated well-being for people in employment. This applies only to average employment experiences, not the insecure, low-income jobs which, as will be seen, may be the only ones available to many MSD clients pressured to take any work available.

The claim that FWL is a good proxy for at least some benefits rests on three assumptions: that most or all beneficiaries ceasing to be a cost to the welfare system find work; that the work they find is better for their welfare than remaining

on a welfare benefit; and that work is the only benefit that should be weighed against cost. The evidence does not bear these out.

Not all welfare benefit exits are to work

First, not all exits from welfare benefits are to work. Data provided under the Official Information Act from MSD for 2014, for example, show that only 45.6% of benefit cancellations were for the reason 'obtained work'. MSD says beneficiaries whose benefit was cancelled for certain other reasons may also be in work; in fact, they say that in general they don't know. In the unlikely event that all those whose benefit was cancelled who possibly found work in fact did so, then 39.8% would still not be in work immediately after leaving the benefit. Some left for full-time study, but between 29.2% and 43.8% were in neither work nor full-time study on this basis.

Some of the people who were in neither work nor study may have been in acceptable circumstances, such as in a new, supportive relationship, and some (including those in prison, who died or whom non-government social agencies say are homeless) certainly were not, but fiscal liability values all exits the same, whether the people leave to good-quality jobs or to homelessness. Indeed, MSD does not in general know their circumstances unless they apply for a benefit again, so is unable to judge the outcomes of its clients' exits from the welfare benefit system.

Another source of information is Statistics New Zealand's linked employer-employee data (LEED). These show⁴ that in 2013 (the latest available), one month after leaving a welfare benefit only 52.8% were in employment, a lower proportion than in any year between 2001 and 2008 (see Figure 1a). Of them, 30% were no longer in work after six months, and a third of those (10.2%) were not on a welfare benefit. Of those who left the welfare benefit for work in 2011, 41.3% were not in work two years later, and over two in five of them (17.5%) were not on a benefit (see Figure 1b). Equating exit from welfare benefits or reduced liability with finding employment is therefore far from valid.

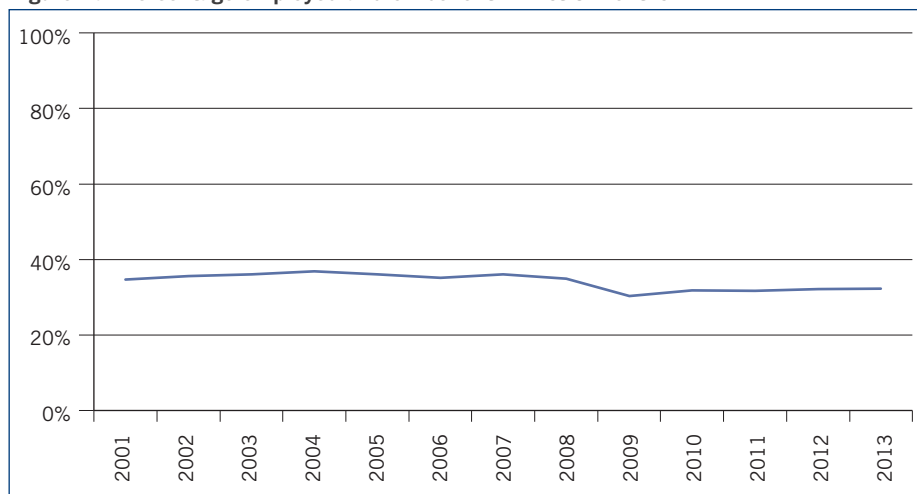
Not all work means better social outcomes

Second, being employed is not always 'strongly correlated with better social outcomes' as the Productivity Commission asserted: insecure, low-income work with poor prospects for career development may have worse outcomes, as may jobs which don't fit family life due to, for example, long commutes or unsuitable hours (Brewerton, 2004, pp.27-8; Burchell, 2011, p.9; Johri, 2005, pp.23-4; Marmot, 2010, p.26). Not all jobs are equal. Those finding work may be in work of poor quality which leaves them worse or little better off, and both MSD and LEED data suggest that, for many, that is the case. MSD's benefit system performance reports and actuarial reports provide some data on the rate at which former beneficiaries return to a welfare benefit. For example, in the report on the year to June 2014 they find that 40% of 'jobseeker work-ready' exits have returned to a welfare benefit 12 months later, and this hasn't materially improved over the four years it provides data for (Raubal and Judd, 2015, p.23). Their 2013 report suggested that the high 'churn' rate could have been due to insecure work or 90-day trials (Raubal and Judd, 2014, p.33).

LEED data⁵ finds that only 32.3% of those exiting a benefit were in work and off welfare benefit for all of their first six months in 2013. Of those who came off a welfare benefit in 2011, only 15% had been in work and off a welfare benefit for all of the following two years (see Figures 2a and 2b). This suggests insecure and spasmodic work, if it was found.

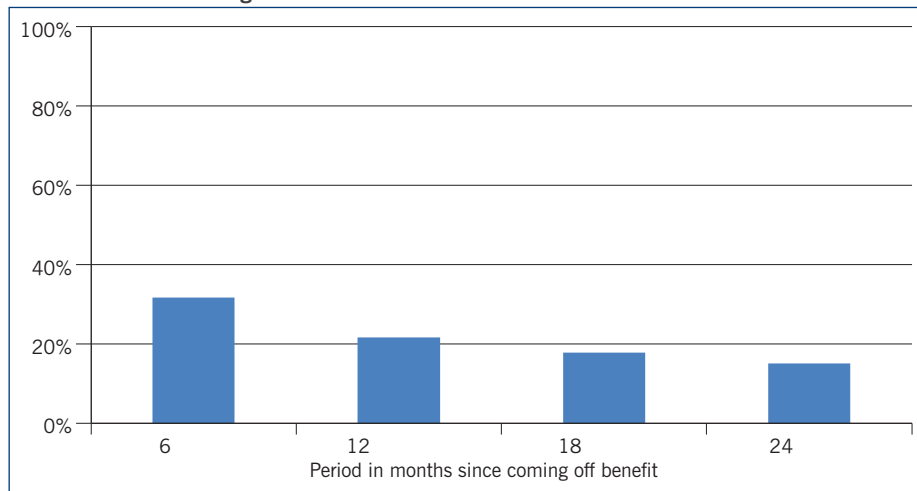
Measuring success by exits from a welfare benefit is a poor measure of benefit even on this evidence. International evidence confirms this: longer time on a welfare benefit can improve subsequent employment outcomes. For example, labour economist David Card and colleagues Kluge and Weber (Card, Kluge and Weber, 2010) in a meta-analysis of evaluations of active labour market policies found that welfare exit rates and other short-term measures are poor predictors of the quality of employment outcomes. Judging performance on exit rates neglects the longer-term benefits of spending more time on a welfare benefit, which can, through raising skills and more

Figure 2a: Percentage employed and off benefit in first 6 months



LEED, Statistics NZ

Figure 2b: Percentage employed and off benefit in all months since coming off benefit in 2011



LEED, Statistics NZ

effective job search, improve subsequent employment outcomes. Engbom, Detragiache and Raei (2015) found that reduced time on unemployment benefits in Germany as a result of the Hartz reforms, which included tightened conditions and reduced welfare benefit payments, led to 10% lower subsequent earnings, implying less satisfactory employment outcomes.

Even putting quality of work aside, being employed is not always the best outcome for beneficiaries. Consider a sole parent, just out of a traumatic relationship break-up, who is being pressured to put her children into care and take a job, perhaps full-time. Are there no benefits to her staying at home supported by a welfare benefit? That, after all, is the purpose of the welfare system. In fact, there are many benefits, such as allowing her to care for her children, enabling her family to recover from the trauma of the

break-up, and better health outcomes for both her and her children.

Yet MSD apparently doesn't know whether people leaving a welfare benefit got a good or poor job, stayed in work or remained unemployed outside the welfare system, let alone whether their lives improved or worsened as a result of either exiting or staying in the system. The FWL model takes no interest in this.

Work is not the only benefit that should be weighed against cost

There are many possible benefits from a well-functioning social welfare system. The purpose (section 1A) of the Social Security Act 1964 reflects some of them: helping people to support themselves and their dependants while not in paid employment or in hardship; helping them find or retain paid employment; helping those for whom work is not currently appropriate because of sickness, injury,

disability or caring responsibilities. More broadly, we would look for benefits in maintaining the dignity of welfare beneficiaries and their participation in society. There are also social benefits external to the individuals themselves in avoiding members of society, especially children, falling into poverty. There are benefits to employers and the economy from the productivity of those finding jobs. These other benefits are ignored in MSD's investment approach.

It is worth noting that FWL itself is not measuring an economic cost or benefit: it measures a transfer between

MSD staff leading the implementation of the FWL model say that 'spending has been directed away from lower liability clients (short-term jobseekers) towards higher liability clients such as sole parents (Edwards and Judd, 2014, p.10). This means that people on what was formerly called the unemployment benefit are getting less assistance because they have the 'lowest average liability' of all the main benefits. Another MSD report indicates that the result may be that jobseeker exit rates are not falling: 'The focus on SPS [Single Parent Support] clients may also partly explain

education. The 'future educational liability' will be higher for those advancing to higher education because of the additional expenditure it will require from the government. It is commonly accepted that sound early childhood education is likely to lead to later educational success (e.g. Early Childhood Education Taskforce, 2011, pp.21-8). Should we therefore take action at the early childhood level to reduce the likelihood of future success because it increases 'future educational liability'? Of course not: we would never contemplate this action without considering the many benefits of the different levels of education. Some of those benefits may create income for the government (such as income tax on higher incomes, if that is the result of higher education), but crediting these against the future liability as has been suggested by the Productivity Commission is not part of the MSD investment approach. Even if it was, the many other benefits of education are still not taken into account.

The MSD's approach ... is the reduction in future liability created by a given expenditure, still without taking benefits into account.

New Zealand residents which only changes the distribution of income, rather than directly creating economic costs or benefits to the economy as a whole, except to the extent that there is a deadweight loss from taxation.

Failure to incorporate a cost-benefit analysis
These are symptoms of the fundamental flaw in the FWL model: it fails to take a cost-benefit approach, weighing benefits against costs.

As an example, consider just the financial benefits of employment. Higher expenditure, such as for job search or retraining, may be more than justified by the benefits to welfare beneficiaries and society of the better jobs they find as a result. The benefits of work can be crudely quantified as the income earned in the job found, but there will also be benefits to the employer and society (and non-fiscal costs). Because the FWL measure looks only at fiscal costs, it will appear that 'effectiveness' has been reduced rather than increased by the added cost of the job search or retraining. It fails the test of a true investment approach by failing to identify an opportunity to spend more now to get better outcomes later.

why JS [Jobseeker] exit rates have been relatively stable in the last three years. In prior years, resources currently diverted to SPS clients would have been more heavily focused on JS clients' (Raubal and Judd, 2015, p.26).

Suppose an MSD client is a skilled tradesperson: a printer, made redundant because of the state of the newspaper industry and changing technology. Some of her specific skills may be redundant, but she will have a host of other skills, including 'soft skills', and would still be highly employable. Left alone, she will undoubtedly find another job eventually, but almost certainly at reduced income and productivity because she may not have the specific skills required. Support from MSD to retrain, apply for jobs, perhaps establish her in an adult apprenticeship, and support her during the initial stages of employment would be greatly beneficial for both the worker and the economy. But the FWL model says no.

An example from outside the social welfare system makes the fallacy of omitting consideration of benefits even clearer. Consider applying the MSD's future fiscal liability approach to

In fact, according to the Productivity Commission, the Ministry of Education is considering an investment approach which appears to contrast sharply with that of the MSD. The commission reports that '[i]n education, a child or student centred approach is needed to ensure that developmental outcomes of individuals are at the forefront' (New Zealand Productivity Commission, 2015, p.234). We have yet to see how, and how fully, these developmental outcomes and other benefits will be incorporated, but this is promising.

The MSD's approach does include the idea of 'return on investment'. But this is not a cost-benefit analysis either. It is the reduction in future liability created by a given expenditure, still without taking benefits into account.

The annual reports commissioned by MSD on the investment approach are now suggesting that MSD should take an interest in quality of employment. But it is a stretch to assert that that is the success of the approach. Even if it could be said that improved quality of employment is encouraged by the investment approach, because it reduces future liability by making re-entry less likely, that doesn't

need a calculation of forward liability: MSD and LEED data show that simple annual costs would tell us that.

The use of data to prioritise policy and actions

The use of a rich data set to discover correlations and associations between the introduction of new services, clients and outcomes can be very worthwhile. However, its use as demonstrated by MSD and its contractors warns that caution is required.

The crowing rooster does not cause the sun to rise

First, correlation is not causation. For research purposes, correlation is a handy indicator as to where it is worth looking deeper for causation. But when used for policy purposes, it is essential that we are confident of the direction of causation. Should we make it more difficult for beneficiaries to rent Housing New Zealand Corporation houses because a high proportion of its tenants are beneficiaries, adding to the future fiscal liability? Does the finding that many long-term beneficiaries come from families which were often reliant on a welfare benefit mean that we should reduce the availability of welfare benefits, or that we should reduce poverty (which frequently leads to reliance on social welfare, and vice versa), or something else? To optimise policy it must optimally *cause* increases in social well-being. If we don't know that the causes our policy may be far astray.

To a man with a hammer, everything looks like a nail

Second, many factors that are not recorded in the database can and do bear on the outcomes of services: economic conditions (only unemployment is used for the predictive modelling, though interest rates and inflation are used in the actuarial calculation of the future liability); the full financial situation of families; the relationships, health and skills within a household; broader community and whānau support (or lack of); families' housing situations; their history before coming onto a welfare benefit, and so on. There is a strong tendency for too much weight to be attributed to the data available

because it is available and quantifiable.

For example, MSD annual benefit system performance reports put heavy weight on past welfare benefit history, where many other factors are involved. Similarly, MSD appears to use the data solely to recommend changes to its own operations and policies. Yet if its modelling is correct, a far greater reduction in forward liability would occur if the government pursued policies to reduce unemployment by 2% to a level similar to that immediately before the global financial crisis, than from the likely effects of the MSD's own

Zealand tenants are welfare beneficiaries. It deduces that the fiscal cost of welfare assistance is not limited to welfare benefits and recommends extending the investment approach to social housing clients. The policy outcome 'might involve giving higher priority for intensive case management to clients in social housing', which suggests harsher treatment for beneficiaries who are in social housing in order to save on income-related rent subsidies. This attributes no benefit to social housing, which may improve health, educational and employment outcomes.

Most of the use of the data set involves modelling, which in turn requires crucial assumptions ... which are either unclear, in technical reports or not provided.

interventions (Raubal and Judd, 2015, p.38). To achieve a similar effect would require a further 25% increase in the quarterly exit rate of beneficiaries on both jobseeker welfare benefits, where, despite new, more stringent policies, the exit rate for jobseekers has been stable for four years, and sole parent support, where the quarterly exit rate has already increased a very substantial 19% (from 3.2% to 3.8% per month) in the year to June 2014 (ibid., 2015, p.26). The latter is presumably as a result of even more stringent policies and considerable MSD effort. Raising it a further 25% would require draconian policies.

This narrowness of view may be partly addressed by linking in other databases, such as those of Housing New Zealand, education, health and IRD, though the increasing complexity carries its own risks, not least around privacy. But it still requires more rigorous research and modelling, and does not address the central issue: the need for a cost-benefit analysis. For example, the 2015 MSD benefit system performance report (ibid., 2015, pp.51-2) makes the unsurprising discovery that many Housing New

Modelling assumptions and error margins are unclear

Most of the use of the data set involves modelling, which in turn requires crucial assumptions (for example, about the effect of economic conditions) which are either unclear, in technical reports or not provided. The assumptions are acknowledged by actuaries Taylor Fry in their reports (e.g. Greenfield et al., 2015, pp.111-12, 128), but bands of errors in crucial estimates are not given and in some cases cannot be. Estimation or modelling errors could well be material, given that the estimate that the latest welfare reforms led to a reduction of \$2.2 billion in forward liability is only 3% of the total estimated liability and appears to be a residual after modelled factors have been accounted for. Instead, the point estimates are quoted as though they were certainties, and the residual reduction in forward liability once economic factors have been filtered out confidently attributed to policy changes (e.g. Raubal and Judd, 2015, pp.35-6) rather than estimation error.

Further, the models rely on past decades of experience of beneficiaries' behaviour deduced from the MSD

database. But this experience is, of course, dependent on the different policies in place at each point in time. For example, if at one time the priority was to spend more effort helping unemployment benefit recipients rather than reduce domestic purposes benefit numbers, then the records will reflect that 'experience'. That is not an inherent characteristic of those types of beneficiaries, but is strongly influenced by previous policy.⁶ Behaviours change over decades too: an increasing proportion of women in the workforce, smaller families, and so on. The models apparently try to adjust for these changes using quarterly dummy variables (Taylor Fry Pty Ltd, 2012, p.4), but this is a blunt approach.

If, with careful research and modelling, we could understand better the consequences for health, housing and education of forcing people off benefits too early, ... we would be able to make much better public policy.

Most of the useful deductions that can be derived from analysis of this data do not need to be tied to fiscal costs. Knowing that certain groups of people spend a longer or shorter time on benefits, for example, does not require fiscal cost to suggest useful policy.

Conclusion

Future fiscal liability (and its social welfare instance, future welfare liability) is, in the end, just an inter-temporal rather than current measure of cost, and even then only certain fiscal costs. It is not a cost-benefit analysis, which is the well-established and accepted method for policy evaluation and selection of interventions. It is a dangerous fallacy to assess the performance of the welfare system on such a one-dimensional measure – unless the sole aim is to make room for tax cuts or to reduce the size of the state. It disregards the social assets that social services should protect and

enhance, such as a healthy, equitable, cohesive, educated and productive society. It treats citizens as liabilities unless they are employed, and even then they are not regarded as assets. This is the logic of the approach and is being demonstrated in harsh, poorly conceived welfare policy which, ironically, is short-sighted because it ignores human need. It promotes an impoverished approach to public policy, which can be dangerously wrong.

Where could we head? In a recent speech the minister of finance, Bill English (English, 2015), set out what he called a 'social investment' approach to social services. While this article is not intended to discuss this in detail, his general approach is closer to the full

investment approach described at the outset. He defines his use of the term as follows:

At its core, social investment is a more rigorous and evidence-based feedback loop linking service delivery to a better understanding of people's needs and indicators of the effectiveness of social services. This needs to take account of the long-term – including those benefits that might take years to be delivered.

It is therefore closely tied into the extensive use of data, but also recognises the need to balance benefits against costs: 'We will be measuring outcomes and using cost benefit analysis where we can, but this informs judgment, rather than replaces it.' More specifically, he implicitly criticised MSD's approach:

These new data tools are not just about measuring fiscal costs and future fiscal savings as a measure of the effectiveness of a particular intervention. Fiscal costs have been used in welfare as a proxy for the economic and social benefits of getting people back into employment. But we also measure broader results – capturing the wider social outcomes that we ultimately care about. ... measuring the return on investment in social services makes sense whether it is fiscal costs or wider social benefits that are being considered.

It is not clear how far the government is moving towards a fully balanced approach, but it does appear to be moving. Other aspects of what English described raise concerns. For example, it suggests highly targeted interventions which place heavy reliance on data analysis and contracting out of services, and could risk becoming substitutes for a broadly-based social security system. But if it changes government thinking towards a longer-term view of social services and expenditure, with full recognition of benefits as well as costs, it lays the basis for progress. It will not happen without sufficient funding for the deeper analysis required, changes to accountability for finances and outcomes in government agencies, and increased information-sharing, with proper safeguards.

There are obviously benefits to be gained from the use of 'big data'. It can provide tools for a full investment approach. If, with careful research and modelling, we could understand better the consequences for health, housing and education of forcing people off benefits too early, or the consequences for beneficiaries and their children of poor housing and health, or the benefits for education of better health and housing – and so on – we would be able to make much better public policy. But information systems of this kind must be used with care. Correlation is not a substitute for causation. We will never know everything, and it is hazardous to draw conclusions with relevant information omitted. The assumptions

under which the information is used must be clear and valid, and the robustness of its modelling must be above reproach, especially if it is used for policy purposes. Systems and policies must protect against the real dangers of invasion of privacy and misuse (intentional or unintentional) that can cause grave and lasting harm to individual citizens and families. Future fiscal liability may play a role, but it should be just one consideration, not the dominant one.

Most importantly, we must seriously address the admittedly difficult problem of evaluating the benefits of public policy and expenditure and integrating them

into decision-making: we cannot afford to have policies that ignore them.

- 1 In this article, 'welfare benefit' is used to mean payments from the state to a social welfare beneficiary, and 'benefit' to mean generalised improvements in welfare in the usual sense.
- 2 The welfare benefits in the FWL calculation include transfers such as the unemployment benefit, allowances such as the accommodation supplement, and employment assistance such as training costs and non-recoverable hardship assistance, but exclude benefits paid to people over 65 such as New Zealand Superannuation, student loans allowances and unemployment benefit student hardship, and assistance outside Vote Social Development such as Working for Families.
- 3 New Zealand Productivity Commission (2015, p.230) is acknowledged for some material in this table.
- 4 See Tables 2.17 and 2.26 of the annual LEED series at <http://nzdotstat.stats.govt.nz/wbos/Index.aspx>.
- 5 See Table 2.23 of the annual LEED series at <http://nzdotstat.stats.govt.nz/wbos/Index.aspx>.
- 6 I thank Michael Fletcher of AUT for pointing this out.

Acknowledgements

I would like to acknowledge the useful comments made by Simon Chapple, Michael Fletcher and Charles Sedgwick on drafts of this article. I am, of course, responsible for the final result. The article has been developed from a presentation used in a Victoria University of Wellington public finance debate on the investment approach, available at http://www.victoria.ac.nz/sacl/about/cpf/publications/pdfs/2015-pubs/debate-3_main_slide_deck.pdf.

References

- Brewerton, M. (2004) *Influences of Maternal Employment and Early Childhood Education on Young Children's Cognitive and Behavioural Outcomes*, literature review, Wellington: Ministry of Women's Affairs
- Burchell, B. (2011) 'A temporal comparison of the effects of unemployment and job insecurity on wellbeing', *Sociological Research Online*, 16 (1), 9, retrieved from <http://www.socresonline.org.uk/16/1/9.html>
- Card, D., J. Kluge and A. Weber (2010) 'Active labour market policy evaluations: a meta-analysis', *Economic Journal*, 120 (548), pp.F452-77, <http://doi.org/10.1111/j.1468-0297.2010.02387.x>
- Chapple, S. (2013) 'Forward liability and welfare reform in New Zealand', *Policy Quarterly*, 9 (2), pp.56-62
- Early Childhood Education Taskforce (2011) *An Agenda for Amazing Children: final report of the ECE Taskforce*, Wellington: New Zealand Government, retrieved from <http://www.taskforce.ece.govt.nz/>
- Edwards, D. and E. Judd (2014) 'Measuring tomorrow's outcomes today: adopting an investment approach within the Ministry of Social Development', paper presented at the New Zealand Society of Actuaries biennial conference, Brave New World: data, longevity and ERM, Dunedin
- Engbom, N., E. Detragiache and F. Raeli (2015) *The German Labor Market Reforms and Post-Unemployment Earnings*, working paper WP 15/162, Washington, DC: International Monetary Fund, retrieved from <http://www.imf.org/external/pubs/cat/longres.aspx?sk=43094.0>
- English, B. (2015) 'Speech to the Treasury guest lecture series on social investment', retrieved from <http://www.beehive.govt.nz/speech/speech-treasury-guest-lecture-series-social-investment>
- Greenfield, A., H. Miller, K. Wolanski and G. McGuire (2015) *Ministry of Social Development: valuation of the benefit system for working-age adults as at 30 June 2014*, Sydney: Taylor Fry Pty Ltd, retrieved from <http://www.msd.govt.nz/documents/about-msd-and-our-work/newsroom/media-releases/2015/valuation.pdf>
- Johri, R. (2005) *Work Values and the Quality of Employment: a literature review*, Wellington: Department of Labour, retrieved from <http://www.dol.govt.nz/publication-view.asp?ID=206>
- Marmot, M.G. (2010) *Fair Society, Healthy Lives: the Marmot review; strategic review of health inequalities in England post-2010*, London: Marmot Review, retrieved from <http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review>
- New Zealand Productivity Commission (2015) *More Effective Social Services*, Wellington: New Zealand Productivity Commission, retrieved from <http://www.productivity.govt.nz/inquiry-report/more-effective-social-services-final-report>
- Raubal, H. and E. Judd (2014) *2013 Benefit System Performance Report for the year ended 30 June 2013*, Wellington: Ministry of Social Development, retrieved from <http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/evaluation/investment-approach/2013-benefit-system-performance-report.pdf>
- Raubal, H. and E. Judd (2015) *2014 Benefit System Performance Report for the year ended 30 June 2014*, Wellington: Ministry of Social Development, retrieved from <http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/evaluation/investment-approach/2014-benefit-system-performance-report.pdf>
- Taylor Fry Pty Ltd (2012) *Actuarial Valuation of the Benefit System: technical briefing*, retrieved from <https://www.msd.govt.nz/about-msd-and-our-work/newsroom/media-releases/2012/valuation-report.html>

Education is for Everyone Unless You are Special

When meeting with the parents of a prospective student with a learning disability or other impairments, a school principal has a range of options. If the child comes from outside the school's zone, they can refuse admission outright, or make it subject to the school's special enrolment conditions.

