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Editorial Note

The 1992 Local Agenda 21 adopted at the Rio de Janeiro conference - the United Nations Conference on Environment and Development - required governments to adopt and implement National Strategies for Sustainable Development. These were meant to offer guidance for the subsequent re-design of their economic and social governance systems based on a set of four key governance principles for sustainability. The new governance systems were expected to facilitate the coordination of policies and strategies across the three pillars of sustainability – social, environmental and economic, as well as the coordination of such policies across governmental levels. Two other key governance principles require the incorporation of intergenerational perspectives and interests into policy-making, and the involvement of citizens and wide range of stakeholders into governance processes, especially decision-making and implementation.

The question that this special issue of *Policy Quarterly* raises is – to what extent do we see evidence of the incorporation of such principles in the governance of key economic sectors and natural resources? Four contributions to this issue provide insights by exploring successes and failures, threats and opportunities in two policy domains: tourism development and the management of freshwater resources. Two contributions are from Europe, and two from New Zealand; they explore key intercontinental differences and similarities.

De Boer and colleagues explore the implementation challenges associated with sustainable freshwater management in the Netherlands. In the Dutch context this requires the coordination of interventions in four relevant policy domains: recreation, agriculture, nature and flood management. Their case study shows how an inclusive governance approach, with wide public and stakeholder participation, improves sustainability outcomes. In addition, an adaptive approach to implementation is crucial: they reveal that governance for sustainability implies finding the right balance between central government leadership and local flexibility to adapt to the complexities and uncertainties emerging in various local contexts. But adaptive implementation requires flexible institutions and 'open-ended' regulatory structures that enable revisions in the light of learning and new facts. Moreover, it requires an allowance for policy process phases to interact, rather than conceiving them as linear.

The importance of more integration of policy processes, particularly design and implementation, is also discussed in the New Zealand context of water management by Fenemor and colleagues. An interactive approach to policymaking is recommended by the surveyed freshwater stakeholders, as one of the 14 attributes of good governance distilled in their paper. The authors discuss how 'techno-corporatist legal formalism' dominating New Zealand's freshwater governance for decades has resulted in water permits and contracts that fix inefficient and inequitable water allocation systems for the long term. The surveyed stakeholders also associate good governance with a holistic approach to planning that integrates a wide diversity of values in water management such as landscape, ecological, cultural, and amenity values. The recent formation of the Land and Water Forum suggests a political willingness to experiment with new governance arrangements based on the participatory principle. There are also signs of regulatory innovations and improved coordination across governmental levels.

Dishearteningly such signs are not yet to be seen in the governance of tourism in New Zealand. Lovelock examines the institutional and policy frameworks relevant for tourism development at regional and local levels. He finds little evidence of a genuine concern with sustainability issues

among policy-makers and the business community. Despite the rhetoric in the national and subnational strategies for tourism, policy legitimacy emerges as a major obstacle for incorporating sustainability in the governance of local tourism. Two destinations are more closely examined: Catlins, which is an emerging destination for which a preventive regulatory approach to sustainability should apply; and Queenstown, an established destination where a recovery approach is needed, as the unplanned intensive growth over the past decades has already generated negative social and environmental impacts. These case studies reveal that the 1991 Resource Management Act does not provide an adequate regulatory approach to tourism permitting. The legal and institutional frameworks relevant for sustainable development are weak, which lies at the heart of the legitimacy problem for a sustainability-based tourism governance in New Zealand.

The Member States of the European Union (EU) seem to have the opposite problem: too many policy and legislative tools and many levels of governance affecting tourism development locally. However, from this thick policy soup something meaningful still seems to emerge, as Anastasiadou explains. For decades, tourism was excluded from the economic sectors for which EU Treaties gave European political authorities competencies to adopt policies, and enforce them on Member States. In this context, the EU tried to steer tourism towards sustainability through soft instruments, such as guidelines and recommendations, and by means of generic tools such as the Lisbon Strategy, the Cohesion Policy and the Sustainable Development Strategy. Many financial schemes also target sustainability goals at project level. Although the impact of these multiple interacting top-down tools is yet to be rigorously evaluated, signs are emerging that the EU approach warmed hearts and opened minds among both local public authorities and the business community, in established and emerging tourism destinations.

Such behavioural change, underpinned by significant policy and governance innovations, is what numerous participants to the recent symposium on biophysical limits in Wellington advocate ('Biophysical Limits and their Policy Implications', 8-9 June 2011). Jonathan Boston reviews the key themes explored during this symposium. He explains that the earth's resources are typically categorized as non-renewable, conditionally renewable and inexhaustible. The sustainability debate is connected to the normative debate on which – and whether – the first two types of resources are substitutable. Here lies a key difference between 'weak' and 'strong sustainability'. Such conceptualizations are important as they underpin policies and institutions that should move societies towards a greener type of development, respecting the physical boundaries of planet Earth – its resource, sink and thermodynamic boundaries. Boston reflects further on the policy design and political challenges ahead to enable a safer, sustainable development.

Aside from the five articles on sustainability issues, this issue of *Policy Quarterly* contains four other contributions. These canvass a diverse range of topics: David Penman, Andrew Pearce and Missy Morton reflect on one of the key challenges facing New Zealand science, namely how to embrace a more collaborative mode of inter-institutional working; related to this, Jo Cribb, Robbie Lane, Heather Penny, Kylie van Delden and Kathie Irwin explore the lessons for cross agency, cross-sector working arising out of a recent governmental project designed to improve outcomes for vulnerable children; Mike Reid reviews recent and impending changes in English local government and their lessons for New Zealand; Paul Barber explores how New Zealand might reduce its current high level of income inequality; and Paul Callister and Judith Galtry critically assess an article by Maureen Baker on paid parental leave which appeared in the August issue of this journal. Hopefully, there will be something here to excite the interest to all readers.

Valentina Dinica
Guest Editor

Cheryl de Boer, Hans Bressers
and Stefan Kuks

Coordination of Policies and Governance: Regime Requirements in Dutch Freshwater Management

Introduction

Sustainable development presents public authorities with many challenges. Increasing steering capacity, legitimising current actions to address intergenerational benefits, and developing capacity to incorporate learning while dealing with complexities and uncertainties are needed to address upcoming dilemmas (Bressers and Rosenbaum, 2003).

Consequently, the coordination of policies across policy domains and governance scales is essential.

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Hans Bressers is Professor of Policy Studies and Environmental Policy at the University of Twente and founder of CSTM. He has published extensively on policy mapping, instruments, implementation, evaluation and policy networks, mostly applied to environmental policies and water management. He has been a researcher and project leader of numerous externally-funded projects, including several projects funded by the EU research framework.

Stefan Kuks is Professor of Innovation and Water Policy Implementation at the University of Twente (School of Management and Governance). He has been involved in various national and international water policy studies focusing on institutional aspects of water management. Besides his part-time professorship, he is full-time chairman of the Regional Public Water Authority 'Regge en Dinkel' in the east of the Netherlands, as well as an elected member in the executive committee of the Association of Water Management Authorities in The Hague.

Recent developments in freshwater governance approaches in the Netherlands can provide valuable insights for policy implementers. The coordination of a wide range of relevant policy domains, such as recreation, agriculture, nature and flood management, is being used to support sustainable water governance. Multi-policy implementation in complex and dynamic social interaction processes is essential in analysing governance for sustainable development.

Dealing with complexities and uncertainties requires adaptive skills and management approaches which provide implementers with sufficient flexibility. It also requires sectoral, domain-specific governance structures to provide a minimum level of direction and vision. While coordination and strategic direction are important, excessive control and top-down policy implementation can limit opportunities for context-specific solutions (De Boer and Bressers, 2011).

The challenge is in finding the right balance between the extent and intensity of central leadership, vision and direction and local flexibility for adaptation to uncertainties, complexities

and contextual conditions. The latter refers also to challenges of governing flexibly across policy domains (or horizontal coordination). This article describes the governance approach of contextual water management (Kuks, 2005), developed as a response to sustainability challenges, and illustrates its use in a case of river restoration in the Netherlands. This case offers an excellent example for understanding policy domain coordination challenges and the associated implementation processes.

The Netherlands is the most densely populated European country, with an average of 450 people per square kilometre. With approximately one quarter of the land area below sea level

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and three major rivers running through it, flooding issues have long been an important matter for Dutch society. Alongside the three administrative levels of government (national, provincial and municipal), independent regional water authorities (waterboards) play a key role in water management.

The subject of this article is the implementation process associated with planned multifunctionality, increasing space for river beds and the connection of natural areas. These goals are at the heart of efforts in Dutch rural areas to meet habitat and water quality and quantity goals set at the national and European levels. We examine how they can be achieved through complex multifunctional projects within the context of high population density and intense land use. The projects require giving a large amount of space back to natural processes while meeting recreational, economic development and water management needs.

The 52 kilometre-long Regge Valley belongs to the Dutch region of Twente.

Most inhabitants are concentrated in a row of cities, which gives the region a quite 'rural' atmosphere (by Dutch standards). The area used for traditional (intensive) farming in the Regge Valley is decreasing. We classify the Regge Valley as an increasingly interwoven combination of agriculture, recreation and tourism, towns, and both wet and dry nature (EU Natura 2000 areas).

Large investments are being made in the region to improve recreation opportunities, wetlands, river and stream dynamics and health. Combining these ambitions with economic and social development can create various physical planning issues. These efforts fall into key policy domains which require

coordination for sustainable development. One important aspect of governance for sustainable development is that it requires that new dimensions of social objectives be embraced (Meadowcroft, 2007). This necessitates internal and external policy integration efforts from those working within governance structures still heavily based on traditional sectoral segregations. This is a major component of the efforts being taken by local water managers in the Regge Valley.

The strategies discussed in this paper fall under a general framework referred to as contextual water management (CWM). CWM assumes a complex and dynamic implementation environment in which adaptive management strategies are necessary. It provides a conceptual understanding of the interaction of actors in implementation processes and suggests the appropriate sorts of governance structures that can support this. The CWM strategies practiced by Dutch local water managers address some issues typically challenging their work: stakeholder participation,

policy fragmentation and inflexibility, uncertainty and risk, multifunctional land use and improvements in sustainable development.

What follows is a description of the river restoration as a sustainable development-oriented project. Insights are provided regarding the experiences involved in applying CWM in practice. The article concludes with a summary of the basic principles of CWM.

Implementation in complex and dynamic situations

Being a delta country, the Netherlands has understandable concerns regarding the expected increasing frequency of high- and low-water settings as a result of climate change. This has warranted a drastic change of approach to water, land and nature management towards using nature's resilience to provide for both human and natural environmental needs. Recreation, agriculture, nature and flood management are integrated in projects like the Regge River restoration, even though they are based on different sectoral policies. The resulting projects are complex and need extended periods of time to manage opportunities and threats. These aspects are unpredictable from the onset and thus are also dynamic.

The projects are also typically multi-level by nature. Multi-level governance is based on the acknowledgement that all levels and scales influence a certain situation simultaneously (not necessarily to the same extent) and that all levels influence each other (Bressers and Rosenbaum, 2003). Though the projects studied are local by nature, abundant relations with upper levels (including the EU and world climate change arrangements) and lower levels (kitchen table conversations with individual citizens) are centre stage.

Inevitably, projects of the size and ambition of the Regge River renaturalisation are 'complex', but moreover they are also dynamic. The period over which they are implemented is sufficiently long to allow ample room to engage with other actors in the given context. It is also long enough for the actors to try to continuously modify the context of the interaction processes. As

such, the analysis of implementation needs to recognise that not only processes, but also contexts, evolve, both endogenously and exogenously. Attention to the concept of multi-policy implementation in complex and dynamic social interaction processes is thus essential for analysing river restoration projects as examples of governance for sustainable development.

Within this complex and dynamic context, the related unpredictability and uncertainty of the environment makes linear project management an unfit strategy. Sectoral governance structures often demand absolute priority for their own (though perhaps overlapping) goals or procedures. This encourages implementers to defect from collaboration with other policies' implementers and is thus a serious stumbling block for adaptive and collaborative implementation. Certain qualities are required to be able to succeed in integrating different uses, actors' consent, sectoral policy schemes, funding rules, time frames and scale issues. The members of the project teams need to be able to actively seek coherent projects outside their traditional environments (Williams, 2002), and see, use and create 'windows of opportunity'.

River restoration within the broader external governance context

Climate change is having, and will continue to have, the effect of delivering more rainfall at irregular periods, causing higher and more frequent peak water levels and droughts (IPCC, 2007). Two thirds of the Dutch population live in flood-prone areas: the land below sea level requires permanent protection, though further large inland areas also need protection from temporary inundation by sea and rivers. During the 1990s the Netherlands experienced three serious river floods, causing evacuations of people and extensive material damage. More space around rivers is needed not only for safety reasons (to allow rivers to rise and fall without risk to human life or harm to economic interests), but also for the ecological development of the river. River renaturalisation is seen as the best way to achieve more water buffering capacity given the future climate expectations. It is also seen as a way to answer the call of the

EU Water Framework Directive to achieve high ecological water quality standards.

As Leonardo da Vinci said: 'Water is the driving force of all nature' (Juuti and Katko, 2005). Given the increasingly acknowledged link between water and nature, the government agencies of the densely populated and ecologically fragmented Netherlands have started to assign significant importance to linking areas of ecological importance in order to create the highest possible value of biodiversity. Nature development is generally promoted in the context of completing the National Ecological

Network, and provided inspiration to the EU Natura 2000 initiative. From 1990 until recently, governments of all political colours have worked consistently to create stable and functional ecological linkages for that purpose. This level of political stability has been critical in garnering support from different sectors of society. It generated high levels of trust among the many relevant sectors, which was evident in their significant investments of time and resources. Recent revisions to government support of these projects, however, has jeopardised this relationship.

Political commitment and governmental leadership are essential for overcoming the many obstacles involved in spatial planning. In spite of the long-lasting and substantial governmental support for nature development policies, they are very hard to implement in such a densely populated country. Increasingly, water interests compete with other interests for the limited remaining space in the Netherlands. A new objective of the Dutch water policy is to make water a determining factor in spatial planning (Wiering and Immink, 2006).

This renders decision making difficult, especially at the level of waterboards and municipalities. Waterboards have an interest in considering water as a guiding principle in physical planning and leaving areas undeveloped if a flooding risk exists. Municipalities, however, have the final say in physical planning and have a stronger interest in economic and urban expansion (Woltjer and Neils, 2007).

Restoration projects are also affected by local planning processes. Municipal governments are required to submit zoning plans, which must incorporate national and provincial goals. For

Two thirds of the Dutch population live in flood-prone areas: the land below sea level requires permanent protection, though further large inland areas also need protection from temporary inundation by sea and rivers.

example, the legislation for the protection of specific species and national landscapes must be included and developed using an integrated approach. A special characteristic of Dutch local zoning plans is that they are detailed to the plot level and directly legally binding. All land uses other than the ones specified are restricted.

In 2001 the national government and the national associations representing the waterboards, provinces and municipalities concluded a first agreement on the implementation of such policies and the role of each organisation therein. In 2003 they concluded the National Administrative Agreement on Water (Nationaal Bestuursakkoord Water). This elaborated upon the responsibilities and resources for implementation regarding the water buffering aspect of water management.

River restoration in the Netherlands is done as much as possible in conjunction with any related land use and policy opportunities. There is as such quite a long list of important groups and documents that make up the governance structure associated with this activity.

The creation of new corridors of nature claims additional land. Lands are purchased by these public partners in a coordinated fashion to meet goals such as ecological network creation and the formation of water buffering space. The deliberate coordination of policies and strategies is a key capacity that has enabled these groups to work together across governmental levels.

The Regge restoration project

The Waterboard of Regge and Dinkel is responsible for the watersheds of the Regge River as well as the nearby Dinkel River. It is viewed nationally as being innovative and progressive in relation to the new demands of water and nature restoration

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tasks. The waterboard considers the Regge River basin to be suitable for additional water retention. This section outlines the current river restoration project to meet their flood risk management goals in this area. They are cooperating with various nature organisations, levels of government and other private and public stakeholders towards a coherent and strategic approach.

In 1998 the waterboard, in collaboration with the Dienst Landelijk Gebied (DLG, the national agency responsible for rural areas) and the province of Overijssel, initiated and issued the Regge Vision. This integrated policy agreement set the basis for the transformation of the heavily canalised Regge River back into a natural river. The various arguments put in favour of such restoration efforts revealed support for the multifunctionality of the area. The Regge Vision set an agenda for further consultation and concrete decision making regarding integrated management of water quantity and quality, nature, agriculture, drinking water supply, recreation, landscape and estates. All local and regional public authorities

(provinces, municipalities, waterboards, agencies) and non-governmental actors would be involved. While it provides a clear vision, its implementation strategy has been left open to accommodate high participation.

Participation is one of the keys to sustainable development and good governance (Steurer, 2009). This focus on public participation is consistent with that of traditional Dutch governance processes, which are heavily based on consensus decision making. The reclamation and settling of lands below sea level (poldering) forced many Dutch groups in the past to work together to maintain their lands against flooding. Consultation is used strategically by

the waterboard in order to minimise objections and obstacles in attaining their own objectives. It is necessary to engage in this type of communication at the outset of the project, before concrete plans are developed. This strategy increases the ability to include various interests in the project through clever and flexible project design. It also improves trust and cooperation among the various stakeholders.

The Regge restoration project is transforming the previously channelised Regge into a dynamic and resilient river system. Given the large scale of the project, complications are expected related to land use demands across the various sectors of society. It is quite common in Dutch projects involving land use changes for private citizens or public organisations to raise legal objections. These can delay projects significantly and add to their costs, so it is wise to avoid this where possible.

In a successful avoidance strategy, experienced project managers chose to invest minimal time on the development of an all-encompassing and detailed plan.

Instead, they adopted an opportunistic approach and did not begin implementation in a methodical manner. They often watched and waited for project options to develop independently through the initiatives of various stakeholders. They then collaborated with the initiators to include as many aspects of their own vision as possible. For example, in the early stages of the process the waterboard became aware of a farmer along the Regge who was interested in ceasing his farming business. By paying attention to other wishes of people in the area this ultimately resulted in a cascade of land exchanges. This not only enabled the waterboard to get hold of a stretch of the river banks for renaturalisation, but also created improvements for two other farmers and new opportunities for one trade and one recreation business.

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Thus, project managers left ample room in the Regge Vision for these types of participatory win-win situations to emerge and determine where short-term project efforts should be focused. Gradually, this developed into an implementation strategy referred to as 'contextual water management' (Kuks, 2005).

Contextual water management

Contextual water management is rooted in the observation that until the 1980s, water management was mostly segregated into sectors. Later on, the approach expanded to integrate various functions and measures in the water system. This was referred to as integrated water management (IWM), which is, however, only a form of internal integration that still preserves much of the traditional focus of water managers.

In the 80s and 90s a development took place in many European countries towards having a more open view on the relation of the water body to other aspects of natural and human uses. Water's role in the support of natural ecosystems in the river basin area and its role for recreation and tourism began to be better valued (Bressers and Kuks, 2004). This integrated water resource management

(IWRM) approach is a form of external integration, which now includes policy domains previously unrelated to water governance.

Nevertheless, this initiative still does not address key sustainability issues. It is at best an externally integrated water management optimisation process. The water manager simply considers additional issues before deciding what the best 'policy and management response' would be. In order to overcome the IWRM limitations, the water managers involved in the Regge restoration projects have started to develop and work with a new logic. Integration for sustainable governance of freshwater resources implies the incorporation of water goals into the various policies that affect or are affected by the water system of all partners involved.

Water is part of the environment as well as the social context. When water managers do not take the entire context into account, water goals become unfeasible because of opposition from the excluded actors and sectors. Stakeholders have their own socio-economic, aesthetic, cultural and ethical values in relation to how water should be managed. Water goals should be developed through interaction with partners in the environment and society at large, not just by the organisation responsible for managing water (Kuks, 2005).

Water managers should continuously seek an adequate balance between addressing the values and interests of various partners and those they see fit for supporting the water system. A permanent cooperative interaction, aiming at synergies, supports the incorporation of intergenerational interests into policy making. As a consequence, water governance goals cannot be uniformly implemented in different contexts. Within practical limits, there should be space for variation. Policy design that is more flexible and allows for contextual adaptations needs to be supported by policy outcome expectations that accommodate variable success measures. Just as there is not one sustainable water governance situation that can be striven for, an 'optimal' water system can never be attained. This method is, however,

considered to be the only feasible way to realise the maximum number of goals given the constraints of such a complex context (Kuks, 2005).

This turns water management from a modelling, decision-making and management process into a multi-actor interactive governance process. This is essentially a social interaction process crucially dependent on contextual factors.

Contextual water management supports a wide range of stakeholder involvement in governance processes. Decision-making processes are central to the CWM approach. CWM acknowledges the necessary dependency on others and clarifies the benefits of seeking out joint projects. The strength of CWM is that it shows how goals can be realised across

Adaptive implementation ... becomes further challenging when many inflexibly governed sectors need to cooperate in local implementation.

sectors and how intergenerational benefits can be achieved. But for CWM to work, a framework or vision is needed that gives perspective to the core interests of the project, to keep it moving forward. The central inspirational guiding vision is best complemented with sufficient flexibility in the relevant integrated governance arrangement (Boer and Bressers, 2010). This provides the best conditions for making optimal use of scarce space and funds in the implementation process.

Adaptive implementation is very difficult under inflexible governance structures. It becomes further challenging when many inflexibly governed sectors need to cooperate in local implementation.

The following four points highlight a number of elements of governance that contextual water management understands to be at the heart of these implementation processes. This context sets the stage for and illuminates the necessity of an adaptive and dynamic approach to river restoration projects.

1. Processes: interacting process phases and manageable scales of operation

In the classical project-planning and implementation perspective (which is far from abolished in practice and theory) there is a sequence of phases through which each project goes: planning, design, realisation, maintenance. However, in a complex and dynamic context, all such phases no longer offer clarity and organisation, but in fact produce substantial risks. The transitions from one phase to another can be compared to a relay race. The 'baton' always has some chance of falling and this chance increases under stressful conditions. In reality, the complex and dynamic nature of water management projects provides no guarantee that the next runners are

eager to accept the baton or that they will accept it at all. Geldof (2004) warns about 'cold welds' that are inherently fragile and argues in favour of the blurring of boundaries between project phases. This is called 'interactive implementation' and can occur by involving actors who normally would enter the scene in the later phases.

The additional complexity that this produces must be channelled somewhere. We were able to observe quite clearly how this was handled in the Regge River renaturalization process. It involved not trying to implement the whole project everywhere and all at once, but breaking it down into a multiplicity of smaller (sometimes very small) sub-projects. These sub-projects can then be dealt with both in parallel and sequentially. In this way the actual work is captured in units with a manageable scale of space and time. The arenas, actors and resources may be kept reasonably simple per sub-project, even when inputs from various sides of the projects are included.

Structuring projects in a modular way is recommended as an approach that turns time into an ally and supports learning while doing. It also enables the promotional use of intermediate areas as good examples of successful projects in order to convince landowners and citizens in other places that it is worthwhile to participate and cooperate.

2. Interactions: dealing with motivations, cognitions and resources

In the implementation process a concerted effort is aimed at seeking alignment of the cognitions, motivations and resources of the actors involved with the goals of the projects, and vice versa. When a large power imbalance is not present between the participants, the interactions in the process are extremely important. They should be strongly considered when arranging a supportive setting of actors and their characteristics. It is important to combine clear playing ground limitations for each actor with the openness to include options for synergy, and the creativity to find or create such options.

Nearly all of the Regge restoration project agreements were voluntary in nature. One farmer's willingness to reduce the intensity of his/her operations is combined with the province's interest in developing an ecological pathway. Voluntary actions are considered ideal in order to reduce administrative overload, legal obstacles and costs. Actors trust each other to operate in ways that are beneficial towards one another when their interests naturally align.

This form of project development requires an open, participative and communicative approach. It is inclusive towards the social environment of other actors and it supports learning from each other. It is of crucial importance to have a good understanding about the characteristics of the other actors, and to monitor when and where productive settings of positive motivations, adequate cognitions and sufficient resources of actors can arise (Bressers, 2004). It is equally important to show not only openness, but also reliability and determination during the entire process (Bressers and Lulofs, 2010, pp.200-3).

3. Dynamic strategies: a balancing act between fixing options and keeping them open

The Regge restoration projects are not only complex by nature but also time consuming, regardless of how they are managed. In a democratic society in which funds and space are scarce it is beyond the capacity of any regional government to realise them overnight. As pointed out earlier, this is not negative when time is made into an ally. The additional time required by this approach provides a significant benefit in terms of the direct learning process of the actors involved. This does not hold only for the learning process of the actors. Aspects of the specific case context, such as the actor relationships and the institutional arena, can be modified through the application of careful strategies. They are actually bound to change as an emergent result of the complexity of relevant actions in the absence of such deliberate strategies.