Otherwise, the Education Act 1989 gives disabled children the same access to compulsory education as others. The question then becomes: how inclusive should the school be? A school not wishing to burden itself with children with disabilities can adopt a soft approach. The principal can, for instance, be less than totally welcoming at the pre-enrolment interview, or complain about the lack of funding, or praise the great work that the school down the road does in this area, or point

to a drab, uninviting special room. Parents of children with special needs are quick to pick up on these signals and will look elsewhere.

Given the very different treatment disabled students receive at different schools, the temptation might be to blame the schools that practice varying degrees of neglect for the poor inclusion record of the education system, or, conversely, to take the most inclusive schools and present them as models for everyone else to follow. However, what we shall show in this article is that the policies that surround the resourcing of special needs education effectively create incentives that promote exclusion. These incentives are powerful and entrenched, and cannot be overcome by cultural shifts or better practice alone. A system that relies on exceptional schools to demonstrate effective inclusion, we shall argue, is not inclusive, and robs a significant portion of our student population of the choice and the rights that others take for granted.

First of all, however, we must answer the fundamental question: does New Zealand really have a problem? The

Giovanni Tiso is a Wellington-based writer and researcher. He has two disabled children and has been a school trustee at his local primary school for eight years, the past five as chairperson. Hilary Stace completed her PhD on autism and public policy in 2011. She has an adult son with autism and served on the boards of the schools he attended.

Ministry of Education would say that it does not. It will point to our high rates of mainstreaming relative to the international average (Ministry of Education, 2014), or to the results of a recent review by the Education Review Office (ERO) that estimates the number of schools displaying mostly inclusive practices at 78% (Education Review Office, 2015). It will argue that its financial commitment in this area is significant, in the range of \$500 million a year. What it will not be able to do, however, is back up these claims with any meaningful analyses of the disabled student population, since it does not collect the relevant data.

So, for instance, an ERO team might visit a school and find it inclusive, but it will not know if there are students missing from its roll: that is to say, children who were softly dissuaded, as in the scenario outlined above, from enrolling, or who have left to go to a more inclusive school. A similar argument applies to the rate of mainstreaming, which is certainly very encouraging and a key plank for our system to build on, but says little about the quality of the education provided. As researchers Nancy Higgins, Jude MacArthur and Missy Morton point out, mainstreaming is not the same as inclusion. Being at school is not the same thing as having meaningful access to the curriculum (Higgins, MacArthur and Morton, 2008). Given the staggering rates of underspending that have emerged this year in newspaper reports by journalists Jo Moir from the *Dominion Post* and the *New Zealand Herald's* education reporter Kirsty Johnston, focusing on the ministry's financial commitment appears to be no reliable indicator either (Moir, 2015; Johnston, 2015a); not if we cannot observe its effects in terms of reduced discrimination.

Most damningly, however, these reassurances are undercut by the pleas of families whose children are being failed by the education system. Kirsty Johnston has documented ongoing problems and a number of cases of discrimination in a series of articles on special education this year, including instances of parents having to pay for teacher aides. The ministry said it does not support the practice but refused interview requests for

the story. Johnston's investigation found that '[s]ome schools are still turning special needs children away, while others only allow children to attend if a teacher aide is present. This is illegal' (Johnston, 2015b).

At the same time, a 'special education update' exercise conducted by the Ministry of Education attracted so much interest from parents wishing to be heard that they successfully petitioned for a second round of consultation, while the current select committee inquiry on the supports for dyslexia, dyspraxia and autism spectrum disorder attracted over 400 submissions. Many of these are publicly available and make for sobering reading

review, and points to the lack of progress made since at least the watershed report by New Zealand Council of Education researcher Cathy Wylie in 2000. That extensive work, significantly titled *Picking Up the Pieces*, painted a stark picture of the state of special education four years into the implementation of the current policy framework.

In other words, this is a debate that has been going on for two decades. So if we were still somehow inclined to dismiss the ongoing concerns raised by so many families – or the pending human rights complaint, now in its eighth year – as having no evidential basis or value, we should at the very least ask ourselves

In 2010 the Human Rights Commission noted in a report that 'many disabled students and their families have difficulty accessing inclusive education ...

(New Zealand Parliament, Education and Science Select Committee, 2015).

None of these issues are new. In 2010 the Human Rights Commission noted in a report that 'many disabled students and their families have difficulty accessing inclusive education aimed at fulfilling the promises of the CRPD [United Nations Convention on the Rights of Persons with Disabilities]'. In 2008 IHC, the main New Zealand non-government organisation for those with intellectual disability and their families, lodged a complaint with the Human Rights Commission that educational practices contravened our international human rights obligations. The Crown Law Office on behalf of the Ministry of Education rejected the complaint, and also declined to participate in mediation via the commission. IHC is now itself funding litigation against the ministry 'as we believe strongly that the problems resulting in discrimination are to do with government policy, structures and systems' (IHC, 2015).

The IHC complaint followed from a court case taken by parents in 1998 and settled in 2004 with the promise of a broad

the following question: if the litany of problems highlighted by Cathy Wylie have really been resolved, how did we do it? Resourcing has not substantially increased relative to student numbers, and the core aspects of policy have not changed in almost 20 years. Supports are as scattered and poorly coordinated as they have ever been. Student teachers are apparently still not being adequately trained in inclusive practice or how to deal with specific disabilities. Are we really expecting more awareness and a better attitude to have made all the difference?

Let us examine the Ongoing Resourcing Scheme, or ORS, the component of the system for those students with the highest needs, in some detail.

ORS: between competition and moderation

Before the Education Act 1989, disabled children had no rights to attend their local school, and, in the absence of a special school or unit, many were denied access to education altogether. Despite the breakthrough provided by section 8 of that act, which legislated for the right of all local children to attend their local school,

Table 1: Developments in special education since 1989

1989	Education Act: section 8 – all children can attend their local school; Tomorrow's Schools
1996	Special Education 2000 announced
1998	ORS, SEG (Special Education Grant), RTLB (resource teachers: learning and behaviour) roll-out; Daniels and ORS v Attorney General begins
2000	Wylie Report Picking Up the Pieces
2001	New Zealand Disability Strategy (objective 3: education)
2004	Daniels case resolved; Let's Talk Special Education consultation
2008	New Zealand ratifies UN Convention on the Rights of Persons with Disabilities (article 24: education)
2008	IHC begins complaint against Ministry of Education on grounds of discrimination
2010	Success for All: target of 80% demonstrating inclusive practices by 2014
2014	ERO review of 152 schools in term 2 reports that three quarters demonstrate mostly inclusive practices
2015	Special education update review; select committee inquiry

the resourcing to support teachers and disabled children in the new mainstream classrooms was inadequate from the start.

In response to the slow implementation of this policy, in 1996–97 the National government developed Special Education 2000 (Creech, 1997) (see Table 1). This included an Ongoing Resourcing Scheme, commonly known as ORS (which soon became the Ongoing Reviewable Resourcing Scheme or ORRS),¹ targeted at 1% of schoolchildren. Access to the scheme required filling out a very lengthy and complex application highlighting the child's deficits.² As at 1 July 2014, 1.1% of the total student population, or 8,252

students, almost two-thirds (65%) boys, were covered (Ministry of Education, 2014), with the latest budget stipulating a small increase.

Twenty years later, ORS remains one of the key resourcing mechanisms for the delivery of special education. Dressed up as a tool to assess objective need, it consists of a series of criteria under which disabled children as young as five can be enrolled. In reality, however, the scheme is designed not to evaluate children against the criteria but to grade them according to the level of need. This was captured in a telling piece of doublespeak in Labour finance minister Michael Cullen's final

budget, in 2008, which, like the latest one from Bill English, provided a small boost to the scheme: 'This initiative, which is demand-driven, increases the number of students provided for by the Ongoing and Reviewable Resourcing Scheme (ORRS) from 6,700 students in 2007/08 to 6,950 students in 2008/09' (quoted in New Zealand Resource Teachers: Learning and Behaviour Association, 2008). How can a scheme be both demand-driven and artificially capped? The criteria for ORRS did not change before and after the 2008 budget; the verifiers just let more children through, children who would have previously been rejected based on the same criteria. But the application form always contained language enabling the verifiers to exercise latitude in excluding children. For example: 'This criterion is not for students who, despite major difficulties with communication and/or social behaviour, can be engaged to participate in meaningful learning in the curriculum' (Ministry of Education, 2015).

What is 'meaningful learning', and who decides? Evidently what we are talking about here is not the right to an education, but to *some* education. The logic was satirised by Tom Scott in a 1995 cartoon that is every bit as relevant 20 years later.

Besides identifying that the driving principle of special education policy is to allocate resources – as opposed to guaranteeing the right of all children to an education – Scott correctly diagnosed the deficit model on which ORRS/ORS ended up being based: a model which requires that children be graded on a sliding scale of need, and evaluated always and only for their shortcomings, as if disability were exclusively a property of the individual and never a function of the environment.

As well as being restricted to a predetermined number of students, the scheme is periodically moderated to ensure an equal (as opposed to equitable) distribution of resources. To illustrate how perverse this process is, it may be worth bringing up personal experience. One of the authors of this article has a young son with type-1 diabetes whose care includes periodic outpatient clinics



Minister of Education Lockwood Smith 28 November 1995 by Tom Scott. National Library of New Zealand. Ref: H-242-020 (used with permission)

with a specialist paediatric team at Wellington Hospital. If during one of the visits the team finds that his haemoglobin levels have improved, they do not suggest reducing the amount of insulin he is allowed to receive; this would be absurd. Yet this is precisely what happens in the ORS moderation, where achievement and improvement as a result of funded interventions result directly in a reduction of the funding.

It is worth examining the process in some detail. Moderation involves rating the child according to seven categories: Physical Tasks and Mobility, Sensory, Learning, Eating and/or Drinking, Communication, Behaviour and Toileting. The child is rated in each category from 0 to 4, where 0 indicates 'typical age of peers', thus requiring 'no supervision/support beyond school's regular systems', and numbers 1 to 4 indicate the need for increasing levels of support in order to enable the child to be at school, with descriptors which vary according to the category. So, for instance, a rating of 4 under Communication is described as follows (emphasis in original): 'Student requires *total* support to engage in *all* communication activities. Alternative and/or augmentative systems are *always* required. Specialist support and programmes in place' (Tiso, 2010). This may sound like the kind of information that could help the school and the funders respond to a meaningful need, but what counts is not the content of the assessment, it is the number. Not only are all 4s under Communication alike, but also a 4 under Communication is the same as a 4 under Behaviour, just as a 3 under Learning is the same as a 3 under Eating/Drinking or Toileting, in that they all contribute to the overall score in the exact same way: producing this total is the sole purpose of the exercise.

Let us say that the scores in each category are added up and the total is 21. This is the number the ministry will use to determine the dollar amount of the voucher component of the scheme until the next scheduled moderation. However, even if one subscribes to the deficit model adopted by the policy makers, a 21 could be made up of staggeringly different combinations of physical and

intellectual disabilities or impairments. Yet to the institution a 21 is a 21, and all 21s are alike.

In fact, in key areas such as learning or communication there is no direct, straightforward relationship between the severity of a student's disability and the level of learning support she will need to access the curriculum. What might have happened from one moderation to the next is that the child has reached a point where she can tolerate being in the classroom. This is where the proper

cause parents to reward the best ones with their business (i.e. their children) and improve education. However, education isn't a consumer product; nor, more importantly, are children consumers: children are citizens whose equal right to education is unequally met. Like all other citizens, children come from a range of socio-economic backgrounds and with a range of abilities. And while the reforms went some way towards erasing the first difference – by granting greater funding to schools in poorer areas through the

The Special Education Grant must be disbursed to schools irrespective of the number of children with special needs on their roll because to do otherwise would mean allowing for the possibility that school competition has a downside.

inclusion and teaching can begin, and the most intensive and specialised interventions be effective. But the equation dictates that progress in any area must be inversely proportional to teaching resources.

In addition to the moderation process affecting individual children, regional moderation is also in place, to ensure that each area receives a level of funding proportional to the overall number of pupils enrolled at school. Once again, this pre-empts the actual assessment of objective need: any statistical blip in the number of children with disability in a particular area is smoothed out by means of a formula. In this case too, the primary goal is not to ensure inclusion but to ration the ministry's resources.

The Special Education Grant and the myth of school choice

Although the current regime for funding special education goes back to Special Education 2000, it is part of the larger reform programme initiated by the 1989 Education Act. The central plank of the programme, known as Tomorrow's Schools, introduced competition among state schools in the belief that this would

decile system – they gradually obliterated the second.

The consumerist attitude is reflected in the two principal means for funding – and therefore both enabling and structuring – special education in New Zealand: the voucher-like scheme targeted at selected individual children (ORS), and the Special Education Grant (SEG) that goes to every school. As we have seen, ORS is allocated through competition. The case of the SEG, while less directly discriminatory towards individual children and their whānau, is equally if not more symptomatic. The SEG is designed to supplement a school's operations fund to pay for the learning support needs of pupils. Therefore, one might reasonably expect each school to receive it in an amount proportional to the number of students with disabilities on its roll. The funds, however, are allocated to each school based on its raw number of pupils. So, a school with 1,000 children will get ten times as much money as a school of the same decile with 100 children, even though the latter may actually have more children with special needs on its roll. This is not a hyperbolic example: so-called magnet schools are

a reality of our education system and are often victims of their own success at including children of all abilities.

The Special Education Grant must be disbursed to schools irrespective of the number of children with special needs on their roll because to do otherwise would mean allowing for the possibility that school competition has a downside. Only if the model worked in its purest form would children of different abilities be distributed in a statistically uniform fashion. But the model doesn't work, let alone perfectly. The ablest and wealthiest children are much freer to move, and are more easily drawn to the schools that

in children with high needs is likely to attract a disproportionate number of ORS students, thereby increasing the strain on the school's financial viability even further. This strain could potentially be alleviated by the other main source of funding in this area, the SEG. This, however, as we have seen, is allocated to schools based on their roll and decile; and there is no accountability for how the money is spent. We have heard anecdotally of schools that have used the funds for sports facilities or other programmes that have nothing to do with the inclusion of children with special needs.

But the incentives are broader

... the directive to measure this child population against the national norm is in direct contradiction with section 16 of the Education Amendment Act 2013,

spend money on attractive facilities rather than learning supports and teaching staff for disabled pupils, thus directing greater resources to those schools. In the crudest possible terms: most children can choose to go to a school that is not inclusive; disabled children can only go where they are accepted. Therefore, the freedom of choice of the former undermines the right to an education of the latter.

This is how we produced a system that rewards schools for excluding children, and stubbornly refuses to measure and acknowledge – let alone analyse and comprehend – the unequal distribution of children with disabilities.

The incentives to exclusion

While the Ministry of Education lists inclusion as one of its main priorities, its policies ultimately promote exclusion. Consider a child receiving targeted funding under ORS, and therefore – at least in theory – best positioned to receive the highest levels of support. This funding is now openly referred to by the ministry as a contribution, as opposed to a provision, and leaves a shortfall of between \$5,000 and \$8,000 in the school budget for each child on the scheme.³ A school that invests

than the flawed funding model alone. Since 2011, National Standards have been extended to children with severe intellectual disability receiving ORS, who were initially exempt. This requires subjecting these children to assessment tools that are grossly inadequate to evaluate their progress against the goals set in their individualised education plans (IEPs), then formulating an overall teacher's judgment and – inevitably – finding that they are well below the expectations set in the standards. All of these tasks require teacher time, therefore ultimately costing money, in exchange for no gain; they certainly do not improve our understanding of the learning needs of the children, and can be demoralising for both teachers and parents. To make matters worse, schools are required to include the results among the data reported to the Ministry of Education, but are not allowed to cite the special circumstances of the students. Children with severe impairments are therefore both included in the results – as if they could be reasonably expected to achieve a national norm – and 'hidden' inside them. This has a very immediate and concrete repercussion when the ministry

publishes school results on its website, which is used by many parents to compare schools in a system supposedly based on virtuous competition. Schools that enrol a high number of children with learning disabilities will see their academic achievement record penalised compared to those who do not, and no context will be given to explain the poor results. Thus, a measure that might charitably be viewed as an attempt to 'include' children with disabilities ends up making it even less desirable for schools to enrol them.

In addition, the directive to measure this child population against the national norm is in direct contradiction with section 16 of the Education Amendment Act 2013, which states that the function of school boards is 'to ensure that every student at the school is able to attain his or her highest possible standard in educational achievement': *his or her* standard, not that of a typical child who faces none of the same challenges.

The combination of all of these policy settings – inadequacy of the ORS funding, inequitable distribution of the SEG, and a misguided assessment regime – actively disadvantages inclusive schools, thereby reducing the prospects of children with disabilities to access the same education system as their peers. Conversely, these settings incentivise schools to not practice inclusion, and principals – the executives in charge of ensuring the 'success' of each school – are more acutely aware of them than most. Can we really blame them for working within the system and responding to the signals the policy sends them?

Conclusion: shifting the burden

It is beyond the scope of this article to propose a comprehensive alternative policy model. International comparisons suggest that we could look at jurisdictions that perform well on several measures relating to inclusion – be it Sweden, Italy or the Canadian province of New Brunswick – but the reality is that all of them will be found to be wanting in some respect: inclusion is very much a work in progress, and not just in New Zealand. And while it is our contention that many of our officials and policy makers are in denial about the long-standing inequities

that afflict our system, we also believe that New Zealand is perfectly capable of forging its own progressive path, and translating some of the strong commitments in our laws into effective policies that value and reward inclusive schools.

It starts with admitting that we have a problem, and for whatever reason, in spite of 20 years of a debate that has never made real progress, our Ministry of Education is clearly not there yet, as evidenced by the timid nibbling at the edges in this year's special education update, while parents clamour and petition for real change. The set of perverse incentives we have described emanates from a system that is almost pathologically obsessed with costly verification, placing little or no trust in educators and families. Under this regime, it is not probative to say that our levels of expenditure are relatively high by international standards when so much money is going towards guarding access to resources, as opposed to enabling inclusion. The system is also hopelessly fragmented. As New Zealand Disability Support Network head (and former special education district manager) Garth Bennie explained to Kirsty Johnston, 'you might have a bunch of specialists talking about whether a student needs an iPad – and once they have talked for an hour that's equal to the cost of the iPad' (Johnston, 2015b). This kind of scenario will be sadly familiar to virtually anyone who has had to apply for special education support in New Zealand.

It could start with something small, like a more equitable distribution of the SEG, which will require in turn the long-overdue gathering of data about the distribution of children with special education needs. It could end with something big, like a radical redesign of the funding mechanisms for individual schools and the delivery of specialist supports. In either case it should involve, we argue, a shifting of the burden. If a

parent or teacher reports, and the school confirms, that a child has significant needs, they are unlikely to be lying and should not be subjected to endless assessments and reviews. It should be up to the Ministry of Education, rather, to argue that the need does not exist, or justify why the necessary supports are not to be provided. These are reasonable expectations to place on an education system that values all its participants and is committed to teaching all children.

At times the government appears to understand this. Its comprehensive and evidence-based 2008 *New Zealand Autism Spectrum Disorder Guideline*, for instance,

... you might have a bunch of specialists talking about whether a student needs an iPad – and once they have talked for an hour that's equal to the cost of the iPad

makes no mention of the capping and rationing of resources. Instead, it advocates an education based on early intervention and 'individualised supports and services; systemic instruction; comprehensive and structured learning environments; specialised curriculum content; a functional approach to problem behaviours; and family involvement' (Ministries of Health and Education, 2008, p.127). It is the kind of service that our modern public education system outside of what we still call special education is philosophically primed to provide, and that our teachers and the national curriculum are ready to accommodate. Unfortunately, the mandate of the Guideline was underfunded and most of the policy never implemented, but at least the document acknowledged the existence of the problem and the need

for a step change. It is what we are asking again today.

In 2008, the same year the autism guidelines were published, New Zealand ratified the United Nations Convention on the Rights of Persons with Disabilities, whose obligations on states parties include the following:

Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live;

Persons with disabilities receive the support required, within the

general education system, to facilitate their effective education;

Effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion. (United Nations, 2006, article 24)

We made this commitment in front of the international community, on behalf of our most vulnerable children. It is time we honoured it.

- 1 It reverted back to ORS in 2011.
- 2 This could be a very distressing exercise for parents, particularly as it was often unsuccessful.
- 3 As reported by the principal of Berhampore School, Wellington, of which one of the authors of this article is a trustee.

References

- Beaton, P. (2004) *The Disability Revolution in New Zealand: the social model* (2nd edn), Palmerston North: Massey University
- Creech, W. (1997) 'Special Education 2000', 15 September, <http://www.beehive.govt.nz/feature/special-education-2000>
- Education Review Office (2015) *National Report Summary: inclusive practices for students with special education needs in schools*, 5 March, Wellington: Education Review Office, <http://www.ero.govt.nz/National-Reports/Inclusive-practices-for-students-with-special-education-needs-in-schools-March-2015>

- Higgins, N., J. MacArthur and M. Morton (2008) 'Winding back the clock: the retreat of New Zealand inclusive education policy', *New Zealand Annual Review of Education*, 17, pp.145-67, http://ir.canterbury.ac.nz/bitstream/10092/5170/1/12610605_Morton.pdf
- IHC (2015) 'Education complaint', <http://www.ihc.org.nz/campaigns/education-complaint/>
- Johnston, K. (2015a) '\$6.6 million special education underspend revealed', *New Zealand Herald*, 10 July, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11478936
- Johnston, K. (2015b) 'Desperate parents of special needs children are paying for teacher aides', *New Zealand Herald*, 6 July, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11476238
- Johnston, K. (2015c) 'Parents hopeful in push to be heard on special education', *New Zealand Herald*, 27 September, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11519839
- Ministries of Health and Education (2008) *New Zealand Autism Spectrum Disorder Guideline*, Wellington: Ministry of Health
- Ministry of Education (2005) *Let's Talk Special Education*, Wellington: Ministry of Education
- Ministry of Education (2010) *Success for All: every school, every child*, Wellington: Ministry of Education
- Ministry of Education (2014) *Success for All: special education. Briefing to incoming minister*, Wellington: Ministry of Education, <http://www.education.govt.nz/assets/Documents/Ministry/Publications/Briefings-to-Incoming-Ministers/SuccessForAllSpecialEducation.pdf>
- Ministry of Education (2015) 'Criterion 8 for ORS – high needs with language and social', <http://www.education.govt.nz/school/student-support/special-education/ors/criteria-for-ors/ors-criterion-8>
- Moir, J. (2015) 'Government underspend punishes schools', *Dominion Post*, 15 April, <http://www.stuff.co.nz/national/politics/67753483/Government-underspend-punishes-schools>
- New Zealand Parliament, Education and Science Select Committee (2015) 'Inquiry into the identification and support for students with the significant challenges of dyslexia, dyspraxia, and autism spectrum disorders in primary and secondary schools', http://www.parliament.nz/en-nz/pb/sc/business-summary/OODBSC_INQ_64710_1/inquiry-into-the-identification-and-support-for-students
- New Zealand Resource Teachers: Learning and Behaviour Association (2008), 'National co-ordinator's report', June, http://www.nzrtlb.org.nz/index.php?option=com_content&view=article&id=54:ncreportjune08&catid=69:reports&Itemid=61
- Stace, H. (2011) 'Moving beyond love and luck: building right relationships and respecting lived experience in New Zealand autism policy', PhD thesis, Victoria University of Wellington
- Tiso, G. (2010) 'Questions asked', *Bat, Bean, Beam: a weblog on memory and technology*, 13 September, <http://bat-bean-beam.blogspot.com>
- United Nations (2006) *Convention on the Rights of Persons with Disabilities*, New York: United Nations
- Wylie, C. (2000) *Picking up the Pieces: a review of Special Education 2000*, Wellington: New Zealand Council for Educational Research

Victoria Professional and Executive Development



High quality professional and executive development courses specifically designed for the public sector:

UNDERSTANDING FINANCIAL MANAGEMENT AND BUDGETS IN THE PUBLIC SECTOR

→ Tue 1 & Wed 2 December 2015, 9am–4.30pm

MACHINERY OF GOVERNMENT

→ Fri 4 March, 9am–4.30pm

→ Fri 27 May, 9am–4.30pm

MAKING POLICIES WORK: SKILLS FOR POLICY

ANALYSTS AND ADVISORS

→ Tue 15 March, 9am–4.30pm

→ Fri 1 July, 9am–4.30pm

ENGAGING EFFECTIVELY WITH YOUR STAKEHOLDERS

→ Wed 13 April, 9am–4.30pm

→ Thu 16 June, 9am–4.30pm

ROLES AND SKILLS OF POLICY ANALYSTS AND ADVISORS

→ Fri 29 April, 9am–4.30pm

→ Thu 25 August, 9am–4.30pm

ECONOMIC PRINCIPLES AND APPLICATIONS IN PUBLIC POLICY

→ Wed 27 & Thu 28 April, 9am–5pm

→ Thu 8 & Fri 9 September, 9am–5pm

USING SOCIAL MEDIA FOR EFFECTIVE PUBLIC ENGAGEMENT

→ Thu 26 & Fri 27 May, 9am–4.30pm

→ Tue 11 & Wed 12 October, 9am–4.30pm

PUBLIC SECTOR FINANCE FUNDAMENTALS

→ Thu 7 July, 9am–4.30pm

→ Tue 11 October, 9am–4.30pm

ADVANCED POLICY LEADERSHIP WORKSHOP

→ Thu 16 & Fri 17 June, 9am–4.30pm

→ Thu 27 & Fri 28 October, 9am–4.30pm

STRATEGIC THINKING FOR GOVERNMENT

→ Thu 7 April, 9am–4.30pm

→ Wed 13 July, 9am–4.30pm

We can also deliver in-house courses, customise existing courses or design new programmes to suit your requirements. We now also run courses at our Auckland training rooms. For more course dates, further information and to enrol visit: www.victoria.ac.nz/profdev or call us on **04-463 6556**.

Canterbury Water Management Strategy 'a better way'?

A refrain heard often in respect of Canterbury's current approach to water governance is 'there had to be a better way'. Canterbury has 12.7% of the national population, contributes 13% to GDP,¹ and yet encompasses 17% of New Zealand's land area, much of which, because of soil type and slope, is considered irrigable. What happens in Canterbury has material significance for the country as a whole. So, what is Canterbury doing about the management of its water resources, why do those involved think it could be 'a better way', and is there evidence that they might be right?

Space does not allow review here of the national freshwater policy environment (covered in Eppel, 2014) or of the actions taken or neglected at either the national or regional levels over the first 20 years of the Resource Management Act 1991

(RMA). Suffice it to say that Canterbury's water governance, which is the focus of this article, is now dealing with water management issues that are the product of over 150 years of European settlement and land use for farming, and some short-

sighted, if not neglectful, regulation from 1991 to 2010. Rapid change to intensive dairying in a number of regions, but most notably Canterbury,² led to rapid decline in the water quality of many of Canterbury's rivers and lakes. Fish and Game New Zealand's national Dirty Dairying campaign, prompted by this rapid decline in water quality, led to the Dairy and Clean Streams Accord in 2003, and its successor, the Strategy for Sustainable Dairying 2013–2020, through which industry leaders took steps to mitigate and change dairy farmers' environmental impact by fencing streams and planting riparian margins to slow nutrient run-off into waterways.

This article is based on a qualitative analysis of publicly available documents and a series of interviews with participants in the development and implementation of the Canterbury Water Management Strategy (CWMS), launched in 2009. In the following sections I introduce the CWMS by identifying some of the circumstances which led to its development, and the CWMS becoming the official water resource management blueprint in Canterbury. I then examine the contents of the strategy and the processes involved in its creation and promulgation. The CWMS is now five years into its implementation. Some distinctive processes have been developed to achieve its goals, which, given their novelty, demand inspection

Elizabeth Eppel is a Senior Research Fellow in the School of Government, Victoria University of Wellington, with a research interest in complex policy processes and collaborative governance. The author would like to thank Janet Tyson, Jonathan Boston and several reviewers for their helpful and constructive comments..

and understanding by people generally interested in complex governance processes, and also by people involved in aspects of natural resource management in other jurisdictions, national and regional. I conclude the article by addressing the question of whether it is possible to make judgements at this point about the likelihood of successful water management outcomes for the region and the country from this approach, and what more is needed.

The tensions between [the] two perspectives within ECan only increased as the dramatic rise in dairy conversions in Canterbury became more apparent to the wider population of urban Canterbury.

Where did the CWMS come from?

In its first 20 years of operation under the RMA (1991–2011), the Canterbury Regional Council (generally known as Environment Canterbury or ECan) approved individual water resource consent applications on a first-come, first-served basis, without the benefit of a regional plan for freshwater management. With ten significant water catchments and large groundwater systems, fresh water seemed an unconstrained resource which could be harnessed for economic benefit. ECan's water quality focus in that period was on point-source contamination from manufacturing and agricultural processes such as freezing works and wool scours. There was little recognition of the growing importance of diffuse sources of freshwater contamination from surface run-off in rural and urban areas.

The CWMS was officially launched in 2009 but its gestation goes back at least to 2000, and has a number of parents. The official owner of the CWMS today is the Canterbury Mayoral Forum. This body consists of the mayors of the ten territorial areas in the Canterbury region (one of which is Christchurch City) and the chair of ECan.

In 2000, ECan initiated a Canterbury Strategic Water Study as a joint project with the Ministry of Agriculture and Forestry (now part of the Ministry for Primary Industries) and the Ministry for the Environment. The reasons for the study were summarised thus:

Canterbury has 58% of all water allocated for consumptive use in New Zealand, and 70% of the nation's irrigated land. Water is highly valued by the regional community for a

variety of economic, environmental and social reasons. On-going land use change, primarily in the form of irrigation development, continues to increase demand for water abstraction. At the same time, there has been a shift in values within communities towards greater recognition of the Tangata Whenua's values for water, and towards increased protection of the natural environment and maintenance of bio-diversity. As a result, there is increasing conflict over the allocation of water for abstraction and for maintenance or improvement of instream values.

In the absence of an effective vehicle for strategic regional management of the development of Canterbury's water and land resources, central, regional and local government were concerned that ad hoc actions by one group might foreclose on protection or development options that provided greater benefits over the long-term to the environment and to the community as a whole. (Morgan et al., 2002)

The study became a multi-year one, during which information was gathered on the potential long-term requirements for water; the capacity of the region to meet those requirements; the water resources that would come under the most stress; and the reliability, over the long term, of water supplied from natural systems for abstractive uses. A second stage in 2004, commissioned by the Mayoral Forum, identified the potential for water storage in Canterbury, the areas that could be irrigated and the impacts on river flows, while a third stage evaluated the environmental, social, cultural and economic impacts of the water storage options. Evaluation was done by a reference group of people from across Canterbury with a wide range of interests: Ngāi Tahu as tangata whenua, and farmers, irrigators, anglers, recreationists and environmentalists. The reference group completed its evaluation of water storage options for the Hurunui area at the end of 2006 and began evaluating options for South Canterbury and the Waimakariri and Rangitata rivers.

The chief executive officer of ECan from June 2003 to 2010, Dr Bryan Jenkins, an environmental planner, is widely credited as a principal architect of the transformation of the Canterbury Strategic Water Study into the CWMS. He had come to the ECan role with a knowledge of collaborative approaches to the governance of common pool resources, such as land and water, based on the work of Nobel prize-winning economist Elinor Ostrom (Ostrom, 1990; Jenkins, 2011), with prior experience of the benefits of the collaborative approaches to environmental management in Australia. He championed the symbolic, although probably mostly cosmetic, Living Streams programme, which involved local communities in projects to enhance the health of waterways in their local area.

Some ECan councillors were also advocates for having an overall plan for water and all its aspects, from biodiversity through to flooding and drainage, which would result in the concerns of objectors being addressed during planning. Angus McKay, the current mayor of Ashburton, adopted this approach in guiding consents for some developments in his

region. Other councillors, mainly those with non-rural constituencies, seem to have been more intent on stopping development and refusing consents. The tensions between these two perspectives within ECan only increased as the dramatic rise in dairy conversions in Canterbury became more apparent to the wider population of urban Canterbury. Table 1 shows regional changes in total dairy herd numbers between 1994 and 2013: Canterbury has one of the most dramatic (a 500% increase), within a national trend of 68.9%. More irrigation and the application of nitrogen-based fertilisers made it possible to farm more cows per hectare and encouraged conversions from other land uses, such as forestry (Parliamentary Commissioner for the Environment, 2013).

In response to community concerns about the impact these changes were having on water quality,³ the focus of the Canterbury Strategic Water Study shifted to include consideration of sustainability and water quality and the need to understand community water values more broadly. The study progressed, slowly but methodically, accumulating measurement data and consulting with

the community between 2000 and 2010 (Whitehouse, Pearce and McFadden, 2008; Jenkins, 2011), and in hindsight appears to have had an educative effect and enlisted community support for a more strategic approach.

Changes to the Local Government Act in 2002 gave the act a focus on sustainability and the four 'well-beings' (economic, environmental, social and cultural). Emboldened by this change, or principally because of frustration with the current processes, multiple judicial challenges to ECan's authority and ECan's inability to regulate effectively in the absence of a regional plan (Kirk, forthcoming), the Mayoral Forum came to adopt and champion the work of the Canterbury Strategic Water Study. Its final report noted:

Water storage is only one of the things that need to be considered in a water strategy for Canterbury. Other issues that need to be considered include land use intensification, water quality, cultural values, tangata whenua objectives, and recreation uses. (ibid.)

There was wide consultation in the region on this more strategic framework, which was signed off by the Mayoral Forum in 2009 as the Canterbury Water Management Strategy; targets were added in 2010 and implementation began. By this time the relationships among ECan councillors and between ECan and the mayors were quite strained. According to many interviewees, tensions manifested as a rural–urban divide, where councillors representing urban areas were under pressure from their electorates to slow or ban consents for further takes of water for irrigation and land for dairying, while councillors representing rural electorates wanted to move full speed ahead to promote the economic development in their rural constituencies. Following a motion of no confidence in the ECan chair by eight of the 14 ECan councillors, other members of the Mayoral Forum, led by the Christchurch mayor, had growing doubts about whether ECan would and could implement the CWMS. According to a *Marlborough Express* report, the mayors had a number of grievances:

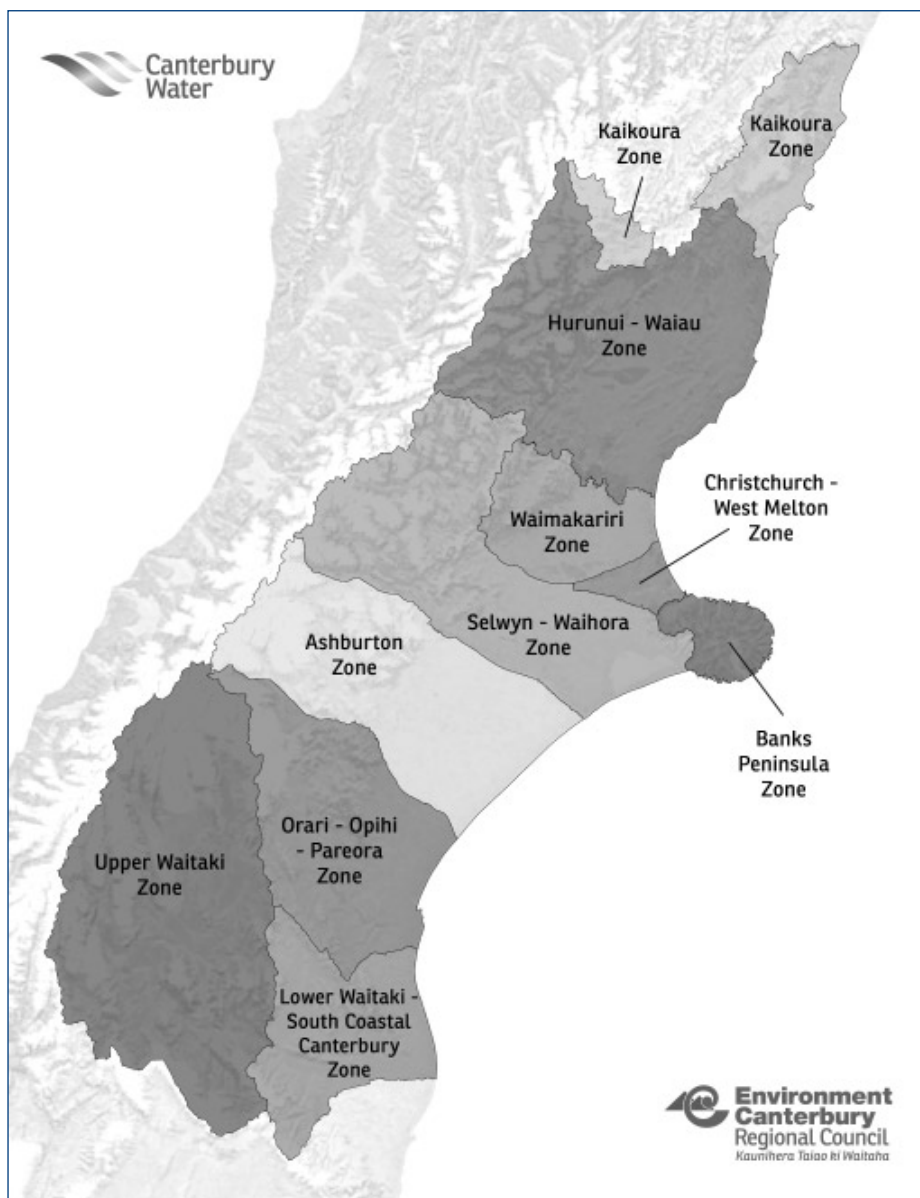
Concerns ... about the effectiveness of ECan on hydro matters, irrigation

Table 1: Dairy cattle in New Zealand as at June 30 1994–2013

Region	1994	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	% Change 1994-2013
Southland	114378	356220	347793	349021	348075	375911	432642	495971	589184	599198	614648	670581	615428	438.1
Otago	82173	204802	181484	174253	161616	180734	218264	232905	257049	262417	307817	336278	367292	367.0
Canterbury	212492	542610	556339	599643	604756	655676	754937	831666	918480	938453	1006742	1200293	1304618	514.0
West Coast	79251	124640	122572	141401	142370	148730	152481	152869	179416	160791	179308	173651	178907	125.7
Marlborough	22648	32526	28233	26831	30604	25783	23899	33544	–	25980	30012	33218	27811	22.8
Nelson	1412	–	–	–	–	–	1862	–	–	–	–	–	1259	-10.8
Tasman	49092	67473	71206	70848	67535	65994	63849	70689	86531	71088	72803	71956	76283	55.4
Wellington	83935	111180	111973	95021	95274	103290	92787	103525	85331	92375	114120	108174	108647	29.4
Manawatu-Wanganui	308022	416802	408986	381464	410765	390125	393453	425484	424880	478514	472992	475466	448030	31.2
Taranaki	599083	651700	623459	664922	615592	598667	589573	571505	607436	645891	625315	604383	595014	-0.7
Hawkes Bay	31707	88982	92852	91786	82772	79419	80200	99931	93871	113465	90655	93047	95098	200.0
Gisborne	6226	12533	6969	–	–	–	7891	16432	–	10535	17806	17095	19332	210.5
Bay of Plenty	285752	331410	326885	320923	329776	300509	299013	315183	299696	306884	331536	312326	314679	10.1
Waikato	1437630	1663446	1679882	1685661	1726323	1735353	1669472	1717421	1786579	1757624	1795785	1832380	1837858	27.8
Auckland	168754	150089	167559	141618	122015	122234	113344	115883	94391	98416	129768	117281	110288	-34.6
Northland	356561	405387	374019	399064	343195	378152	367183	392193	392577	353314	384636	397764	383057	7.4
New Zealand Total	3839184	5161589	5101603	5152492	5087176	5169557	5260850	5578440	5860776	5915452	6174503	6445681	6483600	68.9

Source: Statistics New Zealand

Figure 1: Canterbury region showing water management zones



and water allocation, and the fact that ECan serves a widely disparate geographical area which needs different local foci, including specific urban and rural needs ... a common feeling of frustration at many of the issues Canterbury councils faced when dealing with ECan. These included lengthy time frames for issuing consents; frequent delays and inconsistencies which meant often councils were facing penalties and extra costs such as paying for duplication of specialist time, monitoring and associated administration. The mayors also noted a number of occasions that consents were often held up by what their councils considered to be minor matters. Inconsistency

when dealing with ECan was cited as a common problem also, with a lack of experienced staff, often with no or limited local knowledge, and high staff turnover both possible reasons for this. The (then) Mayor of Ashburton, Bede O'Malley, said the staff turnover at ECan had been 'historically high'. This often meant consent processes had to be started over again when new members of staff took over. 'Lack of community engagement', a disappointing 'lack of openness', lack of dialogue and consultation and a lack of direction were all aspects of Ecan's performance which needed review. (Dangerfield, 2009)

The minister of local government and the minister for the environment, hearing these concerns, commissioned a review of ECan by former National government minister Wyatt Creech (Creech et al., 2010). The immediate result, the dismissal of the elected council and its replacement by seven appointed commissioners with Dame Margaret Bazley as chair, triggered a national outcry about this suspension of democracy.

The Environment Canterbury (Temporary Commissioners and Improved Water Management) Act, passed in April 2010, required that ministers 'must appoint Commissioners who collectively have knowledge of, and expertise in relation to: (a) organisational change; (b) fresh water management; (c) local authority governance and management; (d) tikanga Māori, as it applies in the Canterbury region; and (e) the Canterbury region and its people' (section 14) and that the commissioners 'must as soon as practicable establish a process for seeking advice from the mayors of the territorial authorities in the Canterbury region on local issues that affect the exercise of the powers, and the performance of the functions, of ECan' (section 21).

This act also brought a number of other remarkable changes which, in the words of its preamble, 'provide the Council with certain powers that it does not otherwise have to address issues relevant to the efficient, effective, and sustainable management of fresh water in the Canterbury region'. In particular, it conveyed upon the newly appointed council, which continued to have the status and responsibilities of ECan under the Local Government and Resource Management acts, the power to impose a moratorium on the granting of consents, and replaced some sections of the RMA for Canterbury – regarding, for example, how water conservation orders could be imposed – and limited the grounds for appeal against water conservation orders and any plans issued by ECan to matters of law (for a more detailed account, see Brower, 2010; Brower and Kleynbos, 2015).

What is the CWMS and how is it being implemented?

At the time the commissioners were appointed, continuation of the CWMS was not a foregone conclusion. The

CWMS is a statement of shared values and outcomes for water resource management in Canterbury. Its vision is: 'To enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.' It identifies targets as an agreed way to measure progress towards this outcome,⁴ and includes a set of goals, applying from 2010, that reflect the fundamental principles. Targets are then set for 2015, 2020 and 2040 to provide a set of long-term environmental, social, economic and cultural outcomes reflecting a sustainable development approach to achieve the goals. The detail of how these targets are to be met is worked out at the local level with input from the community concerned through ten zone committees (one for each major water catchment in the region and one to oversee region-wide infrastructure and co-ordination issues) (see Figure 1).

The zone committees, established progressively by ECan and the respective territorial councils since 2010, are joint committees under the Local Government Act 2002, which, among other things, means that they are subject to the Local Government (Official Information and Meetings) Act 1987. The committees are advisory to ECan and the relevant territorial council and operate under terms of reference. Nominations for membership were sought from the local communities in each zone. Rūnanga, ECan and the relevant territorial councils also have a member on each committee and membership has been refreshed regularly since then. Zone committee members are required to give effect to the fundamental principles, targets and goals of the CWMS; be culturally sensitive, observing tikanga Māori; give consideration to and balance the interests of all water stakeholders in the region in debate and decision-making; work in a collaborative and co-operative manner, using best endeavours to reach solutions that take account of the interests of all sectors of the community; promote a shift in philosophy from an individual rights basis for using water resources to a collective interests approach to water management.

Committee members are selected with considerable thought to their ability to work constructively with those holding different views. As well as reflecting a particular perspective, members often have deep roots in the community arising from regular contact with other interests, such as the farmer who is also a recreational angler and whose children like to swim in the local stream.

We look at geographic spread – if everyone is coming from one part of the catchment then you miss out on parts of the community's experiences; we look at sector representation – balance is essential; we look at gender mix – that's really important because they hear different things in the community. We look at skill set – there is quite a broad assessment criteria. So when people are sitting in front of us we might say, well you would both be very good, but when

we look at who is already on the committee and what is missing, we need more of [one than another]. Or if we conclude we don't really need any more people but we really like what you bring, how can we get you involved in a catchment group, like another layer of the zone committee process so that you can use your skill sets there. (Atkinson, 2014)

At least one of the ECan commissioners attends zone committee meetings regularly, along with the representatives of the district council and Ngāi Tahu. Expert advisors can be called on for scientific input. The intended outcome for each catchment is a zone implementation plan or ZIP, which sums up the local priorities for freshwater management. Reaching this point can be a lengthy process and

many remark on the difficulties inherent in working collaboratively.

We are four years in now. Our ZIP was developed over about 18 months and was a very interesting process ... we all bring our experiences and expertise and we do come from different backgrounds ... In those early days there was quite a bit of laying your cards out on the table, letting everyone have their say, and listening and understanding each other ... We developed respect for each other and respect for each other's approaches and where they were coming from. (McKay, 2014)

A ZIP typically includes recommendations to amend ECan's rules: for example, in relation to the amount of nutrient that can be allowed to leach from farmland or the minimum flow required on a particular river. ZIPs might also include

Since 2010 ECan has promulgated the long-awaited National Regional Resources Plan (NRRP), which had been a work in progress for some years.

recommendations for additional flow, water quality monitoring or action on biodiversity. Recommended rule changes are taken up by ECan using its powers under the RMA to create or amend the regional plan.

This last sentence makes the translation to a plan amendment sound simple, but it elides the tricky processes required to translate the wishes of a community into the statutory rule-making of ECan, dictated by the RMA. This needs to occur while balancing two very important tenets which coincide when top-down rule-making meets bottom-up and middle-out collaborative processes: maintenance of the trust of the community and the community collaborative capital generated through the processes of consultation carried out over several years by the zone committees; and exercise of ECan's statutory obligations,

including the necessary independence of their decision-making. That this delicate balance has been achieved so far has much to do with the careful wisdom of the ECan commissioners and the quality of the relationships that have been established between the commissioners and the zone committees and the wider Canterbury community. Commissioner David Caygill welcomes the process of arriving at the water management rules for a particular zone:

The right way is as much what we all agree to do. There are tests as to whether what we are doing is working or not. But if we are agreed

comfortable with their bargain? That is what I took from Elinor Ostrom's work: the diversity, and the absence of common patterns other than the requirement for buy-in. (Caygill, 2014)

Since 2010 ECan has promulgated the long-awaited National Regional Resources Plan (NRRP), which had been a work in progress for some years. It subsequently revised its regional policy statement to which all such plans (including district council plans) are subject and replaced the NRRP with a shorter and more accessible land and water regional plan (LWRP).

While litigation is still threatened or initiated, Bazley or one of the other commissioners is quick to meet with people in the community to both understand the issue in depth and to negotiate a satisfactory resolution.

to do it this way, then does it really matter that Australia does it this way or America does it slightly differently. Our approach might reflect our different culture or it might reflect circumstances or it might just reflect that this is the bargain that we struck here. Which is also why I am untroubled by the thought that at a zone level we end up with outcomes/bargains that are different in different zones, if they are agreed. A good example might be that having set a particular nutrient limit, a particular zone might agree to allocate it/divide it up in a way that reflected historic usage more than another approach would. Another zone might be more concerned with current land use. Another area again might be happy with a minimum for everyone and only allocating above a certain level. If you end up with different bargains in different areas, does that really matter, if the local people are

Significantly the LWRP includes, for the first time in Canterbury, rules that limit the discharge of nutrients, especially nitrates. ECan is no longer focused solely on point source discharges, but now has rules addressing diffuse pollution as well. (ibid.)

It is intended that the work of each zone committee will over time and where necessary be adopted by ECan as a sub-regional chapter of the LWRP. While it would be desirable to carry out this process in every zone simultaneously, ECan has the expert resources to meet the requirements for measurement and analysis for only one sub-regional plan at a time. The first zone committee to reach this stage is Selwyn–Waihora.⁵ Christina Robb from ECan describes the process that happens at this stage:

When the sub-regional planning process rolls into town, you get

four scientists, three economists, a social scientist, all the cultural opportunities, TRONT⁶ puts some resources in to help the rünanga. So some of the attraction of the sub-regional planning process is the resourcing that comes with it from us [ECan] and others.

The sub-regional plan is where the decisions lie about what the actual [nutrient] load is ... It's where that real action, with the numbers involved, happens. We already know that in Waimakariri, because they are a red zone, new development is only going to happen if the existing people reduce their leachate. When we do the sub-regional plan we will be able to tell you by how much. You can have different options for how much growth you are allowed. We can tell you the milk solid effects, the drinking water costs. We can produce 20–30 technical reports about all the things that you need to think about when you are making that call. And we are getting better at it. Because we are learning and some of the information about, like, how much it costs a dairy farmer to reduce nitrates by 20% – we have done that sum. (Robb, 2014)

This does not mean that other zone committees are marking time. There are many issues and actions that zone committees have identified that do not require inclusion in regulation for action to take place. For ECan and the zone committees a big focus has been farm environmental plans as an engagement and education tool for gaining farmer buy-in to more environmentally sustainable farming practices:

We need to get a change in mind-set; make it natural that people do good management practice and look after their water. It [becomes] just something that they do because they want to do it ... One of the things we are trying to encourage, is to not only fill the Farm Environmental Plan out, but not file it away in the bottom drawer. It's a living document that you use. It's got to

be doing something. For example, irrigation efficiency, you might say ... at the moment not a lot of people have moisture meters, tapes in the ground that tell you whether you need to water, or some scheduling information. You might say that in five years, I will have that put in. You'll give yourself a decent amount of time because it's quite expensive. Or you might not have 30 days' effluent storage, so you might say that by year whatever, I will have done that. (McKay, 2014)

What is the likelihood of CWMS success?

I began this article with the refrain 'there had to be a better way', and progress towards this better way is viewed through the eyes of those seeking that way from where Canterbury's water management was in 2010. Past neglect cannot be undone quickly, if at all. People who wanted a better way tended to think that the litigious culture that had arisen under the operation of the RMA by ECan was wasteful of time and resources. ECan's failure to take a strategic and longer-term view of water management and its inability to make progress on an agenda to make better use of the region's water through irrigation from 1991 to 2010 was also an issue. Since the implementation of the CWMS began, the rules have been made clearer through the LWRP and litigation has ceased to be the default response to ECan decisions. While litigation is still threatened or initiated, Bazley or one of the other commissioners is quick to meet with people in the community to both understand the issue in depth and to negotiate a satisfactory resolution. The wider community appears more supportive of Ecan, but this could reflect distraction with earthquake recovery work, and could become more visible with the return to having some elected members of ECan in 2016.⁷

The first national policy statement for freshwater management under the RMA was not promulgated until 2011, nearly 20 years after the passing of the RMA, with the objective of maintaining or improving 'the overall quality of fresh water within a region'. In 2014 this was amended to include 'bottom lines' for a few aspects of

water quality and a requirement to report on ecosystem health and water quality (Ministry for the Environment, 2014). These were generally seen as positive steps towards helping regional councils do their job. But water ecosystem experts would like them to be stronger: for instance, by specifying a level at which visible invertebrates such as mayfly and caddis fly larvae, which signal ecosystem health, can survive in reasonably high numbers⁸ (Joy, 2014; Parliamentary Commissioner for the Environment, 2015a).