The sequential nature of the line-up of sub-projects also creates ample space for improving network relations and trust-building. Clever actors can acknowledge this option beforehand and invest proactively in building such relationships.

For the waterboard officials this inevitably implies accepting a degree of uncertainty (Evers, 2011). Entering into an open implementation trajectory without knowing beforehand what exactly will evolve from it would appear to open up the process to higher levels of uncertainty. Objectively, however, this strategy does not increase the level of uncertainty associated with the achievement of the implementation goals. Contextual water management merely brings the uncertainties to light at an earlier stage of the process. Many implementation processes are bound to fail, get stuck at some stage or only proceed after substantial alterations to the initial plans have been made. Culturally, it requires accepting the inevitability that unforeseen complications or complexity will arise. Dealing with uncertainties requires a continuous balancing act between stability and adaptive behaviour.

4. Actor receptivity: craftsmanship and team spirit for effective organisations

From the individual employee through to the organisational level, the execution of adaptive implementation strategies becomes more difficult in less flexible governance structures. In order to overcome this, efforts that are oriented towards external cooperation must be valued and supported within the organisation. Motivated staff can remain supportive of their organisation's mission while also being adaptive to external factors. They can meet organisational goals through involvement or participation in cooperative relationships and project work (cf. Scharpf, 1997). Such relationships become far more common when there is open communication among the participants. A strong focus on collaboration, communication and networking is important. Organisational development is highly dependent on a sufficient degree of flexibility in the regulations involved and the willingness of the organisation's leadership to facilitate and provide the staff with sufficient leeway and trust.

Support for the continuous learning processes of the staff is also very important. This involves stimulating the exchange of views and practical experiences among colleagues, both within the organisation and with those in other organisations. It basically serves to stimulate all staff members to become 'reflexive practitioners' (Schön, 1983). Contextual water management is not a predefined list of 'dos and don'ts'. To a large extent it is a matter of careful judgment in informed dilemmas. Mutual learning through sharing of each other's experiences creates sharper insights and a team spirit, with a jointly-held collection of possible actions and outcomes.

Conclusion

Increasing complexity in spatial planning is inevitable in working towards achieving a more sustainable built and natural environment. The associated difficulties in developing a coordinated set of policy and governance structures are not likely to be solved through the addition of high-level policies aimed at increasing cohesion. In the field of freshwater management, local

efforts informed by a guiding vision can address both specific interests and broader goals from various sectors. Working under the framework of contextual water management can thus support the advancement of a number of different

societal goals and overcome a number of challenges posed by an incoherent governance structure. Similarly, a more flexible governance structure can better support projects in a complex and dynamic context. Contextual water management

supports sustainable development and is valuable as a best-practice framework for project managers and teams operating in a complex and dynamic environment.

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THE COSTS OF CRIME

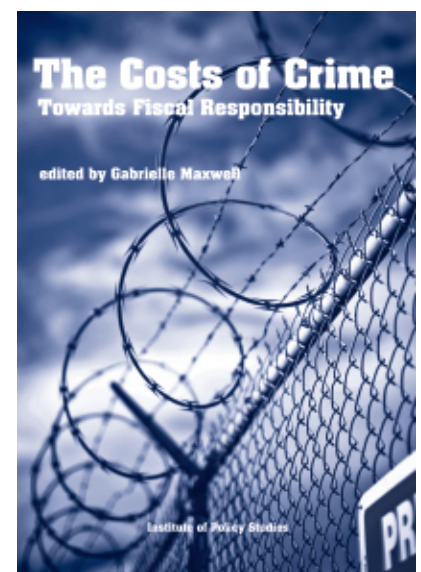
Edited by Gabrielle Maxwell

In 2012 the New Zealand government spent \$3.4 billion, or nearly \$800 per person, on responses to crime via the justice system. Research shows that much of this spending does little to reduce the changes of re-offending. Relatively little money is spent on victims, the rehabilitation of offenders or to support the families of offenders.

This book is based on papers presented at the Costs of Crime forum held by the Institute of Policy Studies in February 2011. It presents lessons from what is happening in Australia, Britain and the United States and focuses on how best to manage crime, respond to victims, and reduce offending in a cost-effective manner in a New Zealand context.

It is clear that strategies are needed that are based on better research and

a more informed approach to policy development. Such strategies must assist victims constructively while also reducing offending. Using public resources to lock as many people in our prisons as possible cannot be justified by the evidence and is fiscally unsustainable; nor does such an approach make society safer. To reduce the costs of crime we need to reinvest resources in effective strategies to build positive futures for those at risk and the communities needed to sustain them.



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Andrew Fenemor, Diarmuid Neilan,
Will Allen and Shona Russell

Improving Water Governance in New Zealand stakeholder views of catchment management processes and plans

Water governance refers to the institutions, legislation and decision-making processes applied to develop and manage water resources. As pressures on water resources increase there has been a realisation that technocratically-driven water management has not achieved desired

sustainability outcomes.

Attention must be focused not only on better scientific understanding of water and its values and uses, but also on what constitutes good water governance.

In this article we focus on the 'engine room' of water governance in New Zealand: water management planning by regional and unitary councils. We suggest six principles of good water governance relevant to New Zealand. These principles are evaluation criteria in our governance evaluation tool. The results of interviews

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Diarmuid Neilan studied environmental science in Ireland before completing his MSc in water management from the universities of Duisburg Essen (Germany) and Radboud (Holland). The stakeholder survey and governance attributes in this paper are derived from his thesis. Diarmuid has taken to heart the benefits of community participation in governance and is working to develop more resilient communities in his home city of Limerick, Ireland.

Will Allen is an independent organisational development consultant and action researcher based in Christchurch. His primary interest is in supporting people to collaborate and develop innovative solutions to sustainability issues. For the past ten years he has managed the Learning for Sustainability website – <http://learningforsustainability.net> – an online guide providing annotated links to several hundred key international information sources that support the different facets of multi-stakeholder learning processes.

Shona Russell is a social researcher at Landcare Research, Lincoln. Shona's research interests are how people engage in environmental issues, particularly relating to water. Her recent work examines how social media can be used to engage in conversations about problems of national significance, how policy and planning practices engage with challenges of water resource management, and how people in New Zealand are responding to climate change.

with 56 stakeholders are synthesised using this tool to identify 14 attributes which, alongside innovations in collaboration and co-governance, would help improve New Zealand water governance.

As is the case in many other parts of the world, New Zealand is seeing growing evidence of stresses on its freshwater resources as land uses intensify and demands for water, especially for irrigation, reach limits of availability. Research and resource investigations have been undertaken on technical issues (e.g. Harding et al. (eds), 2004) such as recharge rates for aquifers, flow requirements for maintaining instream values of water bodies, leaching of contaminants from various land uses, and how to improve efficiency of irrigation watering. Physical, chemical, biological and engineering knowledge are certainly essential for environmental decision making. However, a widening range of stakeholders is being affected by water decisions and many questions of a less technical nature are being raised: questions such as how are decisions being made about who gets what water; whose voices and what values are influencing decision making; why are plans and strategies poor at delivering good environmental outcomes; and how could cumulative effects, especially between land use and water, be better managed?

In the light of those questions, resource managers are recognising that our inability to adequately manage freshwater stressors is not so much a deficiency of science as a deficiency in governance. From a resource management perspective, we can characterise two components of sustainable water management: the science and social process dimensions (Fenemor et al., 2011), the science dimension incorporating biophysical and economic understanding, and the social process dimension a fundamental element of good governance.

To address the New Zealand water governance challenges, this article is structured in three sections. Firstly we describe these six principles of good water governance: participation, transparency and accountability,

integration, efficiency, adaptiveness and competence. Secondly, we briefly summarise the history and current institutional and legislative settings for water resource management. Using the governance principles as a framework, we thirdly outline findings from a research project which sought to address how good governance principles could be implemented in improved decision making around water. This project surveyed the opinions of 56 stakeholders involved in one of five water management planning processes about the governance attributes which they believed affected their level of satisfaction with (a) the water management plan, and (b)

solutions are for management agencies to impose rules, such as full private property rights or regulation (Ostrom, 1990). However, as seen in New Zealand, effective environmental governance inevitably comprises a mix of mechanisms, such as combinations of regulations, water markets and co-management agreements. Ostrom's main conclusion is that people are capable of managing common property resources such as water through intelligent design of diverse multi-scale institutions. We suggest that there are New Zealand examples that are beginning to bear this out, and further opportunities for this approach.

... resource managers are recognising that our inability to adequately manage freshwater stressors is not so much a deficiency of science as a deficiency in governance.

the planning process. The 14 good governance attributes synthesised from these stakeholder responses relate to planning processes, planning methods and plan outcomes.

Water governance principles

In the face of looming global water scarcity and conflict there is increased research interest in inclusive governance concepts (Gleick, 2003; Pearce, 2007; Pahl-Wostl et al., 2008) to the extent that the 2009 Nobel prize for economics was awarded to Elinor Ostrom for her work on polycentric (distributed) governance of common-pool resources (Ostrom, 2010). Her research is founded coincidentally on water management – water users who devised their own collective solutions to excessive groundwater withdrawals in Californian basins. It challenges the rational choice theory underpinning the 'tragedy of the commons' (Hardin, 1968) which suggests that users of common property resources are powerless in the face of self-interest and will exploit shared resources unsustainably. Conventional

Governance is therefore a fundamental contributor to the success or failure of water management initiatives, because decision making and implementation at the technical level are so dependent on the organisational, legal and policy context. Organisations involved in water and land management are sources of funding and technical and facilitation skills. The law dictates how resources are allocated and what limits apply to the use of water and land. Policy applies controls on water and land uses at more local and regional scales. But good governance is more than just having responsible institutions producing plans and strategies for water.

At its heart, the test of an effective system of water governance would seem to be whether it sets and delivers sustainable water management outcomes. However, there are other tests which should also apply, because water governance is also about the processes for achieving enduring and adaptive outcomes. Table 1 presents a synthesis of principles of good water governance

Table 1: Principles of good water governance

Principle	Description
Participatory	The different stakeholders involved need to be identified and included in policy and decision making. Inclusive processes build confidence in the resulting policies, and in the institutions. Two-way communication using engaging language creates trust and a sense of democracy.
Transparent and accountable	Information flows freely and steps taken in policy development are visible to all. This helps ensure legitimacy by being seen to be fair to all the parties. It implies the need to be seen to be ethical and equitable, for the roles and responsibilities of both institutions and stakeholders to be clear, and for the rule of law to apply.
Integrative	A holistic approach is taken to the primary influences within the water system, be they landscape components such as land use or river-groundwater connections, different community world views or diverse scientific interpretations. Integration recognises linkages within the management system; in turn, policies and action must be coherent and aligned – this requires political leadership and consistent approaches amongst institutions.
Efficient	Governance should not impede effective action. Transaction costs are minimised, including financial and time costs of decision making and compliance, administrative costs, complexity, and ease of understanding of how the system operates.
Adaptive	The system incorporates collaborative learning, is responsive to changing pressures and values, and anticipates and manages threats, opportunities and risks. It recognises that the system is complex and constantly in flux.
Competent	Decisions must be based on sound evidence. Competence requires development of capability at all levels: skills, leadership, experience, resources, knowledge, social learning, plans and systems to enable sustainable water management.