Adding to the omissions of the past, two factors now affecting water quality in Canterbury (and Otago, Southland and Waikato) are ongoing increases in dairy herd numbers and land area devoted to dairying, facilitated by increased irrigation;

The Canterbury experience definitely does not support any dilution of the RMA's focus on protecting the environment.

and historical water-use consents granted over the years by ECan and only recently, or yet to be, acted on. When the appointed commissioners took over in Canterbury they decided not to revisit previously agreed consents, which, according to David Caygill, would have been a massive and problematic exercise, as well as controversial and probably court-contested given the strict processes laid out in the RMA for the review of consents.

What we decided to focus on was strengthening the actual rules, in particular getting in place rules that for the first time set limits on the discharge of nutrients from farmland. Without those rules in place there would have been no basis against which to review existing consents. The increase in land intensification meant that the crucial issue in Canterbury is not water quantity but water quality: above all, limiting the discharge of nitrogen/nitrates, and for this we needed rules. (Caygill, 2015)

Into the foreseeable future there is likely to be an increase in irrigated land, facilitating more intensive farming and making increased nutrient run-off into waterways likely. The new national bottom lines and the ECan LWRP requirements aim to regulate this. Jenkins notes, however, how problematic the parallel achievement of reduced nitrate loads and increased irrigation will be: 'existing users will need to adopt better than good practice management and incur cost' (Jenkins, 2014, p.13). Commissioner David Caygill and others involved in the CWMS admit that the water quality trend is likely to get worse before it gets better, largely because a large proportion of Canterbury's water is trapped in underground aquifers

which will continue to be affected by past diffuse pollution for decades to come. This view is shared by the parliamentary commissioner for the environment (Parliamentary Commissioner for the Environment, 2015b).

ECan's June 2015 progress report on the CWMS shows that the first five years of the strategy have been largely about setting up the processes and getting the community's buy-in, particularly in its rural and farming districts. A better way involves a collaborative approach to rule-making and more voluntary or incentivised action in the form of on-farm management practices, to make water use more efficient and limit nutrient loss from the soil root zone into freshwater sources, backed up by new regulatory limits such as the LWRP and the new sub-regional chapters as they are promulgated.

The Land and Water Aotearoa⁹ environmental reporting website shows indicators such as total phosphorus and dissolved nitrates at monitoring sites in the region. It reveals a pattern of average to above average water quality in upland

sites, and some well below average in lakes and lowland streams. ECan has been working on the quality of its aquatic ecosystem health data and monitors 200 sites annually. The 2015 CWMS progress report aggregates water quality data and reveals the same trend: 50% of alpine and high country streams generally have a good to very good water quality index (WQI), while the WQI is largely fair or below in lower hill-fed streams, and all of the Banks Peninsula streams are graded only fair, poor or very poor, and there are few signs of improvement in 2013–14 over previous years (Environment Canterbury, 2015, p.19). Aquatic ecosystem health of spring-fed plains and urban streams showed a rapid decline in the 2012–2014 period over the previous three years, with around 70% graded as poor or below.

The CWMS has milestones mapped out to 2040 and the next progress report is due in 2020. The LWRP has set some water quality and nutrient discharge limit rules for the region which are now being acted upon, and which will be progressively refined in the sub-regional chapters where more stringent limits are required. As part of its 'immediate steps' programme ECan has allocated \$420,000 to 29 lowland sites and \$650,000 to 36 high country and foothill streams to improve habitats that contribute to aquatic ecosystem health, but clearly there is much more to do to remediate existing damage and prevent more. Montaine lake systems are particularly vulnerable to increased run-off from intensified activity and must be better protected.

For me, the Selwyn–Waihora decision ... is going to be very significant. It's a very tricky catchment. It drains into a shallow lake which is only intermittently open to the sea so it doesn't clear itself readily. So you have a sump that is collecting the nutrients from decades of land use. The zone committee laboured for three years before they recommended an agreed position to ECan, Selwyn District and Christchurch City, but it is mainly us [ECan] that has to respond, because of our powers ... The zone committee's recommendations are aimed at

achieving a trophic level index in the lake [Ellesmere/Waihora] which we won't get to on their plan until 2035–40 – that sort of timeline. So this is a 20–25 year programme that we are dealing with. The conditions in the lake will get worse before they get better partly because of the legacy of what is already in the aquifers and partly because the plan recognises that there will be further development that will take place in that catchment, some of which is already consented ...

The Central Plains water scheme is consented to supply water to more intensive farms and more hectares of intensive farming than there is at the moment and the authority for that is attached to their consent ... At the same time, the alpine water that the Central Plains scheme is bringing to the catchment will take pressure off groundwater, and in turn also pressure off the lake. And there will be others outside of that scheme that still hope to develop further in that catchment. (Caygill, 2014)

Increased effort going into monitoring water quality and reporting of this data for public scrutiny improves everyone's understanding and ECan accountability. Efforts are being made to motivate individual water users to play their part through farm management plans and good management guidelines, and the enforcement of rules is aimed at limiting and lowering nutrient losses. ECan encourages farmers to use the Overseer model (a nutrient-loss measurement tool) to predict their water and nutrient-use requirements to avoid over-watering and prevent leaching of excess nutrients. These efforts suggest that ECan will first take an educative rather than a prosecutorial approach to enforcing its new rules. But when the educating has been done, there must also be appropriate and effective use of sanctions when individuals do not play their part.

As an irrigation strategy for the region, the CWMS has enabled land-use changes and regional economic development on such a scale that environmental regulation has struggled to keep pace.

This economic development has been based largely on a single commodity, milk, and fluctuating global prices have made this economic development appear more risky. Tightened requirements to consider water quality could be an incentive to encourage investors to adapt and move to higher-value propositions for the environment, the farmer and the economy as a whole. Alternatively, government and regulators could be tempted to soften the economic changes with increased environmental costs, both short and longer term.

Conclusion

The Canterbury experience might be seen to lend support to the government's proposals to amend the RMA to allow more participative processes, as recommended by the Land and Water Forum (2012), and limit the opportunities for appeal to something similar to what exists in Canterbury's current arrangements. The Canterbury experience definitely does not support any dilution of the RMA's focus on protecting the environment. Rather, it exemplifies just how much worse New Zealand's water quality could become with neglect and compromise of environmental outcomes. As ECan's regulatory screws begin to tighten on some individuals, as they must, there will be push-back from those reluctant to change their practices and meet more stringent requirements. Politicians and bureaucrats need to be ready for this and prepare to meet this challenge to their authority in a wider court of public opinion, as well as using all the regulatory powers they have to compel compliance. There is a long way yet to go to make a real difference in maintaining, let alone improving, water quality in Canterbury, and no one (ECan, central government, the population of Canterbury and the rest of us) can afford to take their eyes off the size and importance of the challenge to the quality and sustainability of our environment. Canterbury needs the help of a wider set of national bottom lines for freshwater ecosystem health.

Canterbury's efforts so far exemplify a number of things which have implications for water governance at the national and regional levels. First, under conditions of

changing economic development, failure to specify environmental bottom lines can very quickly lead to rapid decline in the quality of fresh water. Further, this deterioration is not a linear response that can be precisely linked to increments in intensification of water use. Freshwater ecosystems can quickly reach a point from which there is no qualitative recovery. Second, once damage to the environment has been done, through diffuse means as has occurred in Canterbury, it is a very complex, costly, multi-actor and long-term project to bring about any remediation, if it can be done at all. The jury will be out on that for some time yet, and those responsible for the damage could be long gone before the

effects are realised. For other regions, the lesson is that a region-wide view of water resources is needed, one that takes a dynamic view of ecosystem health and its resilience and sustainability, and which recognises that there are bound to be episodic shifts in how water is used and how intensively.

- 1 Source: Statistics New Zealand and Census 2013.
- 2 According to Statistics New Zealand the total number of dairy cattle in Canterbury grew by nearly 84% to 1.3 million cows between 1995 and 2013, compared to the national average growth of 40.7%. See also Table 1.
- 3 Reflected at the national level in the Dirty Dairying campaign, prompting the Dairy and Clean Streams Accord 2003 and its successor, Sustainable Dairying 2013–2020.
- 4 Targets have been developed for: (1) ecosystem health/biodiversity; (2) natural character of braided rivers; (3) kaitiakitanga; (4) drinking water; (5) recreational and amenity opportunities; (6) water-use efficiency; (7) irrigated land area; (8) energy security and efficiency; (9) regional and national economies; (10) environmental limits.
- 5 Hurunui zone committee produced an interim regional

plan early on to unblock an impasse created through the imposition of a water conservation order and High Court challenge, but have yet to do a fuller plan based on the work of the zone committee.

- 6 Te Rūnanganui o Ngāi Tahu.
- 7 The expiry date for the temporary Canterbury legislation was extended to 2016. New legislation was introduced in August 2015 to create a hybrid council of seven elected and up to six appointed members until 2019.
- 8 The use of a macroinvertebrate community index (MCI) is advocated by the Parliamentary Commissioner for the Environment and others as a desirable bio-indicator to be added to the national policy statement bottom lines.
- 9 Land and Water Aotearoa (LAWA) (<http://www.lawa.org.nz/explore-data/freshwater/>) is a joint project of the regional councils and unitary authorities in New Zealand, the Ministry for the Environment, the Cawthron Institute and Massey University.

References

- Atkinson, J. (2014) Interview with Jill Atkinson, director strategy and programmes, Ecan, December
- Brower, A. (2010) 'Legislation note: Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010', *New Zealand Journal of Environmental Law*, 14, pp.309-21
- Brower, A. and I. Kleynbos (2015) 'Changes in urban and environmental governance in Canterbury from 2010 to 2015: comparing Environment Canterbury and Christchurch City Council', *Policy Quarterly*, 11 (3), pp.41-7
- Caygill, D. (2014) Interview with David Caygill, ECan commissioner, 10 December
- Caygill, D. (2015) Personal communication, August
- Creech, W., M. Jenkins, G. Hill and M. Low (2010) *Investigation of the performance of Environment Canterbury under the Resource Management Act and Local Government Act*, Wellington: Ministry for the Environment <http://www.mfe.govt.nz/publications/rma/investigation-performance-environment-canterbury/investigation-performance-environment-canterbury.pdf>
- Dangerfield, E. (2009) 'Mayors dissatisfied with ECan', *Marlborough Express*, 30 September
- Environment Canterbury (2015) *Canterbury Water Management Strategy Targets: progress report June 2015*, Christchurch: Environment Canterbury, <http://ecan.govt.nz/publications/Reports/targets-report-cwms-2015.pdf>
- Eppel, E. (2014) 'Improving New Zealand water governance: challenges and recommendations', *Policy Quarterly*, 10 (3), pp.66-75
- Jenkins, B. (2011) 'Sustainability limits and governance options in Canterbury water management', in S. Russell, B. Frame and J. Lennox (eds), *Old Problems New Solutions: integrative research supporting natural resource and governance*, Lincoln: Manaaki Whenua Press
- Jenkins, B. (2014) 'Progress of the Canterbury Water Management Strategy and some emerging issues', paper presented at the New Zealand Agricultural and Resource Economics Society conference, 29–30 August, <http://hdl.handle.net/10092/9084>
- Joy, M.K. (2014) 'New Zealand's freshwater disaster', *New Zealand Science Review*, 71 (4), pp.97-103
- Kirk, N. (forthcoming) 'Local government authority and autonomy in Canterbury's freshwater politics between 1989 and 2010', PhD thesis, Lincoln University
- Land and Water Forum (2012) *Third Report of the Land and Water Forum: managing water quality and allocating water cover*, Wellington: Land and Water Trust
- McKay, C. (2014) Interview with Claire McKay, Waimakariri Zone Committee chair, 10 December
- Ministry for the Environment (2014) *National Policy Statement for Freshwater Management 2014*, Wellington: Ministry for the Environment
- Morgan, M., V. Bidwell, J. Bright, I. McIndoe and C. Robb (2002) *Canterbury Strategic Water Study*, report prepared for the Ministry of Agriculture and Forestry, Environment Canterbury and Ministry for the Environment, <http://ecan.govt.nz/publications/Plans/Canterburystrategicwaterstudy.pdf>
- Ostrom, E. (1990) *Governing the Commons: the evolution of institutions for collective action*, Cambridge: Cambridge University Press
- Parliamentary Commissioner for the Environment (2013) *Water Quality in New Zealand: land use and nutrient pollution*, Wellington: Parliamentary Commissioner for the Environment
- Parliamentary Commissioner for the Environment (2015a) *Managing Water Quality: examining the 2014 national policy statement*, Wellington: Parliamentary Commissioner for the Environment
- Parliamentary Commissioner for the Environment (2015b) *Water Quality in New Zealand: land use and nutrient pollution, update report*, Wellington: Parliamentary Commissioner for the Environment
- Robb, C. (2014) Interview with Christina Robb, programme director, CWMS, 11 December
- Whitehouse, I., A. Pearce and G. McFadden (2008) *Canterbury Strategic Water Study (CSWS) Stage 3: Multi-stakeholder evaluation of water storage options. Final Report*, Christchurch: Canterbury Mayoral Forum, <http://ecan.govt.nz/publications/Plans/CSWSCcombinedFinal.pdf>

Uncertainty in Policy: implications for practice

Introduction

Academics have been writing about uncertainty in public administration since the 1950s (Brown, 1978; Lindblom, 1959), and more recently complexity theory has provided tools for learning one's way through uncertainty (Eppel, Turner and Wolf, 2011; Kurtz and Snowden, 2003).

Uncertainty is different from change. Uncertainty arises from change, but it is also an effect of the social interactions engaged in by public servants going about their business, and of the environment they work in. Research on the way policy is practised provides a way to 'understand how to conceive of public policy making in an uncertain world' (Hajer and Laws, in Moran, Rein and Goodin, 2006, p.421). Within this field, the pervasiveness of the effects of uncertainty on the daily work of policy practitioners appears to have been given less attention than it deserves.

This article aims to stimulate thinking about the positive and negative effects of uncertainty. It does not purport to have all the answers on how to manage uncertainty better; rather, it provides illustrative stories from my recent PhD research on the interplay between narrative and action in the domain of trans-Tasman border management. That research revealed that the working environment of policy officials is anything but stable; that uncertainty acts on officials and how they practice their work, day to day.

The fragility of social connections

The sociology of translation (more commonly known as actor-network theory), which has as its starting point the fragility of social connections, provides an entry point into the subject of uncertainty. To illustrate, Bruno Latour tells a story about Shirley Strum's study of baboons (Latour, 2007). Strum observed that baboon social relationships were complex, held together by agreed behaviours, such as grooming. She realised that grooming was not just a practical activity to clean the fur; it was a part of maintaining positive social connections. But she also observed that the baboons had to keep doing this every day to maintain the stability of those connections. In other words, the daily performance of those activities bound this baboon social group together.

However, unlike baboons, humans have been able to stabilise social connections through inventing mechanisms such as language, and the writing down of language; through creating processes and being able to document them for others to use; through building machines and organisations and

Germana Nicklin has recently had her PhD thesis approved by Victoria University of Wellington, and is awaiting graduation in December 2015. She is currently a Principal Advisor, Business Improvement in the New Zealand Customs Service, where she has worked for the last 16 years.

infrastructures. Importantly, these have enabled us to transport ideas from one place to another. For example, the idea of public sector organisations providing advice to ministers and Cabinet has been translated into a written account of the method, which is transported by way of the Cabinet Office Manual.

Even so, Latour asserts that stabilising mechanisms are only temporary and will break down over time. We can see these breakdowns in the public sector all the time: Cave Creek and Pike River are extreme examples. However, we humans tend to behave as if our stabilising mechanisms are permanent, and when that stability breaks down we treat it as a problem. Bruno Latour reminds us that '[t]he world is not a solid continent of facts sprinkled by a few lakes of uncertainties, but a vast ocean of uncertainties speckled by a few islands of calibrated and stabilized forms' (Latour, 2007, p.245).

The following stories from my PhD thesis show how uncertainty unconsciously affected officials' actions, and highlight its impacts.

Story 1: Cumulative change creating uncertainty of purpose

Story 1 tells what happened to a trans-Tasman Customs senior officials group called the High Level Steering Group. Created out of a Customs ministerial meeting in 2005, this group from Australia and New Zealand customs administrations, and on four occasions including the respective biosecurity administrations, met regularly until 2009, after which meetings started to tail off.

In the first few years the group was small, and while the meetings and work programme had structure, it was a light touch, enabling frank exchanges between the senior officials. At this time the group was co-chaired by two deputy chief executives who knew each other well. The group's focus was clear enough, its work programme generated results and its regular meetings, often with an annotated agenda and resulting action points, created an impetus for action. For example, on more than one occasion a trans-Tasman workshop addressing one of the action points from the previous

minutes was held two weeks before the next group meeting.

In the later stages of the group, however, the purpose narrative lacked clarity. One official observed:

there were probably some people particularly in the High Level Steering Group that felt that the discussions weren't as valuable as they might have been and that it wasn't clear what the purpose of some of the agenda items was. (Nicklin, 2015, p.150)

Uncertainty of purpose is familiar in the policy world, particularly when officials have to translate ambiguous directional political statements into something actionable.

Another raised questions about the future of the group, for which no answers were forthcoming:

Australian International¹ had an action in probably about 2009 to review the HLSG in tandem with us, and that never really led to anything. So 'what was the role of the HLSG, what was the role of the two Customs agencies, where did our responsibilities lie, what did we want out of CEs, what did we want out of Ministers?' (Nicklin, 2015, p.150)

The data indicates that there were multiple factors leading to the uncertainty of purpose: one of the co-chairs retired, thus removing the close personal relationship that maintained the impetus of the group; the number of attendees at the meetings increased as people from lower levels in the organisation attended to report on their item, resulting in an inability to conduct the more intimate discussions originally intended; some items on the work programme were completed or found to be unfeasible,

resulting in a dropping off of impetus; the work emerging from a joint Australia-New Zealand prime ministerial statement on 2 March 2009, in effect overtaking the work of the group, which was not strongly connected into either organisation's strategic priorities.² It is evident that the group was undergoing constant change, and the cumulative effect of that change was uncertainty of purpose.

Uncertainty of purpose is familiar in the policy world, particularly when officials have to translate ambiguous directional political statements into something actionable. One official

articulated the difficulty:

often what happens is you have that broad political statement, like the 2009 statement, and so officials get excited, try to come up with solutions to match that, and the solutions are a bit vague and unclear, and therefore in discussion we were never really sure between the two countries what we were actually trying to do. (Nicklin, 2015, p.181)

A common and usually effective response to uncertainty of purpose is to revisit and rework it, often through changing the narrative.³

Story 2: Messy narratives

A key aspect of policy practice is uncovering and telling a story (Roe, 1994). However, more than just being told, John Law sees stories as acting on us and enabling us to create things: 'one way of imagining the world is that it is a set of (pretty disorderly) stories that intersect and interfere with one another' (Law, 2000, p.2). He is talking about how

messy the process of doing so often is, as different people's narratives rub up against one another. A side-effect of this messiness is uncertainty.

Story 2 tells of the uncertainty created by narratives that intersected and interfered with one another. On 2 March 2009 the Australian and New Zealand prime ministers committed, in their usual joint statement issued after meeting over the previous two days, to 'reduce remaining barriers at the borders to ensure that people and goods can move more easily between the two countries' (Key and Rudd, 2009a). One initiative supported by New Zealand prime minister John Key was for New Zealand to introduce SmartGate, the automated

The data shows that the process of agreeing on the exact narrative that accommodated these different matters of concern in the Cabinet paper caused considerable uncertainty for officials, particularly for Customs, who were holding the pen. Added pressures on officials were the tight time frame and Cabinet's directive to present a paper with a single set of recommendations.

This story highlights the uncertainty caused by agencies working together without having first sorted out their respective organisational narratives. My research showed that when officials work across agencies they bring to the table many different narratives, both individually and collectively. Some of

the chief executive of the Department of the Prime Minister and Cabinet (DPMC) tasked New Zealand border agency⁴ officials with developing a new trans-Tasman travel model for consideration by Cabinet. The officials were given a punishingly short time frame, having to produce a report to the chief executive of the DPMC in two weeks, and a proposal for the Cabinet strategy committee, with all its attendant sign-offs by senior officials and three border ministers, for a meeting five weeks later; a full Cabinet paper with proposals agreed by border agencies in New Zealand and Australia was to be completed six weeks after that.

The data shows the discomfort officials were experiencing at having to document how something would work when they had not had time to fully check out how or whether what they were saying *would* work. For example:

in an update on the outcome of a New Zealand Customs workshop I had facilitated,⁵ I noted '... another important conclusion was confirming that what we are proposing for TT⁶ is complex – we won't really know the effect of changing our processes so dramatically, so need to be able to test our assumptions as we go'. (Nicklin, 2015, p.176)

The delivery time frame demanded by the DPMC acted on officials in this situation, making it impossible for them to trial or test any of the ideas beyond basic consultation with their operational colleagues. At the same time,

dates were unstable – dates for papers to be discussed by Cabinet; dates of Ministers' meetings. In the former case, this had a positive effect by providing more time to develop the required detail; in the latter, it removed an opportunity to test New Zealand's thinking with Australia at the ministerial level. This would have reduced one area of uncertainty. (Nicklin, 2015, p.181)

A key mechanism for reducing the uncertainty and managing the pressure during this period was the border sector

The delivery time frame demanded by the DPMC acted on officials in this situation, making it impossible for them to trial or test any of the ideas beyond basic consultation with their operational colleagues.

passenger processing technology introduced by Australia in 2007 – and now in operation at Auckland, Wellington and Christchurch international airports. Key wanted to see visible change by December that year, which made a tight time frame for getting Cabinet approval, then purchasing and installing the equipment. Customs' main narrative was that investing in SmartGate would create a common trans-Tasman experience for travellers: this was the driver for that particular technology choice. To them, they were just automating an existing process (implication: there's no problem). The other border agencies had different concerns. They wanted a good investment for government, one that could accommodate their longer-term needs and that would bring productivity and financial benefits. Their narratives were different. None was 'right' or 'wrong'.

these narratives are implied rather than explicit, and can cause disruptions (and therefore uncertainties) later in the process if not flushed out. At the start of a policy initiative there could be benefit from taking more time to unpack the matters of concern that officials bring into the room, and the narratives that sit behind them, to see where those narratives contribute to the matter that brings people together, and where they conflict. This would then clear the way for officials to examine the 'who, what, when, where and how' of the work.

Story 3: Uncertainty from tight deadlines

Policy practitioners are used to working to tight deadlines. Story 3 describes the uncertainty from having to work to an extreme set of deadlines, and what officials did to meet them.

On 12 March 2009, ten days after the 2 March joint prime ministerial statement,

secretariat. This small team, whose role was to coordinate the collaborative work of the border sector agencies, issued a timeline of day-by-day actions, organised the many multi-agency meetings, drafted the papers, and interpreted the multiple sources of feedback on those drafts, turning them into an agreed final product. Tools such as email and a shared electronic workspace played important roles in transporting the meeting invitations, draft and final papers and feedback between officials.

The border secretariat did a lot more than just coordinate. Its staff and its outputs spoke on behalf of New Zealand border agencies and the DPMC, who in turn spoke on behalf of the prime minister. This created a thick set of connections for the border secretariat which helped them deliver a new model and a supporting Cabinet paper in a very short time frame. An effect of these connections, and the tight time frames they created, was the necessity to bypass a full policy process, which would have seen them consulting widely on and iterating the design of the model before submitting it to Cabinet. The stabilising effect of the secretariat could be seen as a kind of proxy for the effect a full policy process would have had in reducing uncertainty, though I suggest the full process would have reduced the uncertainty more.

This mechanism was disestablished in late 2011, when priorities changed and it was no longer seen to be needed. It was re-established recently as a new need emerged, highlighting the temporary nature of stabilising mechanisms, and reminding us that they need to be reviewed periodically for fitness for purpose.

Story 4: The uncertainty of the future and how to reduce it

On 20 August 2009 the two prime ministers issued a second joint prime ministerial statement which committed to a joint Australia–New Zealand feasibility study on a new trans-Tasman travel model (Key and Rudd, 2009b). This commitment reflected Australia's desire to start afresh because of different stakeholder interests in Australia, rather than use New Zealand's model. To make the work manageable,

officials split it into two phases. Phase one was to develop terms of reference which set out different options, a wide range of considerations and an estimated budget; phase two was to develop from one of those options a model that provided a 'domestic-like experience'. Both phases were conducted by the same external contractor.

This work was slower in pace than that in Story 3, and the nature of the uncertainties was different. The purpose of the work was clear enough; the time frames were more manageable; the narratives of the different agencies involved on both sides of the Tasman were different but not disruptive.⁷ Uncertainty came from the physical separation of each

off point for the next stage of detail. The diagrams were particularly important in providing a picture of the future that was communicable to others, with each new level of detail making the picture of the future more and more tangible.

These observations highlight that the concept of a 'future state' is invisible until it is revealed, and while it is being revealed, it is unstable. At the same time, through the policy process, each part is stabilised, albeit temporarily, as it is revealed. (Nicklin, 2015, p.219)

In doing so they made the future goal (the end) less and less uncertain,

There is another side to uncertainty – that of an opening up, of creating a space for possibility.

country's officials, lack of clarity around the problem to be solved, and the lack of something tangible with which senior officials could engage. Unlike SmartGate, which was a piece of technology that could be seen, touched and used, the work on the new model couldn't be easily experienced.

What officials did unconsciously was to step by step make the end goal more and more visible. The initial decision to maintain existing connections (i.e., travel being between two international airports, as opposed to options involving domestic airports) *could* be experienced, and so was easy to understand. However, how the new model would be different, and how it would work, was not. So officials defined and described the term 'domestic-like', and, as the work developed, created a representational diagram supported by a detailed description.

The descriptions and visual iterations of the model played an important part in creating stabilising points for the work. They gave officials something to present to senior officials for decision, each decision giving officials a stable jumping-

point although even seemingly stabilised points were sometimes relitigated. Eventually, officials had enough detail to be able to translate the description of the model into a question about the feasibility of implementing it: did the cost–benefit really stack up? This was the point at which the chief executives became properly engaged, because it connected with their core interests.

Reflections

Reflecting on these stories, we can see some wider implications from examining uncertainty. First, the effects of uncertainty on officials are part of what officials manage every day and manifest in multiple ways in their work. They help explain why the policy cycle is less a model that represents how policy works, and more a visual concept that helps provide some structure to policy practitioners' thinking.

Second, these stories reinforce that policy practice is an uncertain business, not just a changing or a risky business. Therefore, the more we can understand the effects of uncertainty on officials, and

bring to light the ways in which those officials effectively counteract or manage those effects, the better the outcomes are going to be.

Third, uncertainty doesn't just affect the work; it affects the people carrying it out. For example, my research has shown how uncertainty can undermine officials' confidence in the advice they are providing; how it can create misunderstandings and emotions that derail the work; how it can result in officials not being clear about what they are meant to be delivering or why. These are effects that can be, and need to be, managed.

There is another side to uncertainty – that of an opening up, of creating a space for possibility. For while something is uncertain, it is not set, and there is 'room for something different to occur' (Nicklin,

2015, p.259). The introduction of service design and continuous improvement methods into the public service speak to this 'possibility space' through new ways of working, a development worthy of further investigation.

Do we need a new way to look at uncertainty? Would we get different results, for example, if we practiced policy with an *expectation* of uncertainty and if we better understood how to deal with it; if we appreciated periods of stability, rather than expected them? These reflections and questions indicate that there is value in finding out more about how officials can better understand and manage the effects of uncertainty.

- 2 See Story 2
- 3 The terms 'narrative' and 'story' are used interchangeably, although stories are often equated with a 'beginning-middle-end', whereas narratives are less so.
- 4 New Zealand Customs Service, Ministry of Agriculture and Forestry, Department of Labour (Immigration New Zealand), Department of Internal Affairs and Ministry of Transport. Australian border agencies were not involved in this work, though they were consulted briefly.
- 5 I was very involved in this particular initiative.
- 6 TT is short for trans-Tasman, referring to the work on the new travel model.
- 7 By comparison, some stakeholders were pushing for their own interests. For example, the Tourism and Transport Forum Australia wrote two reports – *Special Treatment for a Special Relationship* (August 2013) and *Bringing our Neighbour Closer* (August 2014) (retrieved from <http://www.ttf.org.au/Content/aviation.asp>) – and a media article (retrieved from <http://www.scoop.co.nz/stories/BU0905/S00097.htm>).

Disclaimer: The views in this article are the author's own, and do not represent the position of the New Zealand Customs Service or the New Zealand government.

1 The International section in the Australian Customs and Border Protection Service, which looked after the bilateral relationship with New Zealand.

References

- Brown, R.H. (1978) 'Bureaucracy as praxis: toward a political phenomenology of formal organizations', *Administrative Science Quarterly*, (3), pp.365-82, <http://doi.org/dx.doi.10.2307/2392415>
- Eppel, E.A., D. Turner and A. Wolf (2011) *Experimentation and Learning in Policy Implementation: implications for public management, working paper 11/04*. Wellington: Institute of Policy Studies, <http://ips.ac.nz/publications/publications/show/317>
- Key, J. and K. Rudd (2009a) 'Key and Rudd – joint statement on strengthened trans-Tasman cooperation', 2 March, <http://www.beehive.govt.nz/release/joint-statement-strengthened-ns-tasman-cooperation>, accessed 25 May 2013
- Key, J. and K. Rudd (2009b) 'Joint statement by Prime Ministers Rudd and Key', 20 August, <http://www.beehive.govt.nz/release/joint-statement-prime-ministers-rudd-and-key>
- Kurtz, C.F. and D.J. Snowden (2003) 'The new dynamics of strategy: sense-making in a complex and complicated world', *IBM Systems Journal*, 42 (3), pp.462-83, <http://doi.org/10.1147/sj.423.0462>
- Latour, B. (2007) *Reassembling the Social: an introduction to actor-network theory* (new edn), Oxford: Oxford University Press
- Law, J. (2000) 'On the subject of the object: narrative, technology, and interpellation', *Configurations*, 8 (1), pp.1-29
- Lindblom, C.E. (1959) 'The science of "muddling through"', *Public Administration Review*, 19 (2), pp.79-88
- Moran, M., M. Rein and R.E. Goodin (eds) (2006) *The Oxford Handbook of Public Policy*, Oxford: Oxford University Press
- Nicklin, G. (2015) 'Trans-tasman border stories: actor-network theory and policy narrative in action', PhD thesis, Victoria University of Wellington, <http://researcharchive.vuw.ac.nz/handle/10063/4704?show=full>
- Roe, E. (1994) *Narrative Policy Analysis*, Durham, NC: Duke University Press

Where Does Liberty Thrive?

The ecological origins of democracy and autocracy



Stephen Haber

Senior Fellow and Professor
at Stanford University

Monday 23rd November 12:30 – 1:30pm
Old Government Buildings Lecture Theatre
3 (Ground floor)
RSVPs not required.
See more at igs.victoria.ac.nz



Institute for Governance
and Policy Studies
A research institute of the School of Government

A Systems Approach to Defining Environmental Regulatory Institutions

It is unlikely that any new regulatory regime will involve the establishment of a completely new regulatory institution. Instead, regulatory responsibility is more often apportioned to an existing institution, or several institutions within a portfolio that most closely match the subject matter of the regulatory regime in question. This article therefore offers guidance less for those involved in the initial policy design phase, and more for those engaged in implementation and operational policy, as well as those with review and reform agendas. In emphasising these policy and policy-like elements, the article takes as its lead the argument made by the New Zealand Productivity Commission and the New Zealand government that the traditional emphasis of review and reform efforts on regulatory design has acted to the detriment of implementation and better regulatory practice.

Grant Pink and Matt Marshall are adjunct research fellows in the School of Law, University of New England, Australia. The authors wish to thank Dr Peter Mumford, Professor Jonathan Boston and an anonymous referee for their comments and advice on earlier versions of this article. The views and opinions in this article are those of the authors and do not necessarily reflect the views of the University of New England.

In 2014 the Productivity Commission released a comprehensive and cross-cutting report, *Regulatory Institutions and Practices* (New Zealand Productivity Commission, 2014). The report outlined a number of policy choices for governments, regulatory institutions, and regulatory practitioners and managers in terms of how they approach their work. Notably, it suggested moving beyond responding to various crises towards a strategic (and system-wide) development of regulatory capacity and capability. In 2015 the *Government Response to the New Zealand Productivity Commission Report on Regulatory Institutions and Practices* reinforced that:

there is a need for the different agencies involved in designing and administering regulation, and monitoring how effectively [it] is functioning, to lift their game. The system as a whole also needs to work more coherently, to secure real improvements in regulatory outcomes. (New Zealand Government, 2015, p.1)

The utility of the Productivity Commission report is enhanced by the fact that it is not commodity- or legislation-specific. The term commodity in this article refers to the way it is used in Australian environmental regulatory terminology, and relates to the physical subject matter covered by regulation; conversely, in the US and UK the term used is media, with the traditional environmental media being air, water, waste and pollution. Instead of having this sort of focus, the report covers a range of matters through the themes of improving regulatory institutions and practices and better regulatory management. The sub-themes considered under these two headings are outlined in Table 1. Those matters of particular relevance to this article appear in italics.

This article considers the policy and implementation issues raised by the report and the government’s response to it in application to environmental regulation and the various environmental regulatory agencies, as well as their functions and roles. It does so in an attempt to provide practical guidance to policy makers on how the structure of regulatory institutions – as collections of regulatory practices – affects implementation. In other words, the nature of the institution as a collection of systems and practices has ongoing impacts on the effectiveness with which the institution achieves its outcomes.

While the focus of the article is on environmental institutions, many of the issues associated with regulatory design, implementation and review

are transferable and are worthy of consideration by regulatory institutions in other regulatory fields.

For the purposes of this article, regulatory institutions are defined as the governmental bodies, including agencies, bureaus and departments, tasked with implementation of legislation containing regulatory provisions (which incorporate a range of functions, from setting, monitoring and enforcing standards to providing guidance to the regulated community). The definition covers all regulatory institutions, operating at local, regional, central/federal and international levels. This definition does not include industry bodies (even ones established by government).

Equally, regulatory practices are taken to be those activities and processes undertaken by a regulatory institution to implement and give effect to legislation with regulatory provisions. Necessarily, this includes the management and governance of regulatory officers engaged in their daily work. In referring to regulatory systems, this article uses the definition provided by Manch, where:

Reference to the ‘regulatory environment’ means the environment in which our regulatory systems operate. Reference to ‘regulatory systems’ means the end-to-end approach of government intending to influence or compel specific behaviour. (Manch, 2014, p.18)

Regulatory systems are therefore the collection of regulatory practices

undertaken to give effect to legislation with regulatory provisions.

The regulatory experiment

Bailey and Kavanagh (2014) highlight that designing and implementing regulation is extremely difficult. They consider it to be ‘fraught with complexity, severe knowledge gaps, unintended consequences, speculation about the efficacy of different regulatory arrangements, and a regulatory environment which is in a state of constant change’ (p.15). Mumford (2011) states that ‘the reality [is] that for the most part regulatory regimes are experiments ... [and] we do not know in advance precisely how it will work in practice’ (p.36). This argument speaks to the connections between the regulatory development process (design: the making of laws, rules, ordinances and other instruments) and the practices that comprise operationalisation (implementation of those instruments), which is also variously called regulatory delivery (OECD, 2014a), regulatory administration (Australian National Audit Office, 2014), regulatory implementation, regulatory activity or regulatory practice (New Zealand Productivity Commission, 2014; New Zealand Government, 2015).

Unfortunately, there is a sense that the regulatory experiment is being conducted in a less than scientific manner. Mumford goes on to state: ‘[i]n complex decision-making contexts we often revert to heuristics, or “rules of thumb”’ (2011, p.41). What is required, perhaps, is greater study, with a focus on what is already in place and what might be expected to eventuate. In determining better rules of thumb for the regulatory experiment, Mumford states, ‘[i]n an experimental frame the two that we might emphasise are “thinking ahead” and “thinking along the way”’ (ibid.). This suggests an approach that can be taken not only in the design stage of regulation, as already stated, but also in the review stage (including performance auditing, reform and continuous improvement).

The inclusion of systems, practices and institutions in regulatory reform

Bailey and Kavanagh have noted that ‘[m]uch of the focus of regulatory management in New Zealand, and in other

Table 1: Regulatory Institutions and Practices report: recommendations and areas of focus

Improving regulatory institutions and practices	Better regulatory management
<ul style="list-style-type: none"> • <i>regulatory practice</i> • <i>regulatory culture and leadership</i> • <i>workforce capability</i> • effective consultation and engagement • regulation and the Treaty of Waitangi • <i>role clarity</i> • <i>regulatory independence and institutional form</i> • <i>governance, decision rights and discretion</i> • decision review • approaches to funding regulators • monitoring and oversight 	<ul style="list-style-type: none"> • <i>system-wide regulatory review</i> • information to understand and manage the system • <i>strengthening institutions</i>

Source: New Zealand Productivity Commission, 2014, pp.vi-viii

parts of the world, has focused at the front end, on the quality of regulation-making' (Bailey and Kavanagh, 2014, p.16). There is an acknowledgment, in the work of the New Zealand Productivity Commission and the government response, that the emphasis of efforts directed to the analysis and reform of regulation have, in the past, been centred on the policy associated with creating or amending a regulatory regime and its reflection in statute, possibly extending to secondary regulation. In response, the Productivity Commission undertook to 'develop guidance for improving the design of new regulatory regimes and recommend system-wide improvement to the operation of existing regimes' (ibid., p.10). The Productivity Commission report and the government response, therefore, mark a shift towards a consideration not only of the process of developing regulatory instruments, but also of the systems, institutions and practices engaged in giving subsequent effect to those instruments.

The state of regulatory institutions and systems

The use of unexamined heuristic thinking in regulatory systems, as described by Mumford, has created a significant number of challenges and problems. These problems are core issues that affect the entirety of any number of regulatory systems. In fact, the issues arise within the systems themselves, and therefore a systemic approach is needed to address them.

The first is the failure on the part of institutions to apply basic understandings to the management and practice of administered regulation. On this Bailey and Kavanagh observe:

Although there have been improvements in regulatory management systems, departments still do not, in general, systematically apply basic good management principles and practices to the regulatory regimes that they administer. (ibid., p.13)

The second issue is a failure in forming the requisite agency-wide culture within an institution (ibid., p.14). The reason

this is so important in terms of regulatory practice is the interconnectedness of the various regulatory roles. 'The critical elements of the regulatory system are self-reinforcing and display a level of interdependency' (ibid., p.12). The organisational culture in an institution in this context is a systematic support that maintains effectiveness across the interlinked regulatory areas.

The third issue is the inability of regulatory institutions to develop and progress. '[I]t appears that institutional constraints within our regulatory system have rendered it virtually incapable of gradual evolution and incremental change' (ibid., p.15). It is the form of the institutions themselves, as embodiments of entrenched unconscious heuristic

this respect, such an analysis could serve as an example for other institutional systemic analyses.

The Productivity Commission report as part of better regulatory management suggested a system-wide regulatory review (New Zealand Productivity Commission, p.374). Bailey and Kavanagh further suggest that:

A systems approach to regulatory management would see monitoring and review of regimes not as the end of a process – or worse, forgotten about entirely – but as a fundamental part of enhancing the quality and impact of the regulatory system. (Bailey and Kavanagh, 2014, p.16)

There have been difficulties in adapting police and customs bodies (and even the courts) to environmental roles, though these bodies have continued to be tasked with certain aspects.

processes, that forms part of the problem and inhibits efforts to overcome those problems.

Resolving systemic regulatory issues

Bailey and Kavanagh noted that the strengthening of regulatory systems should include:

- defining the overall objective of the system and bringing focus and attention to it;
- strategic prioritisation of effort across the system;
- specifying and allocating tasks for improving the system; and
- promoting continuous improvement in regulatory design and practice. (ibid., p.15)

In accord with this, and noting the resistance of heuristic regulatory institutional forms to reform, this article undertakes an initial analysis of environmental regulatory agency forms as institutionalised systems. While limited in

Environmental regulatory practice

Administering environmental regulation is a complex and difficult process (Pink and White, 2015; Emison and Morris, 2012). Legal frameworks offer multiple litigation and sanction options that can be negotiated or imposed, leading to punitive or restorative outcomes, with the possibility, and increasing likelihood, that a mix of all approaches may be necessary (Baldwin, Cave and Lodge, 2013; Freiberg, 2010; Sparrow, 2008). There are diverse kinds of regulated entities. Some are large multinational corporations, others are medium enterprises, and some (perhaps even the majority) are small businesses. A small part of the regulated community comprises organised career criminals engaged in networks which have ties to other forms of organised crime, and, potentially, terrorist organisations (Wyatt, 2013; UNODC, 2010).

Environmental regulation, like most forms of regulation, must also deal

with a number of political pressures from governments of the day and their particular platforms. Industry groups are opposed to bureaucratic clutter because of the compliance costs incurred (Productivity Commission, 2012, 2013). Meanwhile, environmental advocates push for tighter controls or, increasingly, blanket bans on certain commercial activities as a result of their concerns for environmental effects, especially from new and emerging technologies. Cianchi (2015) notes that such environmental activists are becoming increasingly radicalised. In short, the provision of

- *environmental protection agencies* are dedicated regulators undertaking activities closely aligned with the traditional four main media: air, water, pollution and waste;
- *environmental commodity agencies* are commodity (media)-oriented bodies undertaking activities aligned with the specific matter, subject or geographic location² (and associated commodities, sectors and industries) they have been established to administer and regulate;
- *hybrid environmental agencies* are government bodies that to

are implemented in government practice. Programmatic practices ultimately rely on the fiscal power of the state: the power to fund and provide. Regulatory practices rely on the physical power of the state: the power to deny; that is, to deny freedom of action through banning the action or, in serious cases, incarcerating the actor.

Programmatic efforts, looking to maximise benefit, involve practices that are fostering, facilitative and motivating, with financial support as a core component, often in the form of 'contracts, grants, loans, subsidies or incentives' (ibid., p.106). Alternatively, programmatic practices include the establishment of marketplaces in which beneficiaries can trade, or use the power of exhortation or the power to convene, both to persuade behavioural change without direct financial support.

Regulatory implementation, which is intended to minimise harm, involves practices that by contrast constrain, limit and circumscribe. In short, they regulate. Instead of incentives, regulatory practices contain penalties as a core component. Such penalties include incarceration, fines, suspensions, seizure, confiscation, cancellations, restitution, and either mandatory or prohibitive orders (ibid., pp.249-51). Regulation may also be indirect, by requiring delegated regulators (such as local government) to act, which involves devolution of practice but not responsibility.

It is worth noting that the regulatory and the programmatic are options for achieving outcomes. They can exist simultaneously in terms of achieving a broad policy goal. However, in circumstances where a policy develops without a clear consideration of the factors informing the choice of option, the two can find themselves operating in competition. At worst they can hinder the effectiveness of one another (New Zealand Productivity Commission, 2014).

Environmental protection agencies

The Environmental Protection Agency is a dedicated regulator created by statute (Emison and Morris, 2012; Mintz, 2012). Its remit tends to be to administer laws relating to the traditional environmental commodities or media: water, air, pollution

Regulatory implementation, which is intended to minimise harm, involves practices that by contrast constrain, limit and circumscribe.

environmental regulatory delivery occurs in a highly contested space, especially so when sanctions or responses are levied as well as administered by regulators (Pink and Marshall, 2015).

Environmental regulatory institutions as collections of practices

The government bodies that exist to administer environmental regulation and respond to environmental crime tend to fall into three groups. These are the police, customs agencies and environmental regulatory agencies (Pink, forthcoming 2016).¹ There have been difficulties in adapting police and customs bodies (and even the courts) to environmental roles, though these bodies have continued to be tasked with certain aspects. To ensure full coverage of environmental regulatory requirements, the greater part of the regulatory role is given to environmental regulatory agencies which have distinctive and recognisable characteristics. These agencies fall into three broad types. For the purposes of this article, these are the environmental protection agency, the environmental commodity agency and the hybrid environmental agency. In summary:

varying degrees combine policy, programmatic and regulatory activities and responsibilities.

Policy, programmatic and regulatory activities and responsibilities

This article draws distinctions between the three main types of governmental activity: policy, programmatic and regulatory. This will be explored further in the discussion of the different environmental regulatory agencies.

The policy role involves supporting the government of the day in policy development and determining the best way to put that policy into effect. The two options are through programmes or by regulatory delivery, whichever is most likely to succeed.

Programmatic approaches, in broad terms, are undertaken to maximise benefit, while regulatory approaches are intended to minimise 'harm and nuisance' (Baldwin, Cave and Lodge, 2013, p.106). There are arguments that maximising one thing is the same as minimising the other, and in some instances this may be the case, though it seems an approach that lacks nuance. Either way, there is a notable difference in the way the two tendencies

and waste (United States Environmental Protection Agency, nd). It does not necessarily have a policy or programmatic branch, though it can undertake extensive encouraging and advising of activities to help ensure regulated entities comply with the relevant environmental regulatory regimes. (See, for example, the Victoria Environment Protection Authority in Australia.)³

In addition to this, environmental protection agencies can adopt the 'expert model of regulation' (Sparrow, 2012) and develop responses to environmental issues outside the remit prescribed by their legislation. When this occurs, agencies are obviously unable to fall back on their authority and powers under law. This means they have to find alternative courses of action for resolving environmental impacts, including negotiation, conciliation, encouragement and persuasion (Baldwin, Cave and Lodge, 2013; Sparrow, 2012).

Characteristics of environmental protection agencies

The core task of the environmental protection agency remains regulatory work. Staff within environmental protection agencies see themselves, and are purposively trained, as regulators.⁴ Particular training and authorisation attaches to their role the use of coercive powers, which environmental protection agency officers are expected to exercise routinely and appropriately. The use of powers is covered by standard operating procedures, and the levying of sanctions is conducted by reference to a mapped schedule of non-compliance responses.⁵ While environmental protection agencies predominantly establish frameworks⁶ for their officers to operate within, individual officers have high degrees of autonomy, especially those appointed as authorised officers⁷ under legislation. Legislation frequently apportions decision-making power and discretion to authorised officers in relation to addressing suspected or potential breaches of environmental legislation. While circumstances can require timely, on-the-spot action, the result can create a tension between the needs of the moment and the overall necessity to achieve a consistent, proportionate, repeatable,

measurable approach to regulatory delivery across the agency.

Environmental commodity agencies

The environmental commodity agency is a body that focuses on one specific matter, media or subject (including geographic locale) and can be expected to administer it through both programmatic and regulatory operations. Such an agency can distribute and manage grants, undertake secretariat roles for industry or other interest group bodies, ensure the continued operation of marketplaces, and intervene when breaches of the regulatory

geographic location lends it a slightly different status. It is usually a very small agency with a highly independent culture, distinct from the departmental public administration culture, which can be viewed at arm's length, even where there are reporting and service provisions between the agency and an umbrella institution.

The variability of form and the degree of independence can be influenced by the agencies' revenue streams, which can originate with government, across jurisdictions, via industry registration payments, or any other number of

It is usually a very small agency with a highly independent culture, distinct from the departmental public administration culture, which can be viewed at arm's length ...

aspects of the regime are detected. (See, for example, the Australian Pesticides and Veterinary Medicines Authority.)⁸

Characteristics of environmental commodity agencies

Environmental commodity agencies usually have a statutory basis for their existence or serve a statutory office holder.⁹ They are highly variable in their institution and practices. This is a direct result of being designed and activated to address a specific issue; they are, in other words, customised to their purpose. They might be predominantly judicial or executive as well as policy, programmatic and regulatory, in varying proportions dependent on the determined needs of the commodity or geographic location.

What unites these types of agencies into a single typology and distinguishes them from both environmental protection agencies and hybrid environmental agencies is the degree of focus. While an environmental commodity agency can look to all intents and purposes the same, the fact that it is highly focused on a type of regulated thing or a contained

mechanisms (see, for example, the Australian Fisheries Management Authority).¹⁰ Whatever revenue stream is directed towards the agency is usually isolated from general government revenue. Monies are therefore protected, which can lead to greater certainty in terms of the continued operation of the agency, though many agencies remain susceptible to agendas focusing on small government, and legislation repeal.

The potential issue of chief concern for environmental commodity agencies emerges from the relationship between them and their regulated communities (Baldwin, Cave and Lodge, 2013). Such agencies can often have their counterparts in peak industry bodies with which they have long-standing interactions. Such interactions are a necessity where interests align and a collaborative and cooperative approach is needed to address matters relating to an aspect of the commodity. The relationship can, however, become strained where interests do not align. Alternatively, such agencies may find themselves adopting industry interests as their own in a process of regulatory

capture (ibid., pp.107-8). Where industry also provides the resource base for the agency, through licensing and registration fees, an expectation can develop that the environmental commodity agency exists for the sole purpose of advancing the needs of the industry, thereby compounding the issue. There are obvious knock-on effects arising from this combination of factors that have consequences for effective regulatory delivery.

In an attempt to address these issues, some agencies establish separate teams dedicated to responsive regulatory delivery, while the majority of the agency carries out programmatic work and some preventive compliance encouragement.

In terms of implementation, the characteristics of institutions make certain organisational challenges more likely to eventuate according to type.

While this appears to solve the issue by keeping a clear distinction between an agency's support of industry and its regulation of the same, there can be subsequent cultural issues that arise from such a division, notably in terms of silos or stovepipes (McMahon, 2006).¹¹ This sort of consequence is particularly evident in hybrid environmental agencies.

Hybrid environmental agencies

Hybrid environmental agencies are government departments, offices or bureaus that form a part of the public service providing support to the executive branch of government. They can be headed by a minister or secretary, or a political appointment of one type or another. They are, like any other public service body, tasked with giving effect to the policies of the government of the day. This is as opposed to explicitly implementing the law, which is much more the task of an environmental protection agency. (See, for example, the Australian Department of the Environment.)¹²

Characteristics of hybrid environmental agencies

It is worth noting that the hybrid environmental agency is not the same as a regulatory agency. Regulatory delivery is only one of three roles hybrid environmental agencies perform. As discussed previously, these roles are policy, programmatic and regulatory. Regulatory delivery is often the last role such an agency is given, and it is not one that always sits well within a hybrid agency. This can occur where an environmental protection agency operates inside a larger hybrid environmental agency, or where the environmental protection capability is integrated within the latter without formal

organisational recognition of the role. This occurs because organisational distinctions tend to replicate the formalism of having a separate environmental protection agency. Additionally, the organisational lines operate in concert with cultural distinctions.

Either way, the inclusion of regulatory roles within a programmatic and policy agency can be one of the key causes of challenges to these agencies achieving effective regulatory delivery (OECD, 2014a, 2014b; New Zealand Productivity Commission, 2014). Additionally, Mumford highlights that '[t]he performance of regulators themselves is influenced by a range of incentives and underlying capabilities' (Mumford, 2011, pp.36-7).