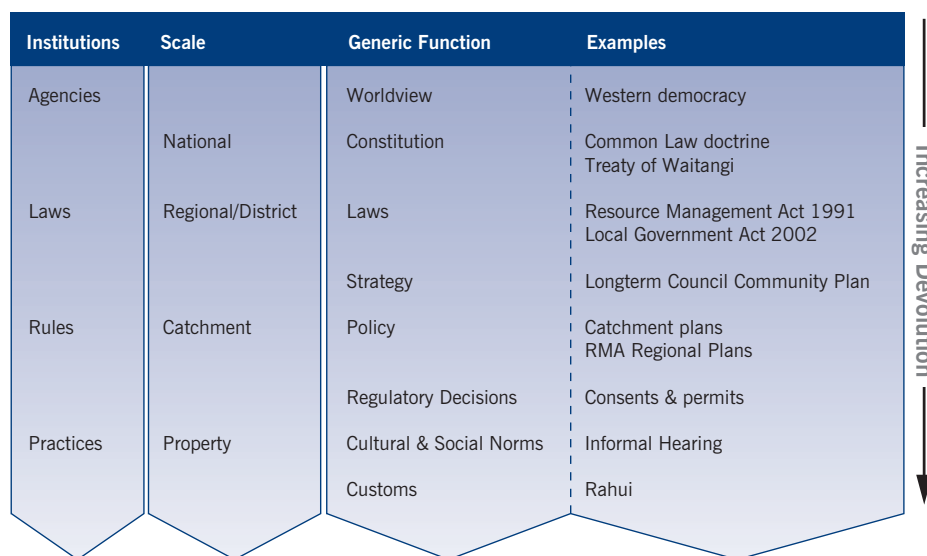
fact that water resources are just a part of a complex system, and in particular heavily influenced by land use and management practices. The principles recognise the need for efficiency and effectiveness, and that the system will need to adapt as social, economic and ecological systems continually co-evolve. Finally, they recognise that the management of such collaboratively-managed systems requires a number of skills and capacities. However, putting these principles into practice is not easy, and in a subsequent section of this paper we look more at how that can be done, looking specifically at the decision-making aspects of governance.

New Zealand water governance

In New Zealand, water governance is enacted through agencies (central government agencies and local authorities), laws (primarily the Resource Management Act 1991), rules (in regulations and in regional plans) and practices (e.g. administrative procedures), as shown conceptually in Figure 1. Collectively these operate across a range of scales, from the setting of national water management priorities through to landowner or business decisions about water (and land) use at the individual property level. Figure 1 also provides examples of the types of functional approaches which guide decision making across those scales.

Water management is undertaken through two key pieces of legislation: the Resource Management Act 1991 (RMA), which has a sustainable management focus, and the Local Government Act 2002 (LGA), which has a sustainable development focus. Those concepts overlap as both embody the idea of sustainability; consider intergenerational issues; involve participation of people and communities; and consider social, economic, environmental and cultural values (Richmond et al., in Harding et al. (eds), 2004). However, sustainable management can be seen as more of a balancing of values than sustainable development, which implies sustainability within a growth trajectory. The concepts of sustainable management and sustainable development are still

Figure 1: Conceptual view of water (and land) governance in New Zealand



from literature (Rogers and Hall, 2003; Lockwood et al., 2008; UNESCO, 2006) and of relevance to 21st-century water resource management in New Zealand. An agreed set of principles such as this can be used to evaluate, refine and improve the legislative, institutional and policy components of water governance.

Collectively these principles provide a high-level guide for good collective practice in how we manage our water resources. They point to the need to involve people in a transparent and accountable process. They require us to look at the bigger picture, and to strive to be integrative and mindful of the

evolving. Seen from the viewpoint of the four 'well-beings' needed to achieve sustainable development (LGA), sustainable management of water resources would logically involve balancing of not just environmental sustainability, but also social equity, economic efficiency and recognition of cultural values.

Agencies with freshwater management responsibilities

Although we have the full range of levels shown in Figure 1, New Zealand is unique in that more than in most other developed countries, water policy and decision making are devolved almost wholly to local authorities at regional level (Fenemor et al., 2006). This level of devolution has existed since catchment boards were formed in the 1940s to implement soil conservation and flood control measures, and their functions expanded under the 1967 Water and Soil Conservation Act to the allocation of water and management of water quality.

Replacing catchment boards and a plethora of other single purpose organisations in 1989, local authorities (regional councils, unitary authorities and territorial authorities) have varied responsibilities for sustainable management. The 16 regional/unitary councils have a much broader mandate under the RMA to develop region-wide policies, and specific plans for publicly-owned or -managed natural resources, and to issue consents for use of those resources, including water and discharge permits. Territorial authorities (district and city councils) develop policies and issue land use consents for development. Unitary authorities (Auckland, Gisborne, Marlborough, Nelson, Tasman) combine functions of regional and territorial authorities within one organisation.

At the next level up, central government can issue guiding national policy (e.g. national policy statements) and binding standards (e.g. national environmental standards), and also adjudicates through independent panels or the Environment Court when decisions at either level are contested. Successive central governments have devised programmes of work to improve water management, from the

National Agenda for Sustainable Water Management (1999) to the Sustainable Water Programme of Action (2003) and the New Start for Freshwater (2009). All cite the need to improve New Zealand's water allocation and water quality management.

The RMA also recognises the primary role accorded Māori under the Treaty of Waitangi. Māori have a special status as Treaty partners, beyond that of other stakeholders. Māori customary values and the guardianship concept of kaitiakitanga are to be recognised in decision making around water. Some iwi have been seeking co-governance with government of water bodies including the Whanganui and Waikato rivers. The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 established in 2011 the

democratically elected institutions have in dealing with environmental issues. It is moot whether an alternative institutional governance structure could do any better. However, we would suggest that globally this challenge has proven difficult, and the environment must be seen as a collective responsibility, rather than solely an agency responsibility.

Water management plans

Most of the regional councils and unitary authorities have developed statutory plans for the management of fresh water. Catchment and water management planning is not a new activity, but the RMA did provide a statutory basis for these as 'regional plans'. Water and soil management plans were previously prepared by many catchment boards

... the environment must be seen as a collective responsibility, rather than solely an agency responsibility.

first co-governance body, the joint iwi/Crown-governed Waikato River Authority. The government has committed \$210m funding over 30 years to restore this river, New Zealand's largest.

Performance of regional councils

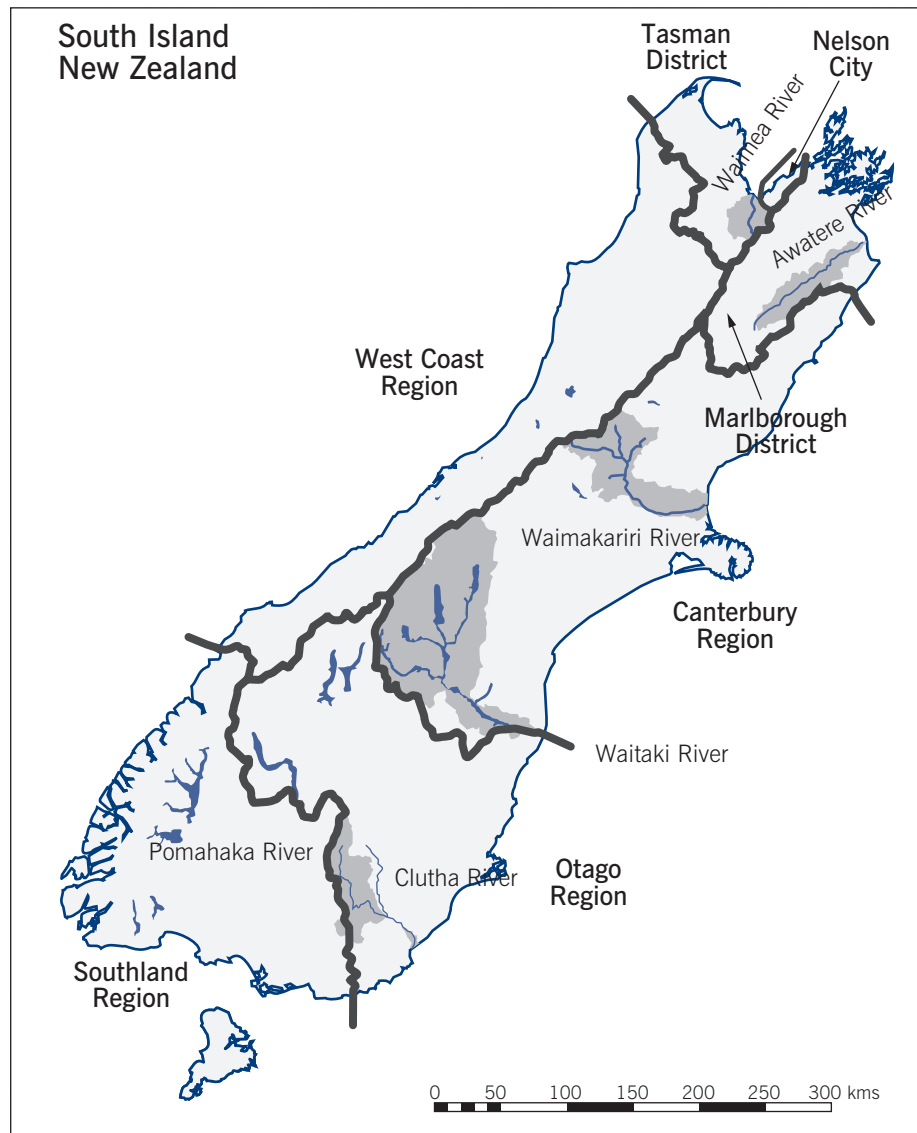
As agencies with major responsibilities for water resource management, regional councils' performance has come under the spotlight, perhaps best illustrated by the minister for the environment's action in March 2010 to replace the elected council at Environment Canterbury with non-elected commissioners McNeill (2008) points to regional councils having failed to prevent declines in environmental quality, the primary concern being declining water quality resulting from land use intensification. He identifies among regional councils' shortcomings their low public profile, potential political capture by sector interests, a variability in capability to deliver, lack of uniformity in managing common issues across regional boundaries, and the difficulties

as non-statutory planning instruments under the former 1967 Water and Soil Conservation Act. The scope of current freshwater management plans is commonly water allocation and water quality management, and their spatial scales range from catchment-scale to regional. The plans demonstrate a regional variance according to regional pressures on water use, as would be expected (Bright et al., 2008). These plans are in varying states of implementation, with some fully operative, some still in the hearing phase, and some being reviewed or rewritten. Arguably, the emphasis on integrated and catchment-based planning has been weakened by the broader RMA mandates and more regional focus of regional and unitary council planning than earlier catchment-based water and soil plans.

Criticisms of planning

New Zealand's water governance has been subject to criticism. For example, the legalistic statutory hearing processes imposed by the RMA and the time

Figure 2: Case study catchments



required to make plans operative have attracted criticism (e.g. Ericksen, 2004), as has the perception that both planning and consent decision making is dominated by ‘technocratist legal formalism’ (Jackson and Dixon, 2007) – a reliance on legal and statutory planning processes. New Zealand water management processes have also lacked strategic planning from central and local government (Painter and Memon, 2008), despite provision for strategic planning instruments in the RMA. Memon and Skelton (2007) characterise this as ‘institutional inertia’. Despite the recognition of Māori culture and traditions in the RMA, Māori also view the act as insufficient for fully recognising Māori values and interests in water (Durette et al., 2009).

However, there have been notable advances in water planning. The first

water allocation limits were set in catchment plans in the 1980s, for example for the Waimea Basin in Tasman, the Opihi in Canterbury and the Omaha in Auckland, with the waters of the Waimea Basin all deemed fully allocated by 1996. More recently, Horizons Regional Council (Manawatu–Wanganui) has pioneered the idea of a single consent for farms as a method for controlling sediment and nutrient contamination under their ‘One Plan’. Waikato Regional Council has implemented ‘cap and trade’ for controlling nutrient losses to Lake Taupo, and the Bay of Plenty Regional Council through its ‘Rule 11’ has set limits for nutrient losses to protect the Rotorua lakes from eutrophication.

Innovations for water governance and management in New Zealand

Against this governance background we now turn to looking at how the broad governance principles referred to earlier could improve water governance at the decision-making level. We present results of stakeholder interviews about current and potential New Zealand water governance, focused at the regional planning level. This research evaluated and compared stakeholder opinions about water management planning and implementation processes across five case-study catchments in the South Island. These were the Waimea catchment in Tasman; the Awatere catchment in Marlborough; the Waimakariri catchment in North Canterbury; the Waitaki catchment in South Canterbury; and the Pomahaka catchment in Otago (see Figure 2). A summary of the geography and catchment management issues for each catchment is provided in Table 2.

Stakeholders were broadly categorised into local government (policy makers and resource scientists from regional councils); environmental government (agencies with statutory involvement in water management, including the Department of Conservation and Fish & Game New Zealand); iwi (Māori engaged in resource management); water users (groups and individuals using water under resource consents, such as irrigators, hydroelectricity generators and their consultants); and in-stream stakeholders (members of interest groups such as Forest & Bird and recreational groups). Some sectors were less represented in catchments than others, and some stakeholders did not fit solely into one sector but were assigned to their primary category.

The research was conducted in 2008–2009 in two phases. Firstly, council staff involved in each catchment planning process responded via a questionnaire for a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis of the likely effectiveness of their water management planning process achieving the anticipated outcomes for the environment through the plans’ objectives, policies and rules. Examples of anticipated outcomes are achieving swimming water quality

Table 2: Description of the five catchments

Catchment region	Waimea, Tasman ¹	Awatere, Marlborough ²	Waimakariri, Canterbury ³	Waitaki, Canterbury ⁴	Pomahaka, Otago ⁵
Regional council	Tasman District Council	Marlborough District Council	Canterbury Regional Council (Environment Canterbury)	Canterbury Regional Council & Otago Regional Council	Otago Regional Council
Catchment area	722 sq km	1,600 sq km	3,654 sq km	7,340 sq km	2,060 sq km
Length of river	50km	110km	151km	110km	98km
Land use	Indigenous forests Horticulture Urban & lifestyle blocks	Viticulture Pine plantations Cropping	Dryland grazing Cropping Increased dairying	Dryland grazing Cropping Increased dairying	Intensification of sheep, beef, dairy farming
Importance of catchment	Swimming, kayaking Waimea Inlet internationally valued for breeding seabirds	Important habitat for native fish species Molesworth Station in headwaters	Recreation, tourism Indigenous ecosystems in the upper catchment	Fishing, canoeing, kayaking, rafting, boating, skiing, mountain biking, tramping Hydroelectricity generation	Trout fishery Game bird hunting Other recreation
Water uses (surface and ground water)	Irrigation and domestic use Municipal use	Irrigation for viticulture	Municipal use Irrigation for agriculture	Domestic water supply Hydroelectricity generation Irrigation for agriculture	Municipal use
Pressures	Low reliability of water supply in summer Low flows affect ecological health of waterways	Increasing demand for irrigation water	Increasing demand for irrigation water Discharges and land use affect groundwater quality	Demands exceed availability Discharges and land use affect groundwater quality	Increased dairy conversions Declining water quality
Proposals (past/current)	Lee Valley Community Water Augmentation Dam proposal by the Waimea Water Augmentation Committee	Awatere Irrigation Ltd scheme opened 2009	Central Plains Water proposal to draw water from Rakaia and Waimakariri Rivers to irrigate 60,000 hectares	Existing power and irrigation schemes Hunter Downs proposal Project Aqua hydroelectricity proposal, abandoned in 2004	Irrigation developments
Relevant regional plans	Tasman Resource Management Plan	Wairau Awatere Resource Management Plan	Waimakariri River Regional Plan	Waitaki Catchment Water Allocation Regional Plan	Regional Plan, Water for Otago

1 Young et al., 2010

2 Marlborough District Council, 2009

3 Environment Canterbury, 2011

4 Ministry for the Environment, 2006

5 Otago Regional Council, 2010

in specified water bodies, no decline in existing water quality, and limiting water taken so that water bodies maintain their life-supporting capacity and natural character.

The second phase comprised semi-structured interviews with individuals from the wider stakeholder group about the barriers to achieving outcomes and about factors they thought could assist the achievement of better outcomes through both the planning and implementation phases of the relevant plan. Interviews were conducted with individuals representing or connected to stakeholder groups, and covered water allocation and water quality management. To enable

comparison of stakeholder responses, each interviewee scored their particular catchment plan and planning process against the good governance principles outlined in Table 1, on a poor (1) to very good (4) scale.

The three-dimensional governance evaluation tool shown in Figure 3 was developed to interpret these stakeholder scores. Stakeholder scores for each of the governance criteria (principles) are arrayed along the Z axis. In this way, the average score for each sector could be averaged again across each plan on the X axis to determine the degree of overall satisfaction with each plan. The average score for each sector could be averaged

again across all plans to determine each sector's degree of satisfaction with the planning process.

Results

As an example of results of this analysis, Figures 4 and 5 show the relative level of satisfaction with plans and their implementation and with the planning process by sector respectively. Stakeholders involved in the Waimea plan were the most satisfied, while those involved with the Waimakariri plan were least satisfied. Interviewees from the local government and water user sectors were more satisfied with the catchment water planning process than those from the

Figure 3: Governance evaluation tool to assess stakeholder satisfaction

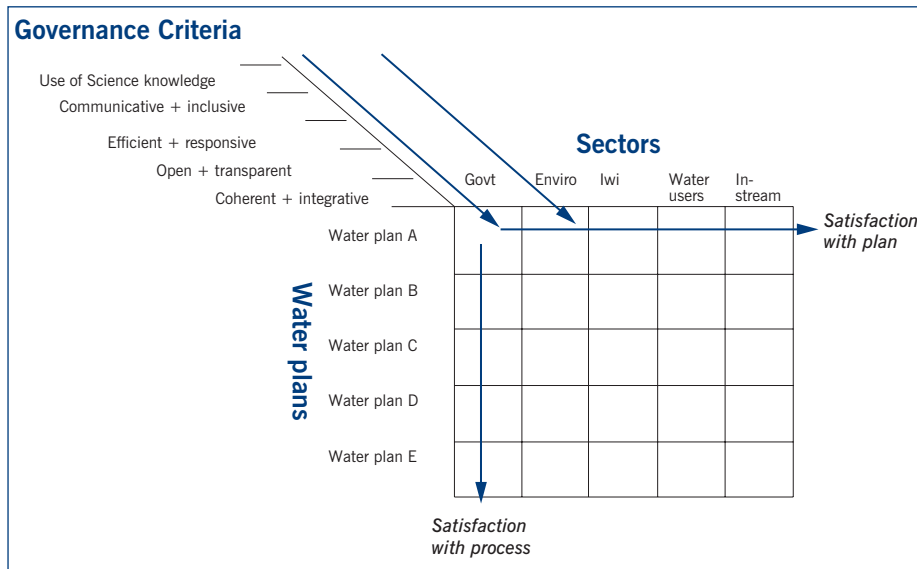


Figure 4: Overall level of satisfaction with plans and implementation, including standard deviations

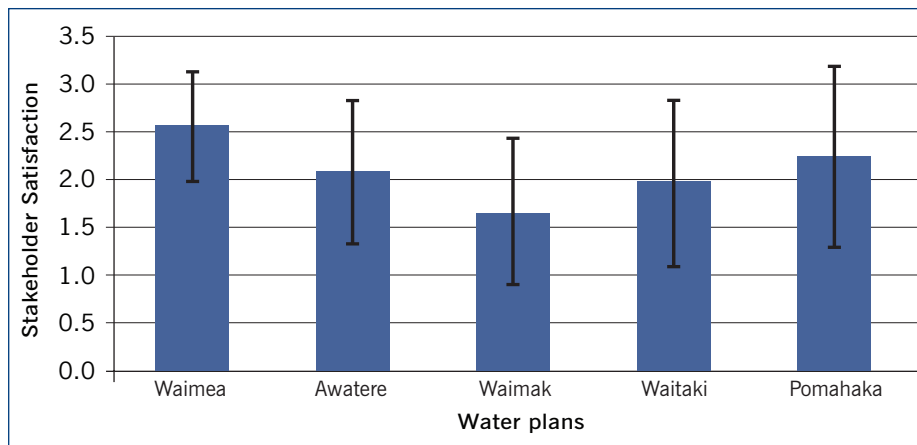
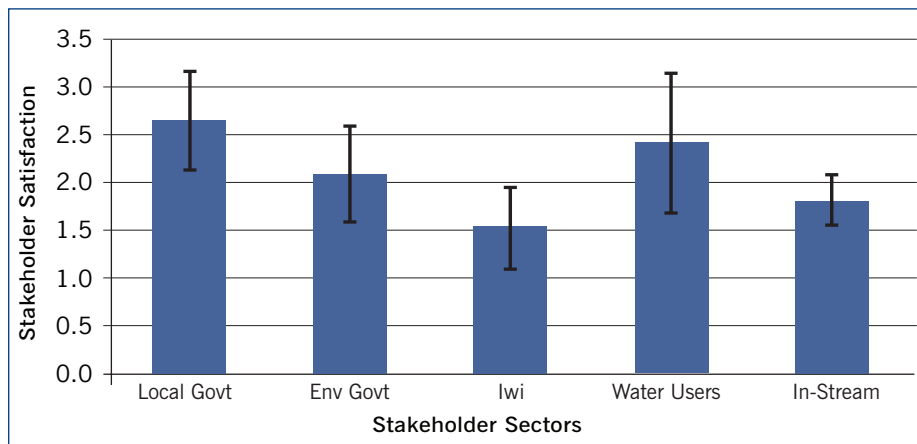


Figure 5: Overall level of satisfaction with planning processes across sectors, including standard deviations



environmental government, in-stream and iwi sectors, in that order. It should be remembered that the interviewees were at different stages of the various planning processes, which will have affected the opinions being expressed.

Attributes of improved water governance
Stakeholder views about why they were satisfied and their views about what changes would make them more satisfied with the plans and planning processes were synthesised into the 14 good governance attributes presented in

Table 3. The attributes for improved water governance in Table 3 reflect stakeholder concerns about deficiencies in current practices in regional water planning. The synthesis covers the main themes raised by stakeholders, but does not imply deficiencies in every one of the five catchments. Rather, it is based on the most persistent issues raised in the interviews, which also included observations about successful attributes of current water management. For purposes of discussion below, we have categorised the attributes as relating to either (1) the planning process, (2) the methods employed in the plan, or (3) the outcomes achieved through the plan.

Planning process attributes

Among the planning process attributes, the need to improve engagement and involvement of stakeholders was emphasised, not just in the plan development phase but also to improve implementation of the completed plan. Planning was seen as more successful in cases where community-based catchment groups or water user groups have a role in implementation – for example, of water sharing – and act as a forum for continued consultation with the regional council. This collaborative approach may reduce the frustration felt by those in some stakeholder sectors who felt that some politically-favoured issues (e.g. irrigation) were taking precedence and undermining their values for the catchment.

A common concern was the need for the staff group developing a plan and those in consent and compliance roles charged with implementing the plan to work in a more collaborative mode. The research has indicated that a ‘think tank’ approach to water management at council level may create a more integrative approach to problem solving, in which consents staff, policy staff and resource scientists meet regularly, especially at consent renewal time, to discuss decisions. Stakeholders also feel more comfortable when they are dealing with council staff with whom they are familiar rather than people they do not know. One suggestion to address high staff turnover was ‘plan induction’ courses, which could be open to the wider stakeholder group.

A consistent theme was the need for more integrative planning, such as integrated catchment management plans. Stakeholders sought not only better planning of land use and land management practices, recognising their impacts on water, but also a more holistic planning process recognising the spectrum of community values for water: examples cited of neglected values were landscape, spiritual and amenity values. These views were strongly held by iwi and environmental stakeholders.

The RMA is effects-based and many stakeholders were unhappy with the slow response of plans to emerging water issues such as land use intensification. Examples were cited of existing consents with long-term expiry dates constraining the ability of the council to adjust plan rules – for example to change allocation limits or environmental flows. Stakeholders saw the benefit of having catchment groups involved in monitoring and advocacy so that emerging issues can be addressed more quickly, and of having reviews of consents (RMA, s128) linked to plan review dates (e.g. ten-yearly). However, water user stakeholders also wanted consent renewals to be made less bureaucratic.

Planning methods attributes

A consistent view among stakeholders was the need to share knowledge about planning methods which have worked well. This particularly included water allocation frameworks (e.g. Bright et al., 2008) and the science supporting good management practices from landowner up to policy levels. Two challenges were posed for science: the need for better mechanisms by which science knowledge can inform planning processes, and how to facilitate access to expert knowledge by all stakeholders, not just those able to compete financially for limited science expertise. One suggestion was for science to be peer reviewed by a non-political national science organisation, where expert intellectual knowledge could be collectively owned and shared.

Involving stakeholders in monitoring was considered likely to increase their sense of ownership of the plan, especially if they can see how the monitoring benefits them

Table 3: Good governance attributes for improved New Zealand water management planning, synthesised from stakeholder interviews

Planning process	
1.	Design and implement an engagement strategy, especially in the planning process through to implementation of early stages
2.	Avoid bias, particularly political
3.	Plan the transition from design to implementation phases, especially having a team approach within council
4.	Facilitate buy-in, both within council and from all stakeholders
5.	Be holistic (integrated planning)
6.	Build in flexibility to respond and adapt to new pressures (e.g. land use intensification, changing climate) while providing sufficient certainty for investment
Planning methods	
7.	Base planning methods on science and monitoring, including improved sharing and peer review of all science
8.	Devolve monitoring to water users and stakeholders (e.g. through audited self-management), and include methods for regular reviews of plan effectiveness
9.	Be explicit about methodology: e.g. for effective water allocation by defining environmental flow needs, allocation caps and sharing; for water quality management, ensuring water quality targets influence land use planning
10.	Spread water management costs more fairly among users
Plan outcomes	
11.	State the vision of the plan, supported by clearer national priorities for sustainable water management
12.	Ensure policies, methods and rules in the plan adequately connect to and deliver the agreed plan objectives
13.	Specify limits ('carrying capacity') based on existing and desired community outcomes
14.	Improve accountability for delivering outcomes (e.g. of regional councils to national level)

and how the data they collect are used for decision making. If target outcomes have been adequately defined in the planning phase, stakeholders mostly wanted to be involved in monitoring those targets and considered this would assist in adaptive management.