While hybrid environmental agencies perform three broad types of role, policy, programmatic and regulatory, each role has a different focus and intent. The distinction between roles and their implications for relationships is a core problem for hybrid environmental agencies, and leads to distinctions in agency cultures. The result can be silos within the

organisation and communication issues outside the organisation. From time to time, governance arrangements can emerge that do not adequately address the particularities of each approach, leading to the inefficient and ineffective distribution of resources, the inappropriate setting of outcomes and misaligned measurements of success (New Zealand Productivity Commission, 2014, ch.10).

Practical guidance

The use of a systems approach as a diagnostic frame which considers all of the agencies working within a regulatory regime has a number of benefits. It provides practical guidance to policy makers, resource allocators and regulatory practitioners; it reinforces the need for institutional review and reform; and it points to further areas that might benefit from systematic review and research.

In terms of implementation, the characteristics of institutions make certain organisational challenges more likely to eventuate according to type. For example, regulatory capture is a greater issue in environmental commodity agencies, and silos can develop very clearly in hybrid environmental agencies. Equally, environmental protection agencies can develop weakness in policy areas that affect the overall regulatory regime. Alternatively, environmental protection agencies can find themselves in conflict with their programmatic and policy portfolio partners.

Policy implications

When developing implementation policy, or conducting reviews of effectiveness in the regulatory space, it is important to have regard to the systemic characteristics of regulatory institutions which pose foreseeable risks to regulatory outcomes. These risks, having been identified, can be mitigated or circumvented through proper policy planning. When reviews are undertaken, an effort can be made to determine the extent to which risk mitigation measures have managed to overcome the challenges that are present in regulatory institutions.

On the rare occasions when there is the scope to design a new regulatory institution, policy developers may have

the opportunity to construct a model for regulatory delivery that overcomes the structural obstacles evident in past institutional forms. Additionally, it may be found that portfolios can be established or redesigned along systemic lines, dividing internal areas by function and making clearer delineations between programmatic and regulatory approaches.

The New Zealand Productivity Commission report and the government response to it highlight the importance of practices and institutions in the regulatory field. In accepting these findings, it seems counterproductive not to consider such practices and institutions when developing policy aimed at achieving regulatory success.

Next steps

The study conducted here can be taken further in a number of ways. This can be done as a research undertaking, but also as an organisational exercise as part of reform processes to achieve continuous improvement. We recommend: more detailed mapping of regulatory practices and the interdependencies between them; and review of regulatory institutions as systems within a regulatory regime system as a whole.

Conclusion

The emergence of regulatory practice within traditional policy and programmatic environmental agencies

raises particular issues, and recasts the relationships within the network of agencies that work together to achieve better regulatory outcomes. The balancing of roles can pose serious challenges to the achievement of environmental protection and other desired outcomes. Equally, awareness of the differences in roles can potentially generate solutions to a range of challenges.

It is worth acknowledging that different agency types and approaches exist for a purpose. A simplistic approach to environmental protection is very unlikely to succeed. Rather, a diverse and complex set of supports and interventions is required to manage it effectively, many of which are external to the agency, however it is designed.

Having acknowledged the important differences in institutional roles and functions, the task then becomes one of more completely understanding the differences, and then ensuring appropriate resources are leveraged and directed in an appropriate way to achieve the desired effects (Bailey and Kavanagh, 2014).

Environmental protection agencies, environmental commodity agencies and hybrid environmental agencies are collections of practices and capabilities. Each agency type can be assisted by policy, programmatic and regulatory approaches, which can supplement or undermine one another. The challenge lies in finding the right balance.

Given the challenges, and fortunately for regulators, the *Regulatory Institutions and Practices* report and the corresponding government response provide a great deal of information and guidance. More importantly, this information has been practically oriented and synthesised, such that the regulatory, compliance and enforcement community can draw upon these documents to advance agency-specific requirements around regulatory capability and capacity.

- 1 It should be noted that the three core agencies are even more prominent when the environmental crime is situated within the context of transnational environmental crime. See, for example, Baldwin et al., 2015; Bisschop, 2015; Wyatt, 2013.
- 2 Examples of a geospatial location would be within a marine protected area or relating to something like Australia's Great Barrier Reef.
- 3 See www.epa.vic.gov.au.
- 4 The issue of strong identification with agency mission and individual practitioner/professional role sets environmental protection agency staff apart from staff in environmental commodity agencies and hybrid environmental agencies. For more detailed explanation and analysis, see Emison and Morris, 2012. See also McMahon, 2006 on the value of a regulatory agency's mission statement generally.
- 5 See Pink and Marshall, 2015 on sanction mapping.
- 6 Such frameworks cover activities such as case management systems, sanctions mapping, standard operating procedures, assurance reviews and governance and oversight.
- 7 For examples of the powers of authorised officers at the federal and state level in Australia, see section 406 of the Environment Protection and Biodiversity Conservation Act 1999 and section 55 of the Environment Protection Act 1970.
- 8 See www.apvma.gov.au.
- 9 The Office of the Gene Technology Regulator in Australia provides one such example, with the regulator as an independent statutory office holder responsible for administering the Gene Technology Act 2000 and corresponding state and territory laws. The regulator is appointed by the governor-general only with the agreement of the majority of all jurisdictions. See <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/about-regulator-1>.
- 10 With funding either being cost recovery or on a fee-for-service basis. For more information see www.afma.gov.au.
- 11 American literature uses the term stovepipe; Australians are more familiar with the term silo.
- 12 See www.environment.gov.au.

References

- Australian National Audit Office (2014) *Administering Regulation: achieving the right balance – better practice guide*, Canberra: ANAO
- Bailey, S. and J. Kavanagh (2014) 'Regulatory systems, institutions and practices', *Policy Quarterly*, 10 (4), pp.10-16
- Baldwin, R., M. Cave and M. Lodge (2013) *Understanding Regulation: theory, strategy, and Practice*, Oxford: Oxford University Press
- Baldwin, G., J. Gerardu, M. Koparova and H. Ruessink (2015) 'International compliance and enforcement networks: the critical role of collaboration in environmental protection', in G. Pink and R. White (eds), *Environmental Crime and Collaborative State Intervention*, Basingstoke: Palgrave Macmillan
- Bisschop, L. (2015) *Governance of the Illegal Trade in E-Waste and Tropical Timber: case studies on transnational environmental crime*, Ashgate: Farnham, Surrey
- Cianchi, J. (2015) *Radical Environmentalism: nature, identify and more-than-human agency*, Basingstoke: Palgrave Macmillan
- Emison, G.A. and J.C. Morris (eds) (2012) *True Green: executive effectiveness in the US environmental protection agency*, Lanham, MD: Lexington Books
- Freiberg, A. (2010) *The Tools of Regulation*, Sydney: Federation Press
- Manch, K.J. (2014) 'Improving the implementation of regulation: time for a systemic approach', *Policy Quarterly*, 10 (4), pp.17-22
- McMahon, R. (2006) *The Environmental Protection Agency: structuring motivation in a green bureaucracy*, Brighton: Sussex Academic Press
- Mintz, J. (2012) *Enforcement at the EPA: high stakes and hard choices*. Austin: Texas University Press
- Mumford, P.J. (2011) 'Best practice regulation: setting targets and detecting vulnerabilities', *Policy Quarterly*, 7 (3), pp.36-42
- New Zealand Government (2015) *Government response to the New Zealand Productivity Commission report on Regulatory Institutions and Practices*, Wellington: New Zealand Government

- New Zealand Productivity Commission (2014) *Regulatory Institutions and Practices*, Wellington: New Zealand Productivity Commission
- OECD (2014a) *The Governance of Regulators: OECD best practice principles for regulatory policy*, Paris: OECD Publishing
- OECD (2014b) *Regulatory Enforcement and Inspections: OECD best practice principles for regulatory policy*, Paris: OECD Publishing
- Pink, G. (forthcoming 2016) 'Regulatory responses to transnational environmental crime: an overview of choices, challenges and culture', in T. Spapens, R. White and W. Huisman (eds), *Environmental Crime in Transnational Context: global issues in green enforcement and criminology*, Farnham, Surrey: Ashgate
- Pink, G. and M. Marshall (2015) 'Sanction mapping: a tool for fine-tuning regulatory intervention strategies', paper presented at the Next Generation Compliance: Tools, Theory, and Practice conference, Rotterdam, 21 April
- Pink, G. and R. White (eds) (2015) *Environmental Crime and Collaborative State Intervention*, Basingstoke: Palgrave Macmillan
- Productivity Commission (2012) *Performance Benchmarking of Australian Business Regulation: the role of local government as regulator; research report*, Canberra: Productivity Commission
- Productivity Commission (2013) *Regulator Engagement with Small Business: research report*, Canberra: Productivity Commission
- Sparrow, M.K. (2008) *The Character of Harms: operational challenges in control*, New York: Cambridge University Press
- Sparrow, M.K. (2012) 'Crime reduction through a regulatory approach: joining the regulatory field', *Criminology and Public Policy*, (11) 2, pp.345-59
- United States Environmental Protection Agency (nd) 'EPA organization chart', <http://www2.epa.gov/aboutepa/epa-organization-chart>, accessed 12 July 2015
- UNODC (2010) *The Globalization of Crime: a transnational organized crime threat assessment*, Vienna: United Nations Office of Drugs and Crime
- Wyatt, T. (2013) *Wildlife Trafficking: a deconstruction of the crime, the victims, and the offenders*, Basingstoke: Palgrave Macmillan

What is your passion?

Follow your passion.

Make your difference. Get up-to-date.

Learn with great people.

Start Now

With a refreshed
4-Course professional
certificate in the School
of Government

Fully revamped Public Management courses

*Managing for Results / Managing People / Managing Public Resources
Leading Change in Public and Community Organisations*

Brand new Public Management and Public Policy courses

*Governance and Governing/ State, Economy and Society/ Policy and
Management Practice*

Fully revamped Public Policy courses

*Analysis and Advising / Policy Methods and Practice/ Economics and
Policy/ Policy Workshop*

Find out more

<http://www.victoria.ac.nz/sog/study/professional-programmes>

Email: sog-info@vuw.ac.nz Phone: 04 463 6850

Contact the Director:

Email: verna.smith@vuw.ac.nz

Phone: 04 463 5848

KNOW YOUR MIND



Keith Manch, Peter Mumford, Sanjai Raj
and Ben Wauchop

Watching the Birth of the Regulatory Profession

Introduction

Several decisions have been taken over the past few months that aim to professionalise the regulatory community in New Zealand. A professional regulatory community is increasingly regarded as essential to achieving social, environmental and economic outcomes sought by New Zealanders, and is one of the fundamental planks in New Zealand's regulatory quality management system. It is not possible to attribute this development to a single cause; nor is it a 'revelation', as dedicated regulatory professionals from a range of agencies have built the foundations over a long period of time. Contextual factors include the impact of ideas of international experts such as Sparrow, Black and

Braithwaite, government policies that have stressed the need for better regulation and governance, and the lessons that have been learned from regulatory failures. Proximate causes include the government response to the New Zealand Productivity Commission's inquiry into regulatory institutions and practices (New Zealand Productivity Commission, 2014). This article outlines and assesses this new development.

Background

In March 2015 chief executives from a number of New Zealand regulatory agencies met and agreed to provide oversight of a regulatory practice initiative. The objective of the initiative was to lead or contribute to capability initiatives where collective action can be shown to be helpful. To progress the initiative, the chief executives established the Government Regulatory Practice Initiative (G-Reg) Steering Group, comprising senior officials from regulatory agencies and Treasury, and representatives from local government and the Combined Law Agency Group. The steering group is supported by a secretariat located in the Ministry of Business, Innovation and Employment, and a group of central and local government officials that has been formalised as the Design, Development and Delivery (3D) Network.

Keith Manch, Chief Executive, Maritime NZ. Peter Mumford, Policy Director, Ministry of Business, Innovation and Employment. Sanjai Raj, General Manager, Consumer Protection and Standards, Ministry of Business, Innovation and Employment. Ben Wauchop, Senior Advisor, Ministry of Business, Innovation and Employment

Chief executives asked the steering group to: develop a business case for the adoption by agencies, as appropriate, of the compliance qualifications framework; develop and deliver one or more forums aimed at sharing best practice in relation to agency compliance plans; and develop a proposal for 2016 activities and beyond.

In 2014 the government asked the Productivity Commission to investigate how to make overall improvements in the design and operation of regulatory regimes in New Zealand. The government responded to the commission's report, *Regulatory Institutions and Practices*, in July 2015. The response acknowledged the initiative taken by chief executives

which demonstrated the relationship between the legal framework, regulator behaviours, regulatory performance and the capacity of regulatory regimes to deliver outcomes that meet societal expectations; and the three articles in the November 2014 'Focus on Regulation' issue by Ayto (stewardship), Manch (implementation) and Bailey and Kavanagh (systems, institutions and practices), which provide the background in most respects to the regulatory practice initiative.

These articles show that there has been a progressive exploration and understanding of the 'black box' that is the regulator. This has both emphasised the critical role that the regulator plays in

The diagnostic provided by the Productivity Commission in its report demonstrates that there are opportunities for improvement at all four levels.

The evolutionary context reflects recent work by Intal and Gill (forthcoming) on the evolution of regulatory management systems.¹ This work, which in turn is grounded in the practitioner literature on capability maturity models (CMM), has produced a four-stage model for regulatory management systems:

- starter or informal – ad hoc practices that are specific to the context, sector, organisation and person undertaking the regulatory quality management function;
- enabled – regulatory quality management processes have been put in place but, while the intention is there, regulatory quality management does not happen consistently;
- practiced – enacted in some sectors and often reliant on a few key people in selected institutions;
- embedded – practices are part of the public sector culture and not reliant on key institutions.

If we think about the elements of regulatory quality management as addressing the flow of regulation (regulatory impact analysis), the stock of regulation (monitoring and review) and the implementation of regulation (regulatory practice), we might consider that in New Zealand, systems associated with the flow are 'embedded'; but regulatory practice is still at the 'practiced' stage.

In this regard New Zealand is not out of step with other countries. In our review of the literature and practices in other countries we have identified elements of a systematic approach to improving regulatory practice. These include the identification of good regulatory practice principles and the assessment of regulatory agencies against these.² However, with the possible exception of the AELERT network³ (albeit focused on one area of regulation, environmental), we have not seen a comprehensive and systematic approach taken to improving the capability of front-line regulators, and we are only starting to see a more systematic approach to cross-regulator

In our review of the literature and practices in other countries we have identified elements of a systematic approach to improving regulatory practice.

and noted: 'Intellectual leadership of regulatory practice should come from the regulator community, so that it stays grounded in reality. Central agencies can play a supporting role' (New Zealand Government, 2015).

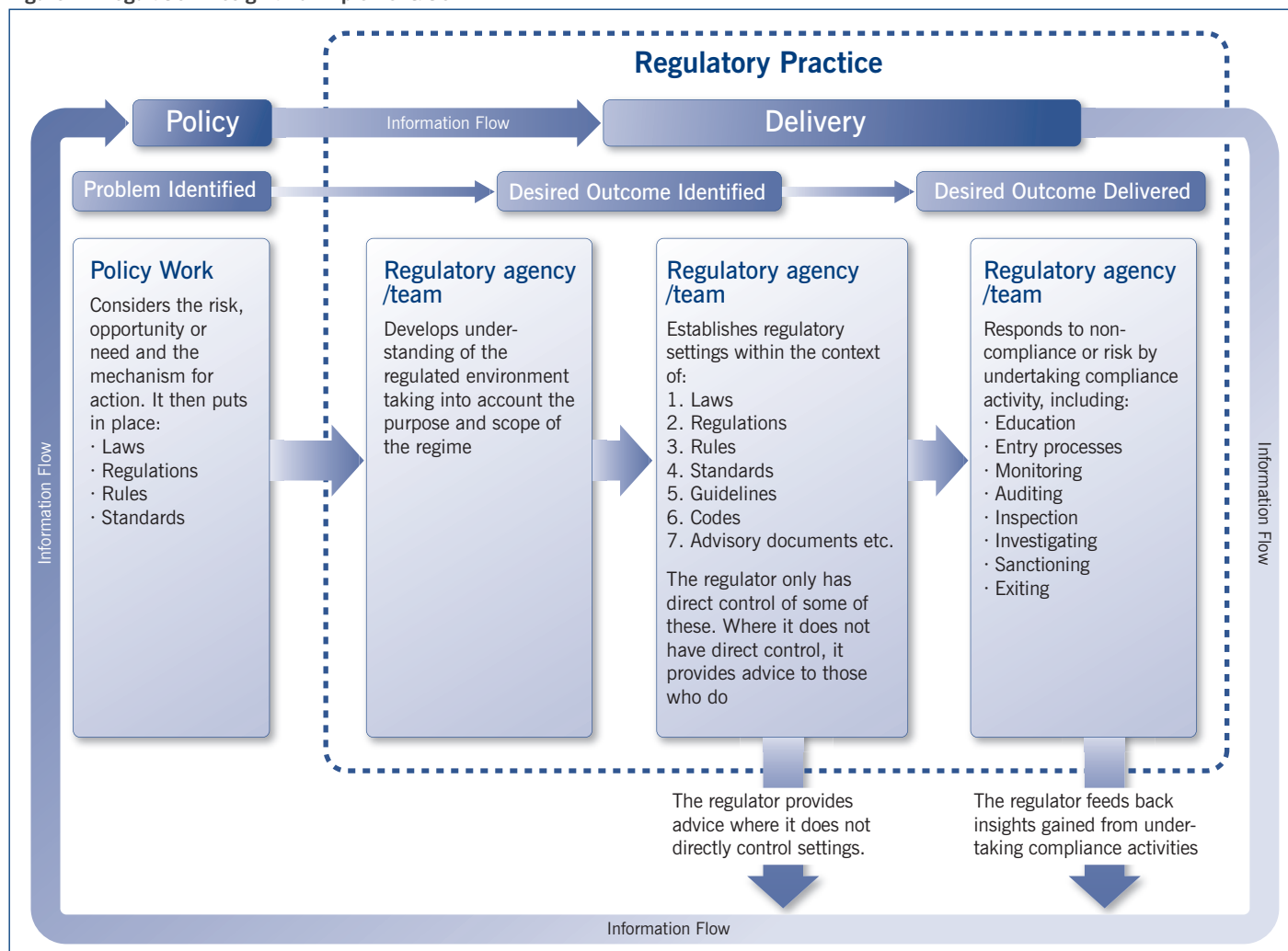
Antecedents in an evolutionary context

Policy Quarterly has published a number of articles that outline or provide insights into the antecedents for the regulatory practice initiative. These include: Mumford (2011) on 'Best practice regulation: setting targets and detecting vulnerabilities', which set out Treasury's approach to assessing regulatory regimes based on best practice principles and performance indicators drawn from New Zealand and international experience; Searancke, Mumford, Simpson and Steel (2014) on 'Governing the regulators: applying experience', which explored recent developments in statute law that aimed to strengthen the governance of regulators and their ability to operate effectively in a modern regulatory context; Black (2014) on 'Learning from regulatory disasters',

the regulatory system (that is, it is not just the rules but how they are implemented that really matters), and provided important insights, which at a high level might be summarised as follows:

- Regulatory agencies cannot be fully effective unless the regulatory framework within which they are operating gives the necessary mandate, powers, tools and resources.
- Regulatory agencies cannot be fully effective unless they have internal systems based on best regulatory practice principles.
- Front-line regulators (compliance officers) cannot be fully effective if they are not given training, experience and support by the agencies they work for.
- To complete the 'circle', ongoing improvement of the regulatory framework cannot occur effectively unless front-line regulators continually provide feedback to policy makers, who work on the regulatory frameworks, on how the regime is working in practice.

Figure 1: Regulation Design and Implementation



learning. This has been recently commented on by Black and Lodge:

Much has been written about the growing European networks of regulatory bodies and competition authorities, arrangements governing concurrency and the co-operation among those regulators tasked with utility and competition-related portfolios. However, these economic regulators are just one side of the story. There has been, as yet, hardly any endeavor to bring together those regulators in the UK whose primary responsibilities relate to the inspection of quality and safety standards. This absence is even more surprising given the considerable importance of these regulatory activities for economic and social life. (Black and Lodge, 2015, p.25)

The scope of regulatory practice

The simple answer to the question ‘what

is regulatory practice?’ is that it is what regulators do, and this is determined by what they are required to do by their statute. A more useful answer might be that regulators operate within a regulatory framework but discharge their responsibilities through developing principles, policies, rules, operating procedures and capability, and it is the totality of these that constitutes the ‘practice’. A simplified version of what regulators do, which is then reflected in practice, is provided in Figure 1. This diagram has evolved from discussions within the steering group and a working group it established to plan a forum for sharing best practices in relation to compliance plans.

Leadership from the regulatory community

The case for intellectual leadership from the regulatory community has its foundations in the inherent character of regulatory practice: essentially, what works well in any given context is often

known within the regulatory community, and regulators have the most direct means to refine and adapt their approaches to ensure success. In this sense regulatory practice requires codified and tacit knowledge, and the exercise of judgement. The intellectual leadership element is to extract from this knowledge and judgement information and insights that have general application to the broader regulatory community, and to make this accessible to that community.

Leadership is not, however, just intellectual. Better regulatory practice comes not just from what regulators do within agencies, but from what they do across agencies. A case in point is compliance qualifications. While each agency will recognise that it needs well-qualified staff and put in place appropriate training and development programmes, the bigger gains come from cross-agency collaboration in the development of a common qualification programme, as discussed below. Leadership is required to

take agencies out of their immediate sphere of influence and activity, and recognise the common good from cooperation.

G-Reg is leadership in action, and the following sections outline what the regulatory community is doing and why.

A common qualifications framework

Chief executives considered the business case for a common qualifications framework in March 2015 and agreed that it stacked up. It is worth repeating in full what they saw as the benefits:

1. improved capability by providing organisations with a structure around which to build a coherent programme of training (if one is not presently in place);
2. the ability for organisations to recognise staff progress within their existing training and development frameworks with a formal qualification;
3. consistency across the regulatory system, promoting trust amongst regulatory workers and higher service standards;
4. professionalisation of the regulatory workforce as a result of a common qualifications framework and compliance language, and an increase in the sharing of regulatory best practice; and
5. the ability to monitor and exercise stewardship of regulatory capability at the agency and system level.

Taken as a whole, the benefits are not narrowly focused on well-trained staff, but rather on the development of a profession and the delivery of regulatory stewardship.⁴ The qualifications themselves are predicated on there being a coherent body of regulatory knowledge that can be codified (in training and assessment materials), and able to be taught or acquired through experience, and assessed. The subject-matter experts from

central and local government agencies who were involved in the development of the qualifications believed that to be the case. (For the background to the development of the qualifications framework, see Manch, 2014.)

The qualifications framework currently includes five new qualifications, which are at levels 3–6 on the New Zealand Qualifications Framework and range from core knowledge to specialist investigations practice. So far the qualifications (statements of outcomes) have been approved and published by the New Zealand Qualifications Authority. Unit standards for the qualifications have also been developed and submitted to NZQA for approval. Under way is the

development of training and assessment materials, and this will be followed by the identification of trainers and assessors. The Skills Organisation is leading this work in a strategic partnership with the G-Reg Steering Group and drawing on the resources of the 3D Network.

It is expected that the first cohort of candidates for the qualifications can be signed up in early 2016. While collectively supporting the development of the qualifications framework, individual agencies were not required to commit to implementing the qualifications, and may take a number of roles as the roll-out progresses. These could include: being an 'early adopter' by committing to provide the initial cohort of applicants; assisting agencies that are early adopters by sharing content for the development of course and training material; or considering being part of a phased implementation of the framework.

The current qualifications are unlikely to be the last. There will be specialised qualifications, such as the current National Certificate in Intelligence Analysis, and demand for regulatory

practice qualifications at the tertiary level can be anticipated.

Sharing best practice: agency compliance strategies

Compliance strategies are the strategies agencies put in place with a view to maximising compliance with the laws they have responsibility for implementing by efficiently deploying the resources available to them. Such resources include statutory powers, staff and funding. In establishing G-Reg, regulatory practice leaders noted that, although the core elements of such strategies are relatively well known, the state of the art continues to evolve and there would be mutual benefit in sharing practices and experiences. A compliance forum for regulators aims to address this need. Its agenda is structured around each of the key areas of regulatory practice, as identified in Figure 1. A more detailed description of the agenda provides additional insights into what is contained in the body of specialised or 'professional' regulatory knowledge.

Understanding the regulated environment

In the literature there has been an evolution from the concept of responsive to 'really responsive' regulation. Both emphasise the need to deeply understand the environment within which the regulator is operating, and to adopt compliance strategies that are most likely to work in given contexts. Really responsive regulation exponents Baldwin and Black have said that regulators need to be responsive to:

- the attitudes of regulated firms;
- operating and cognitive frameworks of firms;
- the institutional environment and performance of the regulatory regime;
- the different logics and the regulatory tools and strategies;
- changes to each of these elements. (Baldwin and Black, 2008)

Baldwin and Black go on to say that compliance strategies need to be subject to ongoing review and modification based on feedback on how they are working.

At the practical level regulatory practice leaders have agreed that what is important is that regulators develop

a picture of the regulated environment, taking into account the purpose and scope of the regulatory regime. This includes establishing the extent and nature of non-compliance, the risk and nature of harm, and the characteristics of regulated parties. More specifically, they have agreed that agencies would benefit from sharing information on how they identify non-compliance and the risks of non-compliance, and its drivers, and determine what motivates regulated entities to comply or not comply; and create a model of the regulated community based on these findings.

Establishing regulatory settings

Regulators often have a key role in developing or shaping the regulatory settings in the environment in which they operate. This includes: developing mandatory and deemed-to-comply standards, and licensing and accreditation criteria; providing guidance; and giving advice to policy advisors and ministers. There is a large body of literature that touches on these areas, from Slovic's seminal analysis of the perception of risk (which explains why we have a greater aversion to aeroplane crashes than car crashes, even though the latter represent the greater risk) (Slovic, 1987), to the experiences with different forms of regulation, from prescriptive to outcome-based, to decision-making in New Zealand's system of government.

Regulatory practice leaders have agreed that agencies would benefit from sharing information on how they carry out or input into these functions in a way that takes into account and minimises risk, including:

- methods for determining what is an 'acceptable risk' (the likelihood and consequences of risk and the costs of mitigation, having regard to risk preferences);
- consultation strategies;
- decision-making principles and processes.

Responding to non-compliance or risk

Responding to non-compliance or risk involves making a number of strategic decisions, including whether to adopt a short- or long-term focus and how to vary

the mix of regulatory tools.

Sparrow's 'regulatory craft' approach (Sparrow, 2000) is well known to the regulatory community in New Zealand. Sparrow advocates focusing on the problems to be solved. Central to this approach is the need to pick the most important tasks and then decide on the important tools, rather than decide on the tools and pick the tasks to fit (Baldwin, Cave and Lodge, 2012, p.267). Escalation of interventions, from information to prosecution, depending on the motivation and capability of regulated entities and how they respond (the Braithwaite 'triangle') is another commonly used approach (Ayres and Braithwaite, 1992).

a regulatory profession is a construct which draws together many strands and develops the depth of expertise required in each of these strands.

Regulatory practice leaders have agreed that the range of strategies adopted by different regulators to maximise the level of compliance and minimise negative outcomes should be described and discussed, including approaches to:

- identifying the greatest need for intervention: for example, through taking a risk-based approach;
- selecting the right tool in the regulatory toolkit, having regard to legal, institutional or resource constraints;
- learning from doing and applying the lessons.

2016 and beyond

At the time of writing (October 2015) the G-Reg Steering Group was still developing its approach to a 2016 work programme. However, initial thinking has identified a number of themes. In most respects these are elements of the compliance framework set out above, but they represent areas of particular importance as regulators seek to develop a depth of regulatory knowledge and practice through a cooperative approach to acquiring and sharing knowledge:

- How can regulatory agencies effectively collect, collate and analyse information to both retain institutional knowledge and use it effectively on an ongoing basis to inform operational decision-making, the exercise of discretion, standards-setting and a contribution to regulatory stewardship activities?
- What are best practice decision-making systems for standards-setting and advice carried out by agencies?
- How do regulators best engage with regulated parties and/or understand their attitudes and responses?
- How can regulatory agencies ensure that compliance officers consistently

make good decisions when exercising discretion?

These themes could be coupled with:

- What tools should a modern regulator have in its toolkit, and how should it address gaps in the toolkit?
- What are the best practice systems for ensuring that emerging and 'non-visible' risks are identified?
- How can regulatory agencies best address political and public perceptions of risk in their response to actual or prospective events, where these are not evidence-based and may require a disproportionate response?

Conclusion

This article has focused on the acquisition, codification and sharing of regulatory knowledge, both at the level of individuals (compliance qualifications) and regulatory institutions (compliance strategies). But what is the relevance of this to the concept of a regulatory profession? John Kay, general manager, policy and systems interventions at the Civil Aviation Authority and a member of the G-Reg

Steering Group, has created a connection through an analogy with other professions, such as law and accountancy: that is, a regulatory profession is a construct which draws together many strands and develops the depth of expertise required in each of these strands.

An international regulatory expert has said that we are watching the birth of the regulatory profession, and to the extent

that the systematic approach being taken by G-Reg 'draws together the strands and develops the depth of expertise', we may well be moving into the parenting phase.

- 1 The analysis undertaken by Intal and Gill included ASEAN countries, Australia and New Zealand.
- 2 For example, from the UK see the Hampton Report (2005) and subsequent reviews of agencies, and the Macrory Report (2006), and from Australia the business regulation benchmarking studies that commenced in 2008 (the 2009 study of food safety benchmarked both Australian and New Zealand regulators).

- 3 The Australasian Environmental Law Enforcement and Regulators Network (AELERT) is a collective of environmental regulators from all levels of government across Australia and New Zealand. It works to create a platform for environmental regulators to connect and collaborate in their work. Member officers connect through AELERT to exchange resources, knowledge and experience about environmental regulatory practice and work together to drive continuous improvement and new approaches to the 'regulatory craft'. G-Reg has connections with AELERT.
- 4 The State Sector Act defines stewardship as the 'active planning and management of medium- and long-term interests, along with associated advice'.

References

- Ayres, I. and J. Braithwaite (1992) *Responsive Regulation: transcending the deregulation debate*, New York: Oxford University Press
- Ayto, J. (2014) 'Why departments need to be regulatory stewards', *Policy Quarterly*, 10 (4), pp.23-7
- Bailey, S. and J. Kavanagh (2014) 'Regulatory systems, institutions and practices', *Policy Quarterly*, 10 (4), pp.10-16
- Baldwin, R. and J. Black (2008) 'Really responsive regulation', *Modern Law Review*, 71 (1), pp.59-94
- Baldwin, R., M. Cave and M. Lodge (2012) *Understanding Regulation: theory, strategy, and practice*, Oxford: Oxford University Press
- Black, J. (2014) 'Learning from regulatory disasters', *Policy Quarterly*, 10 (3), pp.3-11
- Black, J. and M. Lodge (2015) 'Encouraging regulatory conversations', *Risk and Regulation*, Summer, pp.25-7
- Intal, P. and D. Gill (forthcoming) *The Development of Regulatory Management Systems in East Asia: deconstruction, insights and fostering ASEAN's quiet revolution*
- Manch, K. (2014) 'Improving the implementation of regulation: time for a systemic approach', *Policy Quarterly*, 10 (4), pp.17-22
- Mumford, P. (2011) 'Best practice regulation: setting targets and detecting vulnerabilities', *Policy Quarterly*, 7 (3), pp.36-42
- New Zealand Government (2015) *Government response to the New Zealand Productivity Commission report on Regulatory Institutions and Practices*, Wellington: New Zealand Government
- New Zealand Productivity Commission (2014) *Regulatory Institutions and Practices*, Wellington: New Zealand Productivity Commission
- Searancke, G., P. Mumford, K. Simpson and M. Steel (2014) 'Governing the regulators: applying experience', *Policy Quarterly*, 10 (1), pp.54-8
- Slovic, P. (1987) 'Perception of risk', *Science*, 236 (4799), pp.280-5
- Sparrow, M.K. (2000) *The Regulatory Craft*, Washington DC: Brookings Institution

THE SCHOOL OF GOVERNMENT WELCOMES

Dr Verna Smith BA, BA Hons, MPP, PhD (Wellington) Senior Lecturer



Verna Smith is the newly appointed Director of the Master's Programmes and Senior Lecturer in Public Policy for the School of Government. She has qualifications in sociology, politics and

public policy. She previously worked for a number of government agencies, in management and service development roles in housing, funding of non-profit agencies, social and family services, treatment and rehabilitation of people with disabilities and, most recently, building academic/public service partnerships to support evidence-based policy and practice. Prior to her appointment, she led the development and management of a major research program at Monash University for the improvement of neurotrauma services in Victoria, Australia. Her PhD at Victoria University of Wellington focused on a comparative study of pay-for-performance policymaking in primary health care. Her research interests are theories of public

policymaking in Westminster systems; comparative health systems analysis; and accountability frameworks in public services purchasing. Dr Smith will be writing for the *Policy Quarterly* on stewardship challenges within the primary health care sector in New Zealand.

An early focus for Dr Smith in her Programme Director role has been the development of Masters courses to be taught in Auckland during 2016. Two courses will be offered in Trimester Two (Managing for Results and Policy Analysis and Advising and three in Trimester Three (Policy methods and Practice, Leading Change in public and community organisations and Local Government). For dates, see www.victoria.ac.nz

Kirsten Lovelock, Robin Gauld,
Greg Martin and Jayden MacRae

Exploring the Ethics of the Use and Commercialisation of New Zealand Public Health System Data

This article canvasses the literature exploring issues related to the commercialisation of health data from the public health system. It examines whether commercialisation is a viable proposition in New Zealand, socially and ethically. In doing so, it provides a methodological approach to the development of an ethics and privacy policy framework for any potential commercialisation of public health data in New Zealand.

In May 2013 Kathryn Ryan of Radio New Zealand interviewed Hayden Wilson, a partner at law firm Kensington Swan specialising in health privacy and public service issues, and Graeme Osborne, director of the National Health Information Technology Board, about a range of issues connected to health databases and the sharing of health data in New Zealand. Wilson noted that commercialisation of large-scale health data 'is a very difficult policy question'. Osborne commented:

'I have noticed recently that insurance companies have been approaching GPs for patient information ... [this] must be up to the individual and they must consent' (Radio New Zealand, 2013).

The use of health data is widespread in both the public and private sectors globally (Gauld, 2004; Martin et al., 2014). The sale of health data and health-related data is now a multi-million dollar industry, involving both private and public organisations, and yet public

awareness of this industry is poor (Safran et al., 2007; Bailey, 2006). Selling health data to stakeholders with a commercial interest raises a number of ethical issues and concerns.

The commercialisation of public health data and the potential for generating supplementary health revenue has been explored by a number of countries, with many now engaged in commercial relationships with a range of entities, including research organisations (public and private) engaged in research variously in pharmacovigilance, disease epidemiology, pharmaco-economic studies, and health service provision and delivery; insurance companies; and pharmaceutical companies. In New Zealand the common argument for the commercialisation of public health data tends to rest on the following assertions: health data in New Zealand is considered 'public' because the health sector is primarily funded through central government budget allocations; the public health system is for the public good; the public health system is increasingly under financial pressure to provide services and care to an ageing population; there

Kirsten Lovelock is a Senior Research Fellow in the Department of Public Health, University of Otago, Wellington. Robin Gauld is Professor of Health Policy and the director of the Centre for Health Systems, University of Otago, Dunedin. Greg Martin is a Senior Research Fellow in the Health Services Research Centre, Victoria University of Wellington. Jayden MacRae is the chief executive officer of Patients First, Wellington.

is a need to identify potential sources of revenue; commercialising health data sets provides a potential source of revenue and so in this context is in the interests of the public good and public health (Gauld 2004; Bodenheimer 2008; Nolte and McKee, 2008).

Objections to the commercialisation of public health data commonly hinge on the implications for individuals with respect to rights and privacy and the right to informed consent. In countries where health data has been commercialised, attention has been paid to the development of protocols and frameworks which address the risks to privacy and information security and of

norms and rules. Thus, commercialisation may go against social norms and rules, but if it produces greater overall well-being (generates revenue for the public health system and/or improved health outcomes) it is considered moral and ethical. The problem with this is that greater overall well-being or the happiness of the majority does not always address the well-being of the minority, and, in health, such an approach could lead to increased marginality of minorities and poorer health outcomes amongst those who are already disadvantaged (Lovelock and Lovelock, 2013). This is discussed below in relation to pharmaceutical and insurance companies.

happening in practice. There is evidence to suggest that rights are seldom applied equally in societies that are fundamentally unequal, and even less likely to be applied equally across societies where there are vast differences in prosperity (Chandler, 2002). We need to explore the impact of the commercialisation of health data on rights, how rights are addressed, and whose rights are likely to be compromised, at home and abroad.

Finally, and again briefly, this area would benefit from the employment of the principles of social justice. Rawls' (1971) notion of justice as 'fairness' is one of many conceptions that can be usefully employed to examine the commercialisation of health data. Central to Rawls' conception is the notion that fairness is paramount, and here – in contrast to the utilitarian approach – decisions do not rest on what is best for the majority, but on what is right for the individual and the social group. Here, just decisions are so defined not by a person's social position and self-interest, but in terms of what is fair for those who are disadvantaged or less well-off (Pogge, 2005). While it can be argued that issues relating to the sale of health data are pertinent to everyone, the impact of this practice is not necessarily shared equally. Hence, the concept of 'fairness' allows consideration of unequal impact on individuals and certain social groups. This is discussed more fully below in relation to the pharmaceutical industry and ethnic minority groups. Further, distributive or redistributive justice is within this framework considered a moral duty. Thus, if commercialisation was demonstrated to be unfair to some, this ethic would require action against commercialisation.

Finally, fundamental to any ethical decision-making is a commitment to critically appraise the issue or problem, identify where values conflict, and seek resolution to the questions they provoke via a range of ethical frameworks.

The use of health data sets by research organisations

There is evidence of the use of linked data sets for research purposes. For example, in the United Kingdom the General Practice Research Database, developed in 1993, was

The NHS data sets include information on prescribed primary care drugs; administered hospital drugs; laboratory data; consultations; general practitioner [etc].

impingement on the rights of individuals (Brezis, 2008). It is assumed that once these have been addressed the sale of health data can proceed, as it is in the public good. The approach has tended to be to address the privacy and consent issues at the level of the individual and then proceed with commercialisation, thus assuming that 'ethical' issues have been sufficiently dealt with and that there are no further issues with respect to the public good. As we will see, this is problematic.

Generally, the two main ethical frameworks operating here are a utilitarian framework and a rights-based framework (Smith and Duffy, 2003; Lovelock and Lovelock, 2013; Taylor, 1975). Both of these frameworks have limitations. Briefly, in the utilitarian view, actions are good when they increase the overall pleasure (well-being) of the group and when they decrease pain for the community. An act is considered superior if it produces greater overall well-being. Under this model, acts can be evaluated in terms of their own consequences, rather than being seen to be predetermined by social

Rights frameworks also have limitations, as rights are socially and politically created. We need then to ask: what understanding of rights is being embraced? Is this understanding culturally specific or universal? Universalistic approaches to rights, which are evident in this field, have been critiqued as a manifestation of a move towards global governance, underpinned by a desire of developed nations to consolidate their wealth and power (Chandler, 2002, 2003). Important in terms of the commercialisation of health data is the question of whether rights issues (patient rights to informed consent, to control over data, to confidentiality) are being addressed in practice, not just rhetoric. To date there has been no evaluative research which has examined whether the various protocols and frameworks adopted internationally are serving the interests of patients, or whether commercialisation of health data is undermining the interests or rights of patients (or the public). The argument here is not that the concept of rights is valueless; rather it is the absence of a critical appraisal of what is

merged with the Clinical Practice Research Datalink in 2011. This was a jointly-funded initiative of the National Institute for Health Research and the Medicines and Healthcare Products Regulatory Agency, overseen by the National Health Service (NHS) (Department of Health, 2011). Its purpose is to support research capability and it is linked directly to policy on increasing research and innovation in health and social care. The provision of these new data and research services is promoted in terms of what they can offer for new treatment options and insights into serious health conditions. The NHS data sets include information on prescribed primary care drugs; administered hospital drugs; laboratory data; consultations; general practitioner and hospital-coded disease data; disease registers, and cancer registers. Data can be bought for a fraction of what it would cost to conduct the primary research. The data sets provide data on 64 million patients, and partnerships with other European countries are currently being developed.

The key ethical concerns in relation to this use of the NHS data sets have focused on who has access to the database, and the importance of maintaining confidentiality. These issues are addressed through a scientific and ethical advisory group, which is responsible for granting access approval and addresses issues surrounding the scientific validity of the proposed studies and the need to ensure anonymisation. Revenue generated by sales of data to researchers and research organisations funds the database.

In the United States similar issues have been addressed with respect to access to health data by researchers. There, as in the UK, advocates of patient privacy stress the potential misuse and unethical disclosure of sensitive health data and the implications for individuals. Connected to this is the argument that misuse of sensitive health data may or can harm already marginalised or stigmatised individuals (Hodge, 2003). Conversely, others stress the importance of identifiable health data for public health practice, including monitoring and establishing patterns of injury and disease for populations, facilitating surveillance, and furthering epidemiological investigation

and the identification of health needs. The regulatory measures in this area attempt to balance individual privacy rights and the public interest in public health outcomes (ibid.). In the US, the Department of Health and Human Services Privacy Rule (discussed below) addresses this tension. Ultimately, protecting individual privacy protects public health objectives: it is argued that eroding the former leads to a loss of trust, falling participation in public health programmes, and thus poorer data for epidemiological research and informed interventions. However, protecting privacy is not always a case of closing off access. There are legitimate uses that do impinge on privacy, and this

their specific project; and (4) assure data custodians that the data that is their responsibility will be used appropriately and that security obligations will be met.

Research and commercial use in the United States

In 2003 the United States introduced the Privacy Rule, which established a national standard for health information privacy and security (Hodge, 2003). The Privacy Rule stands alongside a range of other regulatory measures at both national and federal levels. Individually-identifiable health data had always been shared with a range of both public and private sector agencies (such as pharmacies, insurance

Individually-identifiable health data had always been shared with a range of both public and private sector agencies ... in the United States, and this sharing has also taken place without individual consent.

is usually in the event of a public health crisis. Privacy and public health have a synergistic relationship and, necessarily, privacy regulations are complicated.

In Australia, privacy and confidentiality are the central issues discussed in the literature, with the focus being primarily on the use of health data for research. For example, Kelman and Holman (2002) discuss the linkage protocol used for a study on diabetes in Western Australia. The best-practice protocol employed by this research team was designed to provide maximum protection of private and confidential information. It involved separating personal identifiers from actual health data and confining the use of personal identifiers to the initial linkage stage. Four broad principles underpin this protocol for inter-agency record linkage: (1) maximise the protection of individual privacy; (2) provide linked data files only to nominated researchers involved in specific, approved research projects; (3) provide researchers with no more than the data sets required for

companies) in the United States, and this sharing has also taken place without individual consent. US law addressing the sharing of health data is fragmented. The constitution does not grant protection of privacy of health data to individuals. Federal and state-level regulations dominate. These include, at the federal level, the Freedom of Information Act 1966, the Privacy Act 1974 and the E-Government Act (2002), and a range of federal-level privacy laws relating to research subjects and protecting confidentiality both for institutions and individuals. There are a range of statutory laws at the state level which tend to regulate specific data recipients (e.g. insurers), specific medical tests (e.g. genetic) and particular data sources (e.g. health care facilities); there are also public health laws, regulations for insurers and licensing statutes which address privacy protections. But the key measure is the Privacy Rule.

The Privacy Rule covers a range of entities – health care providers, insurers and government health programmes –

that conduct transactions electronically. There are, however, other organisations which use, disclose or store public health information that are not directly covered. The rule protects most individually-identifiable health information (PHI), electronic or paper-based, kept by the entities covered. Public health data that has been de-identified is not included (this data must have been stripped of unique identifiers). Those entities to which the rule applies must:

- provide notification to individuals regarding their privacy rights and how their PHI is used or disclosed;
- adopt and implement internal privacy policies and procedures;

- for judicial and administrative proceedings;
 - for commercial marketing;
 - to parents of un-emancipated minors;
 - to family members, friends, significant others or caregivers, in cases of emergency or during care-taking functions;
 - for health research, if a waiver has been provided by an institutional review board (ethics review committee);
 - to public health authorities for public health purposes.
- More generally, the Privacy Rule pre-empts many state-level or local laws

... the use of data to identify profitable gaps in the market carries with it a number of ethical issues and concerns, in particular the potential and likelihood of targeting vulnerable populations ...

- train employees to understand privacy policies and procedures;
- designate person(s) to be responsible for the implementation of privacy policies and procedures;
- establish appropriate administrative, technical and physical safeguards to protect the privacy of PHI;
- meet their obligation to health consumers who exercise their rights under the Privacy Rule to inspect and request corrections or amendments to their PHI.

There is a range of circumstances under which the information can be disclosed. Generally, disclosure cannot take place without written consent from the individual. However, there are exceptions. These are when the individual requests a copy of their PHI, and when the Department of Health and Human Services requires access to PHI to facilitate a compliance investigation under the rule. There are also certain disclosures that do not require individual consent:

- providing a PHI to law enforcement agencies;

– ‘The Rule serves as a federal floor of protections’ – but it does not pre-empt state or local laws that contain greater specificities or stringencies. Thus, all laws that are more stringent and protective of health information privacy rights remain in effect (Hodge, 2003, p.668).

With respect to public health practice, the rule, through exemption clauses, allows a balance between individual privacy and public health considerations. There is, however, always the possibility that the rule will be poorly applied – for example, through misinterpretation of who can have access to PHI – and barriers emerge for public health practice. There is also a reported misperception about how the data can be used (Hodge, 2003), where it is perceived that the rule leads to restrictions on use.

Pharmaceutical and insurance companies

While there are ethical issues connected to the use of health data by research organisations, as identified above, major ethical flags are raised with respect to insurance and pharmaceutical companies.

With respect to pharmaceutical companies, there are issues connected to the use of data for research and development purposes which may well be addressed through various research ethics bodies or committees at an industry, university or national level. We should, however, be cautious about separating out market and profit imperatives from research agendas in this industry, as often the two are closely entwined (Avorn, 2005). In addition, the use of data to identify profitable gaps in the market carries with it a number of ethical issues and concerns, in particular the potential and likelihood of targeting vulnerable populations (for example, the aged and those with chronic conditions), and where at least one component of multiple vulnerabilities can be health literacy. Direct-to-consumer advertising presents a range of ethical concerns, from challenges to individual rights to the potential for overuse of marginally effective technologies, and thus potentially poor public health care, again more likely to be taken up by the vulnerable (Moynihan and Cassels, 2005). Further, it is possible that the revenue generated for the public health system by data sales to pharmaceutical companies is undermined by the conflict of interest between the profit motive underpinning this industry and the interests and objectives of public health (Brezis, 2008). The literature also reveals that voluntary ethical guidelines often fail (Chalmers, 2006).

With respect to insurance companies, data use can also be applied to product development and targeting sales, and it is not clear what ethical processes would be put in place to ensure that this targeting did not perpetuate existing inequalities (that is, disparities in health outcomes between different societal groups) or create new inequalities in coverage requirements or entitlements. A great deal of emphasis is placed on privacy and its protection through the de-identification of data, but it is also known that it is possible to re-identify data after it has been de-identified. Thus, there are ethical issues connected to the potential for insurance companies (or any other commercial entity, for that matter) to re-identify de-identified data (MacRae, Dobbie and Ranchhod, 2012) in order

Table 1: Recommendations of potential utility for New Zealand

Recommendation	Discussion
Increase transparency of data use and promote public awareness.	Ongoing public policy discussions must explicitly and directly address the secondary use of health data. Conducting and managing these activities must enlist diverse stakeholders and fully disclose uses and safeguards through open and readily accessible processes.
Focus ongoing discussions on data access, use and control, not on ownership.	Consensus-building meetings encompassing a broad constituency must focus on data access and control policies and practices for secondary use of data. Focus should emphasise access and control, not ownership. Discussants should consider best approaches to risk management and mitigation.
Discuss privacy policies and security for secondary use of health data.	To develop consensus on pivotal issues, public and private sector organisations advancing the use of health information should promote discussions that include a range of stakeholders. Ongoing discussions must address complex issues related to private and secure secondary use of health data.
Increase public awareness of benefits and challenges associated with secondary use of health data.	A wide range of interested parties, especially consumer-orientated patient and caregiver groups, should promote public education regarding benefits of secondary use of health data. A first step is to identify appropriate organisations and agencies that have a role to play in this effort. The aim of the education is to build public awareness and trust in secondary use of health data.
Create a taxonomy for secondary uses of health data.	A taxonomy identifying possible non-clinical uses of personal health information is needed to clarify societal, public policy, legal and technical issues. The taxonomy will support more focused, productive discussions regarding health data and its use.
Address, comprehensively, the difficult, evolving questions related to secondary use of health data.	Questions to address encompass data transparency; consumer awareness and understanding; technical issues and challenges of identity management and user authentication; commercialisation and sale of data; and oversight. The de-identification and anonymisation of data merit additional attention by technical experts in authentication, de-duplication and identity management.
Focus national and state attention on the secondary use of health data.	Findings of panels should be shared with all interested stakeholders. Additional efforts should be undertaken to formulate a road map which depicts the multi-tiered use and re-use of health data; the road map should take into account all foreseeable applications and the full complexity of issues.

Source: adapted from Safran et al., 2007

to target more effectively and maximise commercial gain.

Public debate, understanding and transparency

In April 2006 the American Medical Informatics Association convened a panel of stakeholders to discuss the issues connected with the secondary use of health data (Safran et al., 2007). The stakeholders identified key findings and made a range of recommendations detailed in Table 1 (amended slightly). All of these recommendations and the discussion that surrounded them are of potential utility in New Zealand.

New Zealand

Health data in de-identified form is routinely used in New Zealand for research purposes. Under the New Zealand Health Information Privacy

Code data is provided on the basis that the individual will not be identified in any published form. To de-identify data, commonly the NHI number is removed, as is the name and address information (MacRae, Dobbie and Ranchhod, 2012). As noted above, there are a range of international protocols which address patient privacy within health information. Privacy is highlighted as a key issue and a potential barrier to the commercial use of health data, and it is typically argued that this key ethical issue can be addressed through de-identification. However, more recently concern has been raised about the risk of re-identification of health data (ibid.). The current recommendation is that de-identified data sets should contain more than 150,000 individuals, not be accompanied by meshblock data, and have age and ethnicity data aggregated. Further, agreements must be in place with ‘trusted’

organisations, as de-identified data can be re-identified readily (ibid.).

Ethics and privacy policy framework

There are a number of questions that need to be addressed in the New Zealand context if an ethical pathway is to be identified for the secondary use of health data and the commercialisation of public health data sets. Answers to some of these questions are suggested in the small body of research canvassed above, but there are some more preliminary steps which need to be taken before any ethics and privacy policy framework can be developed in New Zealand.