Stakeholders acknowledged the benefits of working with a well-defined allocation framework from the early stages of planning. This framework could consist of an environmental flow or limit regime which considers in-stream values and other water uses, an allocation limit capping total extraction (which could vary with water availability), and rate-of-use limits to encourage efficiency and limit water quality and other impacts. Environmental and iwi stakeholders

also particularly sought better tools for tackling diffuse pollution. Methods raised included integrated catchment management; the EU approach, combining 'emission limit values' and environmental quality standards; and inclusion of hydromorphological (river condition) parameters into planning.

With only 30–50% of council water planning and management costs commonly met by consent holders, funding for water management was also a consistent issue. Some stakeholders favoured applying volumetric or flow-based levies on water users to support science and monitoring, including devolved monitoring approaches such as audited self management.

Planning outcomes attributes

Finally, among the outcomes-related attributes the primary areas which stakeholders felt needed improvement were establishing national priorities for sustainable water management, more consistent setting of resource limits in plans, and a mechanism for holding regional and unitary councils more accountable for good water management. We note that since this research was completed, the National Policy Statement for Freshwater Management (Ministry for the Environment, 2011) sets some process targets to address these concerns.

Aligned with concerns about lack of

fresh water management. The forum reached consensus on a package of 53 recommendations, ranging across policy, legislation, institutions, research and infrastructure (Land and Water Forum, 2010). Collaborative governance, which is central to much of Table 3, is now being widely promoted as an inclusive process for managing contested resources like water, examples being Canterbury's Water Management Strategy, led by its local authorities' Mayoral Forum, and various irrigation scheme proposals led by broad-based community groups (see Lennox et al., 2011).

and plan outcomes appear to correlate with the level of influence of the various stakeholder groups. The observations derived from the survey of stakeholder opinions are priority governance issues relating to catchment planning processes in New Zealand. However, they are a subset of a much wider range of views, many documented more recently through the collaborative processes of the Land and Water Forum, about what makes successful and sustainable water management. Common to both is the need to engage with, and where possible devolve responsibility for monitoring and management, with appropriate auditing, to those creating the pressures on water resources: land and water users and interested parties.

This work highlights that governance has not received the same attention as technical and infrastructure development in the water sector. Governance systems need to be able to allocate water and manage water quality to meet environmental, agricultural and urban goals, but they must also be able to justify the choices made, and what values are taken into account. Identifying principles and attributes of good water management planning helps in evaluating how to improve our water governance. Discussions of governance regimes are not divorced from technological and infrastructure decisions; rather these are intertwined. As Tropp (2007) notes, water decision makers and managers have yet to realise the full potential of new forms of governance, such as facilitating inclusive decision-making processes, coordination and negotiated outcomes.

Identifying principles and attributes of good water management planning helps in evaluating how to improve our water governance.

national direction were some stakeholder views that water management plans need a more explicit vision statement, describing how stakeholder values (e.g. iwi values) are being addressed and what trade-offs are being made. Stakeholders expressed frustration about objectives in some plans which had broad narratives with little connection to what was actually going on at ground level. They wanted a plan in which objectives, policies and methods are clearly defined so that the 'rules of the game' are clearly outlined, including limits on water allocation and water quality.

On the question of accountability, some stakeholders supported the idea of a national regulatory authority (the Environmental Protection Agency) having a role in benchmarking the effectiveness and efficiency of regional plans and providing guidance on meeting national objectives on a local level.

We note that after this research was completed, the New Zealand government commissioned a Land and Water Forum to conduct a stakeholder-led collaborative governance process to recommend reform of New Zealand's

Conclusions

Water management has for decades relied upon improving technical understanding of water resource occurrence and behaviour, then designing management systems to keep exploitation of those resources, and associated land uses, within biophysical limits. Those management systems have often proven unable to deliver sustainable water management, because of lack of buy-in by stakeholders and poorly-supported sociopolitical and administrative systems. Technical understanding of our water resources is vital, but the design of good governance is also fundamental to sustainable water management. Water governance has been defined broadly for the purposes of this article as encompassing the institutional, legislative and decision-making processes for managing water, and good water governance as being founded on the six principles described in Table 1.

The governance principles can be used in a governance evaluation tool such as we have devised to rank stakeholders' levels of satisfaction. In this study we observe that the levels of satisfaction with planning processes

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Single Worthwhile Policy, Seeking Legitimacy and Implementation: sustainable tourism at the regional destination level, New Zealand

Despite sustainability becoming a key discourse throughout the tourism industry, the practical implementation of sustainable tourism policies has been limited (Hall, 2011).

New Zealand is not immune to criticism in this regard and our '100% Pure' tourism brand has been brought into question. As long ago as 1997 the Parliamentary Commissioner for the Environment reported that the environmental qualities underpinning tourism were at risk and that visitor pressure on iconic attractions could not be sustained. Importantly, the commissioner identified 'systematic problems that hinder the achievement of sustainable tourism', noting that 'the government system for managing tourism and its environmental effects is fragmented' (Parliamentary Commissioner for the

Environment, 1997, p.5). In order to address these matters, a specific recommendation in the report was that the Ministry of Tourism facilitate the development of a strategy for sustainable tourism for New Zealand.

Flash forward to 2011. Fourteen years have passed and international visitor numbers have climbed from 1.5 million in 1997 to 2.5 million. The country now has a dedicated tourism strategy; in fact two such strategies have been produced, the first in 2001, followed by an update in 2007 (Tourism Strategy Group, 2001; Ministry of Tourism, 2007). But have the problems identified in 1997 been addressed? Do we now have a 'sustainable tourism' industry? Connell et al. (2009) in their review of tourism strategies and sustainable tourism in New Zealand describe the Commissioner for the Environment's report as 'somewhat outdated yet still sadly relevant'. Further, a range of other impacts have been documented which offer little indication that tourism is becoming any more sustainable. So what has gone wrong?

The idea of sustainable tourism has been well articulated in both of New Zealand's national tourism strategies. We have, in our national policy documents, a commitment to the concept of managing environmental, social, cultural and economic resources for present and future

generations. However, governments have become 'extremely canny in reproducing the sustainable development rhetoric without actually effecting fundamental policy shifts' (Dredge and Jenkins, 2007, pp.285-6). At the regional and local levels too we have witnessed over the last decade a virtual explosion in the number of tourism plans and strategies (Connell et al., 2009), most of which espouse a central tenet of sustainable tourism, yet the extent to which such policies have guided sustainable tourism development within their constituencies is unclear.

This article considers this apparent 'implementation gap', and how the norms of sustainable tourism may be translated to the local level. The view is advanced that sustainable tourism implementation is essentially a governance issue, exacerbated by legislative complexities within the policy domain. I argue that there is an overriding crisis of legitimacy for tourism policy, and that this impedes sustainable tourism outcomes. The article begins by discussing literature relevant to the governance and operationalisation of sustainable tourism, before briefly addressing the New Zealand Tourism Strategy and responses to it. It then focuses on two southern destinations, Queenstown and the Catlins, quite different in terms of visitor numbers and pressures but both facing challenges in terms of how tourism policies are translated into workable policies for local planners and tourism industry stakeholders.

Sustainable tourism

Sustainable tourism is defined by the United Nations World Tourism Organisation as:

Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities. (UNWTO, 2004, pp.11-12)

While the jury is still out on the extent to which, globally, we have achieved sustainable tourism (e.g. Hall, 2011, describes it as a 'policy failure'), there is general agreement that destinations that want to promote sustainable tourism are more likely to be

successful when there is effective governance (Bramwell, 2011). While governance may be interpreted in a number of ways, of importance here is what governance scholars refer to as governing systems, which provide means for 'allotting resources and exercising control and coordination' (Rhodes, 1996, p.653).

There are substantial difficulties that can hinder effective governance for sustainable tourism (Bramwell, 2011). Notably, many tourism concerns are cross-sectoral, and consequently span a number of policy domains: e.g. planning, transport, environment and employment. Ruhanen et al. (2011), for example, identify 222 Australian acts which have an impact on tourism. Consequently, policies affecting sustainable tourism are often made in policy domains other than tourism, 'with little attention paid to the implications for tourism' (Bramwell, 2011, p.461). Coordination and cooperation are thus special issues for sustainable tourism, as the relevant actors are found in a variety of sectors (Bramwell and Lane, 2000; Dinica, 2009).

While tourism governance may be influenced by a broad range of actors, it is generally agreed that the state has a critical role to play because of the noted characteristics of the sector. Indeed,

'holistic ambitions of sustainable development and the multidisciplinary nature of tourism entail that only governments and public authorities can coordinate efforts in sustainable tourism policy at both the national and local levels' (Wearing and Neil, 2009, p.44).

Sub-national tourism governance

Effective local governance is thus a central element of a holistic and balanced approach to sustainable tourism (UNEP, 2003). However, the view of local government has become less holistic, and it is 'increasingly common for local governments to support a pro-economic development approach to local tourism policy', focusing just on the marketing and promotion of tourism (Beaumont and Dredge, 2009, p.8). This view is supported by studies of local government tourism policy which reveal a focus on expanding tourism and generating revenue and employment (e.g.

McLennan and Ruhanen, 2008). The operational objectives of regional tourism organisations (RTOs), their organisational skill sets, funding structures and processes have often been geared towards marketing, with little or no attention given to tourism planning or sustainable tourism (Dredge et al., 2011). But despite these and other limitations (instability, disparity of functions, poor resourcing) (Pike, 2004), RTOs are still the major player in tourism policy implementation (Zahra, 2011).

Policy legitimacy

Here I introduce the concept of policy legitimacy, as arguably a core component of 'good governance' and as a useful framework for considering the challenges of sustainable tourism policy implementation. Policy legitimacy can consist of two components: a normative-moral component (the policy needs to be consistent with the political values and norms within society); and a cognitive component (the policy needs to be seen as feasible) (George, 1980, in Smoke, 1994). Both of these components are essential, especially for long-term policy – e.g. for sustainable tourism. Rothstein (2008) identifies two different sources of legitimacy. Input (or procedural) legitimacy refers to how policy choices are made and by whom. This is linked to procedures for involving stakeholders. Output (or substantive) legitimacy refers to the general acceptance of policy decisions made by the authority, that is the laws, directives, regulations and their implementation. Rothstein argues that legitimacy is more dependent on the output side of the political system, i.e. acceptance by the public and implementing actors, and perceptions of 'implementability'.

It is contended here that within the tourism policy domain in particular, output legitimacy for local tourism strategies is challenged. A number of factors are implicated: legal status of policy and integration with statutory processes; resources, image and power of implementing bodies; and coordination and cooperation of key stakeholders. These factors will be explored in the following discussion of tourism policy, nationally and in the two regional destinations.

New Zealand governance for tourism

The policy environment for sustainable tourism in New Zealand is complex (Connell et al., 2009). Effectively there are two quite separate domains: a specific sectoral tourism domain, and a more encompassing resource management domain. Within the former, there is no legislative requirement for the production of tourism strategies in New Zealand, either at the national or local level. The New Zealand Tourism Board Act 1991 created the New Zealand Tourism Board, whose object is 'to ensure that New Zealand is so marketed as a visitor destination as to maximise long-term benefits to New Zealand'. Although the

give little recognition to the importance of tourism within their district plans (Local Government New Zealand, 2004).