First, there are fundamental questions that need to be addressed by stakeholders, including (but not exhaustively):

- What are the potential benefits and risks of the secondary use of health data?
- Who owns health data, and who has the right to access the data and for what purposes?
- What obligations might exist in relation to the Treaty of Waitangi?
- What are the public trust issues with respect to patient consent for secondary use of health data?
- Do patients have the right to audit or put limits on access to their health data, even after anonymisation?
- How can we reconcile public good with the rights of individuals?
- Innovative technologies may enhance the ability and ease of widespread data-sharing and additional commercial uses: what problems may arise from this?
- What can be done about inappropriate use or exploitation of data-sharing?

What can be done if de-identified data is re-identified?

- What regulations, legislation and/or policies and procedures are needed to address these issues? (adapted from Safran et al., 2007).

In addition, there are a number of subsequent questions related to selling, payment and ownership of health data from the public health system. This is particularly an issue when a data-holding entity is an independent business that receives public funding subsidy (for

Table 2: Current legislation of relevance

The following legislation has relevance for the commercialisation of New Zealand health data. The development of an ethics and privacy policy framework would have to work within these legislative parameters.

The Public Records Act 2005 provides a comprehensive framework for the systematic creation and preservation of public archives and local authority archives. This act gives the chief archivist, who is also the chief executive of Archives New Zealand, powers of direction with respect to archiving and disposal decisions concerning health information held by the public sector.

The New Zealand Public Health and Disability Act 2000, section 3(1)(d) describes one of the act's objectives as: to facilitate access to, and the dissemination of information to deliver, appropriate, effective and timely services.

The Health (Retention of Health Information) Regulations 1996 set a minimum period of ten years for which health information must be held by health or disability service providers. They also address the form in which health information is to be retained and the obligations associated with the transferring of health information.

The Health Information Privacy Code 1994 is a code of practice issued by the privacy commissioner under section 46 of the Privacy Act which gives extra protection to health information because of its sensitivity. It covers all health agencies, and protects all personal health information relating to an identifiable individual. The Ministry of Health has a responsibility to ensure it complies with this code in respect to all health information entrusted to it.

The Privacy Act 1993 provides a general framework for promoting and protecting individual privacy. It establishes certain principles with respect to the collection, use, disclosure of and access to information relating to individuals. It applies to private and public sector agencies. The role of the privacy commissioner is to investigate complaints about interferences with individual privacy.

The Cancer Registry Act 1993, section 4 and the Cancer Registry Regulations 1994 require the director-general of health to maintain or arrange for the maintenance of a cancer registry.

The Official Information Act 1982 was established to make official information freely available. This has relevance when a request for health information to the Ministry of Health is from someone who is not the subject of the information or their personal representative, as addressed in part II of the act.

The Health Act 1956 gives the Ministry of Health the function of improving, promoting and protecting public health. It contains specific provisions in section 22 governing the disclosure of health information about identifiable individuals by and between health service providers and other agencies with statutory functions.

example, general practices). How much should providers be paid for the use of their data? And what does the payment represent? Is payment for raw material or is it for the underlying investment to capture data? (This is particularly an issue where providers fund their own information systems. It is, however, a complex issue, because in most instances providers are publicly funded to capture that data for other purposes – for example, the Integrated Performance Incentive Framework.)

Some suggestions

We believe a number of issues surrounding the commercialisation of health data in New Zealand require addressing and

suggest the following as a start.

1. To provide and focus public debate on this issue we suggest that the issue of the commercialisation of New Zealand health data be referred to the parliamentary Health Select Committee.
2. Based on the deliberations and findings of the Health Select Committee, a policy should be developed on the secondary use of health data which adequately addresses ethically its commercialisation.
3. This policy should address issues of privacy at the level of the patient (suggestions overseas include opt-in and opt-out clauses where patients 'consent' or not to the use of their

individual data). There is a need, however, to recognise that there may be differences in cultural response to this: consent, for example, may not be an issue at the level of the individual patient but may be required from a wider, related social group (e.g. whānau or iwi). Thus, in such a case consent may not be given by the individual because it is required from their group. In addition, there is a need to acknowledge that value is a contested concept, particularly among indigenous populations. In New Zealand it seems reasonable to assume that the sale of health data will be contested by Māori in terms both of ownership and of the assumed right to sell health data to commercial enterprises abroad. It also seems reasonable to assume that other members of New Zealand society will contest commercialisation of this data.

4. Any policy development needs to accept that there is no unified consumer position, which means that patient consent is going to be a complex process.
5. While in the United States it has been argued that a focus on ownership detracts from the development of policy, in New Zealand it seems likely that the issue of ownership will be important, not only with respect to the 'right to sell', but also in terms of conflicting understandings of what the 'value' of health data is. It can be argued that we have reached a point currently in New Zealand where ownership is not contested, as both the patient and provider are the stewards of health data, with both having rights to ownership such that they cannot diminish each other's right, but there remains the question of whether commercialisation of health data references the sale of something else; that is, commercialisation may challenge current conceptions of ownership.
6. It would be necessary to engage a wide range of stakeholders to ensure mitigation of future risks of commercialisation. These stakeholders would include, for example, those who

collect the data for primary use; those who use the data for non-clinical use; patients and the public; policy developers; those who inform and educate health professionals, industry, patients and the public; and non-governmental organisations which address health-related issues.

7. It would also be useful to conduct a thorough assessment of the risk of re-identification of de-identified health data.

In addition, several steps need to be taken for the commercialisation of New Zealand health data to be addressed ethically. These include:

- raising public awareness of the possibility of the commercialisation of New Zealand health data;
- transparency in the uses of health data;
- adequate public education, discussion, and debate between and across stakeholder groups;
- understanding that there are multiple meanings around 'value';

- adequate debate on and resolution of the tension between community 'good' and individual rights, and acknowledgement that recognition of individual rights does not always undermine community good;
- recognition that utilitarian ethics emphasises greater overall well-being (or social good), but when applied can also, while addressing the good of the majority, overlook good for minorities and perpetuate social and economic inequality.

Conclusion

There is an urgent need for public consultation, education and awareness about the secondary use of health data and the possible commercialisation of health data in New Zealand. It would be unethical for a decision to be made on the commercialisation ('sale') of public health data in the absence of transparent debate. It should be noted that there have already been some instances of the sale of health data in New Zealand.

It is beyond the scope of this article to explore the vast ethics literature. However, central to the debate is the understanding that when individual autonomy and rights to privacy and informed consent become the focus of ethical attention, key understandings of 'value', 'ownership' and 'social inequality' can be overlooked. Conversely, when attention is focused on what is good for the majority (the public good), minority concerns (including the impact on specific individuals) can be left unaddressed, and thus pervasive social inequalities can be inadvertently perpetuated. We need to move beyond utilitarian and rights-based models towards considering distributive justice frameworks and ethics-of-care models when addressing public health and the uses of public health data, particularly if commercialisation is being considered.

References

- Avorn, J. (2005) 'Torcetrapib and atorvastatin: should marketing drive the research agenda?', *New England Journal of Medicine*, 352, pp.2573-6
- Bailey, S. (2006) 'Your data for sale?', *Boston Globe*, 24 March
- Bodenheimer T. (2008) 'Coordinating care: a perilous journey through the health care system', *New England Journal of Medicine*, 358, pp.1064-71
- Brezis, M. (2008) 'Big pharma and health care: unsolvable conflict of interests between private enterprise and public health', *Israel Journal of Psychiatry and Related Sciences*, 45 (2), pp.83-94
- Chandler, D. (2002) *From Kosovo to Kabul: human rights and international intervention*, London: Pluto Press
- Chandler, D. (2003) 'Rhetoric without responsibility: the attraction of "ethical" foreign policy', *British Journal of Politics and International Relations*, 5 (3), pp.295-316
- Chalmers, I. (2006) 'From optimism to disillusion about commitment to transparency in the medico-industrial complex', *Journal of the Royal Society of Medicine*, 99, pp.337-41
- Department of Health (2011) 'The Government plan for a secure data service: strengthening the international competitiveness of UK life sciences research', London: Department of Health, <https://www.dh.gov.uk/publications>
- Gauld, R. (2004) 'One step forward, one step back? Restructuring, evolving policy, and information management and technology in the New Zealand health sector', *Government Information Quarterly*, 21, pp.125-42
- Gostin, L.O. and M. Powers (2006) 'What does social justice require for the public's health? Public health ethics and policy imperatives', *Health Affairs*, 25 (4), pp.1053-60
- Fennel, D.A. (2009) 'Ethics and tourism', in J. Tribe (ed.), *Philosophical Issues in Tourism*, Bristol: Channel View Publications
- Higgins-Desbiolles, F. (2010) 'Justifying tourism: justice through tourism', in S. Cole and N. Morgan (eds), *Tourism and Inequality: problems and prospects*, Wallingford: CABI
- Hodge, J.G. (2003) 'Health information privacy and public health', *Journal of Law, Medicine and Ethics*, 31 (4), pp.663-71
- Kass, N.E. (2004) 'Public health ethics: from foundations and frameworks to justice and global health', *Journal of Law, Medicine and Ethics*, 32, pp.232-42
- Kelman, C.W. and C.D.J. Holman (2002) 'Research use of linked health data: a best practice protocol', *Australian and New Zealand Journal of Public Health*, 26 (3), pp.251-5
- Lawson, D.H., V. Sherman and J. Hollowell (1998) 'The general practice research database', *Quarterly Journal of Medicine*, 91, pp.445-2
- Lovelock, B. and K. Lovelock (2013) *The Ethics of Tourism, Critical and Applied Perspectives*, London: Routledge
- MacRae, J., S. Dobbie and D. Ranchhod (2012) 'Assessing re-identification risk of de-identified health data in New Zealand', *Health Care and Informatics Review Online*, pp.24-30, www.hinz.org.nz
- Martin, G., K. Lovelock, J. Cumming and R. Gauld (2014) 'Caring and sharing: implementation issues with an electronic shared healthcare record', paper delivered at the Primary Care Research conference, Canberra, 23-25 July

- Miller, R. (2006) *New Zealand Government and Politics* (4th edn), Melbourne: Oxford University Press
- Moynihan, R. and A. Cassels (2005) *Selling Sickness: how the world's biggest pharmaceutical companies are turning us all into patients*, New York: Nation Books
- Nolte E. and M. McKee (eds) (2008) *Caring for People with Chronic Conditions: a health system perspective*, Berkshire: Open University Press
- Palmer, G. (1987) *Unbridled Power: an interpretation of New Zealand's constitution and government*, Auckland: Oxford University Press
- Pogge (2005) 'World poverty and human rights', *Ethics and International Affairs*, 19 (1), Spring.
- Radio New Zealand (2013) 'NZ's super database of health information', Nine to Noon, 8 May, <http://www.radionz.co.nz/national/programmes/ninetonoon/audio/2554343/nz-s-super-database-of-health-information>
- Rawls, J. (1971) *A Theory of Justice*, Cambridge, MA: Harvard University Press
- Safran, C., M. Bloomrosen, W.E. Hammond et al. (2007) 'Toward a national framework for the secondary use of health data: an American Medical Informatics Association white paper', *Perspectives on Informatics*, 14 (1), Jan/Feb
- Schumann, P.L. (2001) 'A moral principles framework for human resource management ethics', *Human Resource Management Review*, 11, pp.93-111
- Smith, M. and R. Duffy (2003) *The Ethics of Tourism Development*, London: Routledge
- Taylor, P.W. (1975) *Principles of Ethics: an introduction*, Belmont, CA: Dickenson
- UK Government (2015) 'Policy: research and innovation in health and social care', <https://www.gov.uk/government/policies/increasing-research-and-innovation-in-health-and-social-care>

OBITUARY

Donald Stephen Gray (22 Dec 1959 – 15 Sep 2015)



Staff and associates of the Institute for Governance and Policy Studies and the School of Government were saddened to hear of the death of Don Gray on 15 September 2015. Don had been a member of the editorial board of *Policy Quarterly* since May 2012.

Don was a graduate of Victoria University of Wellington. He worked

briefly at State Insurance, then from 1984 found his niche in policy advice roles in the Department of Social Welfare and its successor organisations (Ministry of Social Policy, Ministry of Social Development), including as Deputy Chief Executive, Social Development Policy and Knowledge, at MSD.

His career included two secondments to the OECD in Paris, a secondment to the Beehive, chairing the Social Policy Committee Senior Officials Group and advising the chair of the Committee for a number of years. From April 2010 to February 2011, Don managed the secretariat for the Welfare Working Group, based in the Institute for Governance and Policy Studies. He then returned to MSD as Chief Policy Advisor, before being appointed Deputy Director-General Policy at the Ministry of Health from January 2012.

Major policy projects Don worked on included the Social Report, the reform of disability policies in the early 1990s, the 2011 Kia Tūtahi Relationship Accord between the Government and the community and voluntary sector and every major review since the mid-1980s of the New

Zealand social security system and its interfaces with tax, employment, housing and disability policies. During the 2000s, he steered the development of Working for Families, a \$1.5 billion package and the single most significant development in New Zealand's welfare provision for a generation.

Don was a public servant of robust intellect and deep integrity, who encouraged his colleagues in the nicest possible way to maintain a distinction between the use and abuse of evidence in policy formation. He had a quick wit and wry sense of humour. (When I met up with him in April he was undergoing medical treatment and quipped that of course he was merely user-testing public health services.)

Don was a good man who treated everyone with respect and demonstrated public service excellence in working for a better New Zealand. A feature of his career was genuine concern for citizen outcomes, and he found the changes associated with the 1991 'mother of all budgets' particularly challenging. His death is a great loss to the policy community, as to his family and friends.

David Bromell

Global Development in the Twenty-first Century: the maturation of global development – responses to three critiques

Modern economic development does not travel for long in a straight line. Making sense of the periodic changes in direction is the never-ending challenge of economic analysis.

My 2015 Holmes Lecture (Garnaut, 2015b) took up the challenge of explaining new twists and turns in the 21st century. Productivity and output growth are markedly lower in the developed countries, especially but not only since the great crash of 2008. The populations of the developed countries are ageing rapidly and the labour forces declining or growing slowly. Global savings are high and investment low, giving rise to historically low real interest rates. Low business investment, despite the low interest rates, makes it harder for the developed countries to maintain high levels of employment. Increasing inequality in the distribution of income in the developed countries compounds the effects of low output growth on the standards of living of ordinary people. Increased influence by corporate money in the political process makes it difficult to correct adverse tendencies in economic development.

While these developments have generated hard times in the rich countries over the past decade, growth rates have remained reasonably strong in the developing countries – those low-income countries that have their feet on the escalator of modern economic growth. Or at least remained reasonably strong until 2014 or 2015, when most large developing countries, but not India, experienced bumps in the development road. People in other low-income countries – the bottom billion in what I call the underdeveloped countries – face less encouraging prospects, although some are doing better in the 21st than in the last quarter of the 20th century. For as long as a large part of the bottom billion remain left behind by modern economic development, there is a risk that humanity as a whole will remain tangled in a new version of the Malthusian trap.

In the Holmes Lecture, I thought it possible that the combination of contemporary tendencies in economic development may make the maturation of economic growth – the achievement of developed-country living standards for most of the world's people – possible in the current century. While the contemporary challenges to the living standards of ordinary people in developed countries were real and large, this may be simply a small part of a general experience of transition to a world of abundance for

the necessities of life and of reduced inequality.

In three thoughtful responses in *Policy Quarterly*, Gary Hawke, Grant Scobie and Geoff Bertram have added insights and raised important questions.

Gary Hawke (Hawke, 2015) adds value to my own analysis in several ways. The contrast of my own conclusions about the association of low population growth with changes in income levels with those of Kuznets is worth noting. Hawke is right to point out that we have been surprised in the past by sharp changes in fertility and may be surprised again. The powerful association over the past half century between income levels and all that goes with them, and fertility nevertheless provides the base case from which change would have to occur. Hawke brings a wider literature into support for my generally positive view of humanity's prospects of breaking the old nexus between economic growth and greenhouse gas emissions.

Hawke queries my emphasis on the challenge from the influence of corporate money to good governance in the public interest in the developed country democracies. He thinks that pressure from other special interests is similarly important. While not wishing to downgrade the importance of distortions from other interests, and while acknowledging that New Zealand may be different, it seems to me that the recent experience of the larger English-speaking countries is clearly that corporate investment in the democratic

Ross Garnaut is Professorial Research Fellow in Economics at the University of Melbourne. He was the 2015 Sir Frank Holmes Visiting Fellow in Policy Studies at Victoria University of Wellington. He has published widely on a diverse range of economic issues, including development economics, macroeconomics, trade policy, climate change policy, the Australian economy and China's economic development.

process represents a fundamental barrier to dealing effectively with major public policy challenges.

Gary Hawke and Grant Scobie (Scobie, 2015) both draw attention to the risks to maturation of global economic development from weakness in economic growth in China. Hawke is right to point out that China is so important to the global savings story that changes in China could alter prospects for the world.

It is not possible to bring everything one has written on a subject into every new paper, so I am glad that Hawke has drawn attention to my discussion of the risks to Chinese growth in other published work, including *Dog Days: Australia after the boom* (Garnaut, 2013). (For a more recent treatment, see Garnaut 2015a.) Scobie cites Pritchett and Summers (2014) as authority that the high rates of growth in China over the past three and a half decades are likely if not certain to give way to decisively lower growth. Pritchett and Summers point to a step down by more than half in rates of growth in many countries. They think that China's political system makes it especially vulnerable. Yes, there is uncertainty, and other countries should make sure that policy settings are robust against the possibility of China making heavy weather of the transition to a new model of economic growth (Garnaut, Cai and Song, 2013; Garnaut, 2015a). But there are also powerful forces pushing to sustain Chinese growth at rates significantly above the global average until it has entered the income range of the developed countries in the 2020s.

Scobie says that the Holmes Lecture fails to acknowledge another serious challenge to the maturation of global development: the feeding of the world's growing (for the time being) population. How do we provide food for all people at the standards of consumption of the advanced countries? I didn't neglect the point altogether: the food challenge is one reason to be concerned about the effects on global fertility rates of any failure of development amongst the bottom billion. My own deep involvement in international agricultural research as chair of the boards of the Australian Centre for International Agricultural

Research and then the International Food Policy Research Institute makes me aware of both the history of achievement in raising productivity in agriculture since the 1960s, and the inadequacy of current public investment in international agricultural research. But I doubt that food supply will be a binding constraint on the maturation of global development unless a failure of development in a substantial part of humanity prolongs high global population growth.

Technological change may ease what would otherwise be a binding constraint on the maturation of global development in new and different ways. Necessity is the mother of invention. Rising food prices from large increases in demand in rapidly growing developing countries in the absence of accelerated productivity growth in agriculture may ease the path to expansion of non-agricultural food supply. Unpalatable as it may be for generations of *homo sapiens* accustomed to food from agriculture, and challenging though it is for food-exporting countries like New Zealand and Australia, the biological sciences are taking us towards synthetic substitutes for traditional food that at least meet nutritional requirements. My own personal preference for lamb and milk from the farm, and the preferences of others of my generation, whatever the taste of alternatives, are unlikely to be a decisive barrier to global development.

Geoff Bertram (Bertram, 2015) challenges my preference for Keynes over Picketty in assessment of likely trends in the relationship between savings, investment and the distribution of income and wealth. Here I focus on three points in Bertram's critique: the distinction between inequality in the world as a whole and among the seventh of humanity living in the developed countries; the prospects for the rate of return on capital returning to the high historical levels presumed by Picketty; and the importance of positional goods in assessment of economic welfare.

The Holmes Lecture is about global inequality and not the distribution of incomes in the developed countries alone. While inequality has expanded markedly in the developed countries over recent years, it has not increased in the world

as a whole. Figure 7 and the associated reference to changes in the global Gini coefficient make the point that Bertram overlooks. I do not say in the Holmes Lecture or elsewhere that inequality in developed countries is inconsequential. It is important to many people and it may determine the fate of government by, as well as for, the people – the democratic political systems that have made their homes in the developed countries. That matters a great deal to the future of humanity. It may or may not matter to the prospect for the maturation of global development.

On the second point, Bertram sees future savings and investment adjusting until a balance is found which leaves rates of return on investment at high levels. He gives us no better reason to expect such an outcome than that this has been the case in much earlier economic history; one could say most except for the globally golden and silver years since the Second World War.

Bertram recognises that abundant capital kills returns. Like the neo-classical growth theorists, he expects the rate of accumulation of savings to fall in response to low returns on investment, to bring savings in line with falling investment, and sees natural floors to investment rates.

Like Keynes, I see no reason for, and no sign of, low returns causing a diminution of the rate of savings. I see no reason to expect the combination of opportunities for investment at low interest rates, and depreciation, to grow more rapidly than savings from now on, and so raise the returns on low-risk investment above their currently negligible levels.

It is worth noting in response to Bertram's view that not only does the price of bonds rise with falls in the interest rate: the prices of other assets, including equities and real estate, also rise. As a result, falling interest rates have led to increases in most asset values in the 21st century so far, contributing a large part of the increases in inequality in the developed countries measured by Picketty over this period.

Bertram notes that rents for land and assets in fixed supply will rise with growth in population, and may do so

with growth in incomes. This is separate from the increases in capital incomes associated with reductions in interest rates. It is not obvious that this source of increase in asset values will remain important with the maturation of global development and stable or falling global population.

We should make sure that we include in the assets in fixed supply not only land, but all assets that are subject to such restriction in supply that they generate increasing amounts of economic rent. Monopolistic and regulatory rents and the value of the assets which generate them seem to be increasingly important in developed countries today. The cause may be the increased influence of corporate interests over the policy-making process.

Bertram is right to pull me up for dismissing too quickly inequality in the distribution of positional goods. Knowledge, literature, music, theatre and sport are fairly freely available for most people through electronic mechanisms, and standard social security arrangements make a reasonable

minimum of most essential goods and services available to most people in the developed countries. The increased abundance of material comforts with the maturation of economic development would extend these advantages to most of humanity. But there is a danger that increasing corporate influence over the policy process will lead to access to more and more services being restricted behind private paywalls of various kinds. To combat such tendencies, we have to rely on the integrity of established democratic processes in the developed countries, and on the extension of government for the people to parts of the world from which it is currently excluded.

I am happy to agree with Hawke, Scobie and Bertram that there is uncertainty about many of the variables that affect the future trajectory of global inequality. The Holmes Lecture asks the reader to consider an alternative outcome to that proposed by Picketty and thought likely by Bertram: that the maturation of global development will diminish rather than expand inequality. While I think the

basic tendencies may turn out to resemble Keynes' more closely than Picketty's vision of the future, I am concerned enough about the remaining inequality to concur with Picketty's support for international taxes on capital, and with his assertion of the crucial role of democratic systems in effecting the policy change that is necessary to maintain equity in distribution in individual countries and in the world as a whole.

Finally, I take the opportunity to correct two errors in presentation in the original *Policy Quarterly* article which may have discouraged some readers. On page 10, the original text said that high natal masculinity was the source of a decline in the zero population growth fertility rate. It was meant to say that high natal masculinity was *increasing* the fertility rate that was consistent in the long term with zero population growth. And the heading of Figure 6 should read 'Secular trend in relative price of capital goods'.

References

- Bertram, G. (2015) "Garnaut versus Picketty: inequality in the coming century", *Policy Quarterly*, 11 (2), pp.23-5
- Garnaut, R. (2013) *Dog Days: Australia after the boom*, Melbourne: Black Inc
- Garnaut, R. (2015a) "The new model of growth and the global resources economy", in L. Song, R. Garnaut, F. Cai and L. Johnston (eds), *China's Domestic Transformation in a Global Context*, Canberra: Australian National University E-Press and Social Sciences Academic Press (China)
- Garnaut, R. (2015b) "Global development in the twenty-first century", *Policy Quarterly*, 11, (2), pp.3-14
- Garnaut, R., F. Cai and L. Song (eds) (2013) *China: a new model for growth and development*, Canberra: Australian National University E-Press and Social Sciences Academic Press (China)
- Hawke, G. (2015) "Economic policy, external and internal, and public policy", *Policy Quarterly*, 11 (2), pp.15-19
- Pritchett, L. and L. Summers (2014) *Asiaphoria Meets Regression to the Mean*, NBER working paper W20573, Cambridge, Mass: National Bureau of Economic Research
- Scobie, G.M. (2015) "Commentary on "Global development in the twenty-first century", *Policy Quarterly*, 11 (2), pp.20-2

The Institute of Governance and Policy Studies, Australia and New Zealand School of Government and the State Services Commission present



Can we Nudge citizens Towards Better Civic Behaviour?

Speakers: Liz Richardson,
Director Undergraduate Studies, University of Manchester and **Scott Miller,** *Chief Executive Volunteering NZ*

Friday 4th December - 12:30 - 1:45pm
 Intercontinental Hotel, Wellington

RSVPs required. See more at
<http://igps.victoria.ac.nz/events>



Institute for Governance and Policy Studies
 A research institute of the School of Government



STATE SERVICES COMMISSION
 Te Komihana o Ngā Tari Kawanatanga





BUILD AUCKLAND'S POLICY CAPABILITY

In 2016 Victoria University's School of Government is offering Public Policy and Public Management Master's level courses for working professionals in Auckland.

Courses will be taught in block modular mode out of our Auckland premises in Kitchener Street, and include:

- Policy Analysis and Advising
- Policy Methods and Practice
- Leading Change in Public and Community Organisations
- Managing for Results
- Local Government.

Find out more at www.victoria.ac.nz/sog

Study at one of the
world's leading
business schools

Victoria Business
School holds the triple
crown of international
accreditations.



APPLY NOW TO ACCELERATE YOUR BUSINESS FUTURE

Capital thinking. Globally minded.