Importantly, there is no legislative foundation for linking national or local tourism planning with the RMA. Despite the existence of tourism plans or strategies within districts, many remain quite narrow in their focus – adopting a traditional marketing perspective – with a view to promoting tourism in a region rather than creating clear links to the RMA (Connell et al., 2009) and thus to the sustainable development needs of the destination. Notwithstanding these shortcomings, undeniably TLAs, either themselves or through their RTOs,

framework of the Resource Management Act with non-statutory tourism strategies which better address tourism growth and its effects (Local Government New Zealand 2003). Their *Tourism and the Resource Management Act: a good practice guide* (2004) outlines a number of statutory and non-statutory mechanisms for enhancing local government planning for sustainable tourism, including the RMA, the Local Government Act 2002, long-term council community plans, by-laws, annual plans, asset management plans, waste management plans, land transport programmes and reserve management plans. They espouse a 'Planned and Integrated Response with Multi-Agency Participation e.g. regional tourism strategy linked to infrastructure investment, district and regional plan policy and RMA methods' (p.7).

A problem faced here, though, is that most tourism strategies are still being written from a destination marketing perspective (Local Government New Zealand, 2004). The lack of any grist behind the sustainable tourism rhetoric in regional New Zealand tourism plans is revealed in Connell et al.'s 2009 survey of tourism planning within TLAs. Few plans noted a direct link with the New Zealand Tourism Strategy; only three (out of 26 TLAs that had tourism plans) directly aligning with the national strategy. Many TLAs (40% of 40 respondents) did not consider there to be any tourism issues of concern in their districts (but local councils may not have the skills or resources to recognise and monitor the impacts of tourism (Page and Hall, 1999)). The study's authors conclude that there is a still a major gap between strategy and implementation, and that while sustainability has become a central tenet across a range of tourism policy in New Zealand, much of this remains a philosophical stance.

Sustainable tourism in the Catlins

The Catlins is a developing destination in the far south of the country. The destination faces a number of sustainability challenges. Most importantly, the Catlins supports significant populations of marine wildlife, being one of the few places in New Zealand where tourists can

Poor resourcing, uncertainties over continuity of staffing and support, the strains of volunteerism, personality conflicts, and intra-regional conflict have ultimately hamstrung the organisation that did emerge through the strategy

functions of the board include developing, implementing and promoting strategies for tourism, arguably these are all implicitly promotional strategies.

The importance of the Resource Management Act 1991 (RMA) as the umbrella legislation for sustainable resource management, and the role of territorial local authorities (TLAs) as having primary responsibility for planning at the local level are widely acknowledged. Tourism, however, is not specifically addressed in the RMA, which adopts an effects-based approach to assessing development proposals rather than an activity-based approach. Connell et al. note that some TLAs may have interpreted this absence as meaning that tourism is not an activity that requires attention in relation to the 'identification of impacts and delineation of associated policy and management responses' (Connell et al., 2009, p.70). Consequently, many districts and regions

have a key role to play in the 'effective translation of principles into policy and action ... to progress the sustainability agenda' (Connell et al., 2009, p.870). This is explicitly recognised within the New Zealand Tourism Strategy 2010, which states that '[l]ocal government has the mandate for tourism planning and destination management' (Tourism Strategy Group, 2001). It envisages 'New Regional Tourism Organisations' which will take an enhanced role in destination marketing and management.

In response to the New Zealand Tourism Strategy 2010, Local Government New Zealand, the umbrella group for TLAs, called for their members to 'engage communities in planning for tourism which is socially, economically, environmentally and culturally sustainable' (Local Government New Zealand, 2003, p.6). Notably, they explicitly acknowledged the need to supplement the statutory planning

readily observe seals, sea lions, dolphins and penguins at close quarters. Tourist impacts on some species have been documented and pressure continues to mount, with some wildlife habitats receiving up to 100,000 largely unmanaged visitors per annum. Developing a tourism industry largely centred upon vulnerable habitats and wildlife populations will be a critical measure of the success of the sustainability of tourism in the Catlins (Lovelock and Boyd, 2006). A further challenge, however, lies in protecting local communities in the area from undesirable development. The total population of the region is only about 5,000 and, to many residents, tourism is seen as a threat to the maintenance of their traditional lifestyle, while placing more pressure on an already stretched infrastructure (Lovelock and Boyd, 2006).

In 2004, as a part of a consultancy team, the author was involved in the development of the Catlins Tourism Strategy. The strategy was ostensibly a community-driven, bottom-up policy, initiated in the face of increasing visitor numbers to: 'manage tourism growth and maximise opportunities for the future while maintaining and protecting the integrity of the community, wildlife and the environment' (Lovelock et al.). Following an extensive programme of community consultation, a number of strategic objectives were developed under the umbrella goal of taking tourism forward into the 21st century in a sustainable manner. Objectives included providing for the protection of natural and cultural resources from the negative physical impacts of tourism, and optimising the value of tourism for local residents, including social and economic benefits. Beneath these objectives, over 80 recommendations were developed. Given the critical role of RTOs in sustainable tourism governance, a key recommendation was to create a local tourism organisation with specific roles to implement sustainable tourism policies. The consultants' vision was that this proposed RTO, 'Tourism Catlins', would play a key role in 'statutory advocacy for the protection of conservation and heritage values through input to conservation planning and resource

management processes' (Lovelock, et al., 2004, p.115).

But in reality, this was not a vision shared by key personnel from the agencies funding the strategy development. Two agencies were involved, the Clutha District Council (a TLA) and Venture Southland, an economic development agency funded jointly by the Invercargill City Council, Southland District Council and Gore District Council.

strategy (Albrecht, 2009; Lovelock and Boyd, 2006).

The above issues, together with the fact that the strategy was prepared by tourism consultants (not regional planners) and did not integrate key actors from within the districts' RMA policy domains, collectively undermine the legitimacy of the Catlins Tourism Strategy as a resource management document.

Notwithstanding the above challenges,

Somewhat disturbingly, Queenstown as arguably our most important tourism destination and the one facing the most pressing tourism-related issues, has no tourism strategy... Rather, planning for sustainable tourism is undertaken by proxy through a number of statutory and non-statutory processes.

The manager from Venture Southland charged with overseeing the strategy development played an instrumental role in emasculating a number of policies relating to sustainable tourism in draft versions of the plan. In retort to the consulting team's defence that most of these policies had arisen through community consultation, he replied that this was not a community-driven or -owned strategy; the message was clear that this was a council-owned strategy and that any policies unacceptable to the council would be dropped.

Consequently, the proactive RTO Tourism Catlins that could have played a key role in sustainable tourism implementation would end up being but a shadow of the original vision for that organisation. Poor resourcing, uncertainties over continuity of staffing and support, the strains of volunteerism, personality conflicts and intra-regional conflict have ultimately hamstrung the organisation that did emerge through the

the tourism organisation there has made incremental gains in terms of addressing sustainability problems (e.g. introducing a Catlins Care Code, developing an interpretation plan; and contributing to a freedom camping policy and by-law). However, the integration between local tourism strategy and RMA processes was never to occur. The voluntary nature of Tourism Catlins, lack of specific statutory planning skills, the fact that most members are tourism operators themselves, and the small, close-knit nature of the community present further impediments to the organisation being able to engage freely and actively in RMA planning processes relevant to tourism.

Sustainable tourism in Queenstown

Queenstown is New Zealand's fastest-growing tourist destination. Located in a nationally significant landscape, and promoted as the 'Adventure Capital of New Zealand', Queenstown has grown from being a local to an international

destination in a relatively short time. Now boasting 2.5 million visitor nights (in 2010), it is the only area in New Zealand whose economy is almost entirely dependent upon the tourism industry. As a consequence of many years of unfettered growth (particularly under the mayoralty of Warren Cooper, 1995–2001), Queenstown faces a number of issues that could collectively be grouped under the heading of ‘growth management’, including traffic congestion, urban centre design problems, urban sprawl and loss of landscape integrity, waste management,

Rather, planning for sustainable tourism is undertaken by proxy through a number of statutory and non-statutory processes. Paramount has been the district plan, although the limitations of this have been realised, immediate past mayor Clive Geddes commenting that despite the RMA’s premise that it is about the wise and proper use of a resource:

it is, in the end, enabling legislation that allows any applicant to apply for any activity, which is not prohibited on any piece of land regardless of what

plan process (required under the Local Government Act 2002). It is the council’s aim that such growth management plans seek to ‘alter the fundamental dynamics of land use development, rather than try to catch development once areas start to develop (as tends to be the case under the Resource Management Act)’ (QLDC, 2007, p.xx).

However, the non-statutory nature of these plans poses challenges to their legitimacy. The Queenstown Lakes District Council acknowledges that at the moment the Tomorrow’s Queenstown community plan is not given a lot of weight in the statutory decision-making process for new development proposals (QLDC, 2009). Wilson in her study of sustainability planning options for Queenstown also indicates that, although Queenstown is in the process of implementing a community sustainability plan, there are problems around legitimacy and operationalisation ‘due to the ad hoc nature of its implementation and the statutory limitations imposed on the Queenstown Lakes District Council’ (Wilson, 2010, p.2).

...there still appears to be a substantial implementation gap between the sustainable rhetoric within national and local tourism strategies and reality at the local level.

and an escalating cost of living for locals.

Somewhat disturbingly, Queenstown, as arguably our most important tourism destination and the one facing the most pressing tourism-related issues, has no tourism strategy. In a recent conversation with a manager at Destination Queenstown, the RTO, I was told that Destination Queenstown does not engage in tourism management, only marketing. This focus comes about partly through its funding arrangements, as an organisation originating from and funded by tourism businesses, rather than being TLA-funded and -managed, as is the prevalent model for RTOs in New Zealand. Destination Queenstown was formed in 1985 to ‘collectively promote Queenstown to the world’ (Destination Queenstown, 2011). It is funded by commercial ratepayers via an annual levy collected by the TLA, the Queenstown Lakes District Council (QLDC). With 11 staff members, it is one of the biggest RTOs in the country, and arguably would have the capacity to engage in planning for sustainable tourism, but this appears to be outside the organisation’s mandate.

the district plan says. As long as it is based on that fundamental premise it will continue to be a muddled way of trying to achieve sustainable growth. (Geddes, in Wilson, 2010, p.10)

Due to the importance of tourism in Queenstown, practically any public policy is a tourism-related policy. A second approach to addressing tourism issues has been through Tomorrow’s Queenstown, the community plan developed in 2002 (QLDC, 2002), which identifies a main community outcome of sustainable growth management. This is further articulated in *A Growth Management Strategy for the Queenstown Lakes District* (QLDC, 2007), another non-statutory document that provides an overview of QLDC’s growth management policy. This document is described as an ‘expression of the legislative intent’ of the council, and the council’s intention is to translate the actions identified in the strategy into appropriate statutory documents. The strategy will be reviewed every six years, timed to provide input into the long-term council community

Conclusion

The rhetoric of sustainability is pervasive, the concept touted internationally through Tourism New Zealand’s \$70 million annual promotion of its ‘100% Pure’ brand, and nationally through two national tourism strategies. With an overarching sustainable development planning framework (the RMA), one would think New Zealand to be in a strong position to operationalise sustainable tourism. Yet there still appears to be a substantial implementation gap between the sustainability rhetoric within national and local tourism strategies and reality at the local level. While TLAs have been active in developing new tourism plans and strategies, the links with national-level strategy are weak. Furthermore, most of these plans have a focus on marketing and economic outcomes. This has been linked to the economic development imperative of TLAs and the short-term horizon of political governance (Dodds and Butler, 2010; Yasarata et al., 2010).

This article has pointed to lack of policy legitimacy as a key obstacle to

operationalising the sustainable tourism ideals contained within these plans. While such plans may have community and industry stakeholder buy-in and thus input legitimacy within the immediate tourism policy domain, because of the way they are developed, by tourism specialists (often marketers within RTOs) or by tourism consultants, they have limited legitimacy outside the tourism domain. The lack of a legal status for tourism planning, and lack of legislative connection between tourism and other statutory policy processes, is also seen to have an impact on the legitimacy of tourism policy.

Links to the RMA have been identified as being critical to developing tourism sustainably in New Zealand. Queenstown, despite its lack of a dedicated tourism strategy, has historically relied upon RMA processes and its district plan to deal with tourism's impacts. But this has clearly been inadequate. More recently, the TLA there has turned to non-statutory processes to provide more strategic guidance to tourism planning. Ironically, the strategic approach taken by the Queenstown Lakes District Council, while meeting one of the central tenets of sustainable tourism planning (Ruhanen, 2010) has undermined the legitimacy of the policy output. Strategic plans cannot always be linked to statutory processes, and it is this weakness that may contribute to implementation failure.

In contrast, the Catlins has a highly-detailed tourism strategy with a strong sustainability flavour. Yet the process of developing the strategy was flawed, and its policy legitimacy is challenged. RTOs are critical institutions for sustainable policy implementation, and in the Catlins, an emasculated RTO reliant upon unskilled and overworked volunteers can play little or no role in linking the laudable policies of the tourism strategy with RMA processes. Small TLAs in remote areas, with limited funding to support management rather than marketing functions of RTOs, coupled with the political realities of small communities, and tourism boards that are dominated by development-oriented tourism operators, pose further challenges.

In both the Catlins and in Queenstown, achievement of sustainability initiatives has also been hampered at times by a lack of collaboration and cooperation (Lovelock and Boyd, 2006; Wilson, 2010). RTOs can play an important role here; indeed the New Zealand Tourism Strategy 2010 recognises this in its brave 'New RTOs' that would lead the way in tourism planning. However, in Queenstown, for historical, funding and functional reasons Destination Queenstown has limited its coordinating role to marketing activities. Arguably, a more holistic approach on the part of Destination Queenstown could lead to more sustainable outcomes – or at least open up greater dialogue between

the tourism sector and local planners – and thus better links to statutory planning processes.

What does the future hold? Local Government New Zealand envisages an approach in which strategic planning for tourism is combined with a mix of some statutory RMA policies, together with some non-RMA policies and methods (Local Government New Zealand, 2004). But to gain more traction on this would need greater institutional guidance. Sadly, the recent (2010) disestablishment of the Ministry of Tourism and creation of a much-downsized Tourism Strategy Group subsumed within the Ministry of Economic Development has affected policy capacity at the national level. There is a risk of underestimating the state's continuing significance in tourism governance (Bramwell, 2011). But the very fact of that continuance is challenged by neo-liberal reforms such as that noted above, which affect the capacity of governments to govern for sustainable tourism (Beaumont and Dredge, 2009; Dinica, 2008; Lovelock and Boyd, 2006). Such actions detract from the legitimacy of our national tourism strategy and send the wrong messages to regional planners regarding the implementation of sustainable tourism.

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Promoting Sustainability From Above: reflections on the influence of the European Union on tourism governance

Due to the long-standing absence of direct and legally-binding competencies in tourism, European Union (EU) tourism policy has mainly influenced tourism governance through indirect interventions and non-binding instruments (Anastasiadou, 2006, 2008a, b; Halkier, 2010). For example, in October 2007 the European Commission adopted its 'Agenda for a sustainable and competitive European tourism' (European Commission, 2007). This communication proposed measures aimed at complementing the EU policy interventions that have consequences for tourism and its sustainability throughout Europe. However, its overall impact on tourism structures has been miniscule; instead, impact on tourism governance has come from elsewhere.

There are two main frameworks that underpin the EU's approach to sustainability. First, there is the Europe 2020 strategy, adopted in 2010 (which replaced the Lisbon Strategy, adopted in 2000) (Steurer and Berger, 2011). Second, there is the EU Sustainable Development Strategy, which promotes sustainable development as a general objective (European Commission, 2009).

The EU cohesion policy has become one of the main vehicles for delivering EU's vision regarding sustainable development. By promoting the development of partnerships and multi-level governance, it has compelled regions to pursue sustainable development (European Commission, 2009). Both the Sustainable Development Strategy and the cohesion policy have been instrumental in incorporating sustainable development principles and have influenced tourism development at the national and regional levels.

The purpose of this article is to review how tourism sustainability has been defined in relevant EU communications, and consider the impact of the EU's cohesion policy on tourism governance at national and local levels. It is concluded that the EU's governance architecture

has had a mainly positive influence on the adoption of sustainability practices and local governance, but that there are critical discrepancies between member states. Further reforms of the cohesion policy should provide for a better integration of the partnership approach and stakeholder engagement objectives throughout the policy process, which would also benefit the governance of tourism for sustainability throughout Europe.

The EU's approach to sustainable development and governance

'SD is [...] closely connected to the issue of governance' (European Commission, 2004, p.6). Sustainable development has been defined as development which achieves a balance between economic, environmental and social objectives for both present and future generations (OECD, 2006). Governance denotes the 'steering capacities of a political system, the ways in which governing is carried out, without making any assumption as to which institutions or agents do the steering' (Gamble 2000, p.110). Changes in governance are often necessary to achieve sustainable development.

Steurer (2009, p.2) has argued that governance for sustainable development calls for reforms in terms of the integration of economic, social and environmental policies (horizontal integration); closer cooperation between different tiers of government (vertical integration); the integration of different stakeholders in decision making (participation); the recognition of different types of knowledge in decision making (reflexivity); and the integration of long-term time frames into policy-making processes often dominated by a short-term focus (intergenerational equity).

Sustainable development is a fundamental EU objective and an overarching concept that underlies all EU policies, strategies and actions (Ferry et al., 2008). The two cross-sectoral strategies for sustainable development are the Lisbon Strategy/Europe 2020, which focus on economic and social policies; and the Sustainable Development Strategy, which is primarily

concerned with quality of life, intra- and intergenerational equity, and coherence between all policy areas (Steurer and Berger, 2011; European Council, 2006).

The Sustainable Development Strategy (SDS), launched in 2001 and revised in 2006, has identified seven key challenges and targets for the EU: climate change and clean energy; sustainable transport; sustainable consumption and production; conservation and management of natural resources; public health; social inclusion, demography

[The EU's White Paper] identified openness, participation, accountability, effectiveness and coherence as its five key principles of 'good governance'.

and migration; and global poverty and sustainable development challenges (European Commission, 2009). It also includes a good governance objective which aims at promoting coherence between all European policies and between local, regional, national and global actions (Eurostat, 2009).

But Steurer et al. (2010) have argued, though, that the SDS framework has had only a limited impact on national sustainable development strategies, as many member states have followed the international OECD/UNEP (United Nations Environment Programme) guidelines in the design of their national

strategies. However, the strategy framework has had a profound impact on the design and implementation of EU-wide initiatives and policies.

After years of criticism for lack of transparency and questions about its democratic legitimacy, the European Commission launched a white paper on European governance in July 2001. It identified openness, participation, accountability, effectiveness and coherence as its five key principles of 'good governance'. The aim of the paper was to make decision-making processes more transparent and less top-down, and to improve the quality, clarity and effectiveness of its processes (European Commission, 2001a; Shore, 2011). The emerging form of governance is based on the design and implementation of policies that associate civil society and the EU institutions.

The EU's governance approach is shaped by the principles of subsidiarity, which states that the Union does not take any action (except in the areas which fall within its exclusive competence) unless it is more effective than action taken at national, regional or local level, and of proportionality (any action taken by the union should not go beyond what is necessary to achieve the objectives of the EU treaty) (EU Glossary, [2011]). Multi-level governance is also a defining characteristic of the EU policy-making system. Decision-making authority is not monopolised by the governments of the member states but is diffused to different levels of decision making – sub-national, national and supranational (Kohler-Koch and Rittberger, 2006, p.34). In multi-level governance, actors at local, regional, national and the supranational levels are interdependent and have formed dynamic networks of state and non-state actors (Hooghe and Marks, 2001). It reflects the vertical integration principle of sustainable development (Steurer, 2009).

Finally, the open method of coordination is another defining feature of EU governance. The open method of coordination is a framework for cooperation between member states that is achieved through techniques such as the use of guidelines and benchmarking

and the establishment of indicators for measuring 'best practice' (Shore, 2011). These are in effect 'soft' law measures which are binding on member states to varying degrees and which take place under the auspices of the European Commission.

It thus obvious that the EU policy system is extremely open and complex, and promotes the engagement and participation of many actors to improve the transparency of the union's decision-making procedures and legitimise the actions of its institutions. However, the existence of both exclusive and complementary EU competencies establishes different governance dynamics for each policy area, which necessitates the examination of each in its own right.

EU tourism policy and sustainability

In recognition that 'many sustainability issues have transboundary regional and global implications that cannot be ignored', in 2005 the World Tourism Organization (UNWTO) and UNEP identified an agenda of 12 aims for sustainable tourism (UNEP and UNWTO, 2005, p.27). This agenda has shaped the design of sustainable tourism strategies in many countries, with varying degrees of success. However, there is limited research on the implementation of these strategies and their evaluation in individual countries (Dinica, 2008, 2009), and even less at a supranational level.

The EU tourism policy has probably had the least impact on tourism governance for sustainability in the EU region. Tourism began to feature as a policy issue on the European agenda in the early 1980s (Anastasiadou, 2006, 2008a) and tourism sustainability from the mid-1990s. The lack of an EU competence in tourism reduced many of the European Commission's tourism-related communications to little more than statements of goodwill which often reiterate the same ideas. However, an analysis of the Commission's communications serves as a useful point of reference for examining how tourism sustainability is conceived.

In its 2001 communication 'Working together for the future of European tourism' the Commission proposed to further 'promote sustainable development

of tourism activities in Europe by defining and implementing an Agenda 21' (European Commission, 2001b). Following this, its communication 'Basic orientations for the sustainability of European tourism', published in 2003, provided the EU's input to a broad Agenda 21 process for sustainable tourism (European Commission, 2003) and acknowledged the importance of working with a large number of stakeholders (Lane, 2008). The communication also highlighted the considerable impact of other EU policies on tourism, and emphasised the need to ensure the consistency of various community policies and measures affecting the sustainability and the competitiveness of the tourism industry (European Commission, 2003).

Following on from this communication, a Tourism Sustainability Group was set up to create a framework for action which would allocate specific activities to stakeholder groups, with an agreed timetable for implementation and evaluation of actions. The group published its report in 2007 and identified eight key challenges for the sustainability of European tourism:

- a) reducing the seasonality of demand;
- b) addressing the impact of tourism transport;
- c) improving the quality of tourism jobs;
- d) maintaining and enhancing community prosperity and the quality of life, in the face of change;
- e) minimising resource use and the production of waste;
- f) conserving and giving value to natural and cultural heritage;
- g) making holidays available to all. (TSG, 2007, p.3).

The group also proposed a number of aims for achieving economic prosperity, social equity and cohesion, and environmental and cultural protection, and identified roles and responsibilities for the European Commission, member state governments, local authorities, tourism businesses and other bodies.

The suggestions of the Tourism Strategy Group report then informed the European Commission's communication 'Agenda for a sustainable and competitive European tourism' (European

Commission, 2007). This communication suggested measures which complement the EU policies and actions that exert an impact on tourism and its sustainability, urged stakeholders to adopt sustainable practices, and acted as the commission's framework for the implementation of supportive European policies for tourism. Both the types of recommendations and the emphasis on engaging several stakeholders reflect ideas that are in line with the UNEP and UNWTO (2005) guidelines.

As the Lisbon Treaty came into force on 1 December 2009, the EU acquired a specific competence for tourism to support actions that promote the competitiveness of the sector (Anastasiadou, 2006). In light of this change, a new strategy was launched in 2010, 'Europe, the world's no 1 tourist destination: a new political framework for tourism in Europe' (European Commission, 2010a). This strategy linked sustainability to the sector's competitiveness and argued that a new impetus for European tourism is necessary. The document envisages a number of value-adding EU actions to adapt and develop the tourism sector which will complement efforts at the national level and provide tourism businesses with the tools to adjust to change, but a formal plan of implementation has not yet been produced.

Two characteristic examples of the types of initiatives implemented to promote sustainable tourism are the European Destinations of Excellence (EDEN) competition and NECSTouR, the Network of European Regions for a Sustainable and Competitive Tourism.

EDEN is an annual, themed competition which promotes emerging European destinations that are committed to environmental, cultural and social sustainability. The recipients of the award are emerging, little-known European destinations located in the 27 member states and candidate countries (European Commission, 2011). The initiative's aims are to de-congest over-visited tourist destinations, encourage the adoption of sustainable practices across Europe, and encourage visitation to emerging destinations and turn these places into year-round venues (European

Commission, 2011). Each year, one destination from each participating country receives an award at the annual European Tourism Forum which helps further promote these destinations.

NECSTouR develops cooperation and exchanges of information on best practice in sustainable tourism and innovation between regional organisations in the member states. Membership is drawn from several EU countries and stakeholder groups, including regional authorities, academic institutions, chambers of commerce, specialist research units, and EU and local trade associations (NECSTouR, [2011]).

Both these initiatives are characteristic of the types of actions the new strategy is setting out to develop, and are based on the principles of partnership, multi-stakeholder engagement and knowledge exchange. Such measures could have important implications for sustainable tourism governance in the future.

Reflections on the EU's tourism governance approach

In the absence of a tourism competence until relatively recently, a bottom-up, collaborative system of governance emerged, with increasing emphasis placed on stakeholder participation through all the stages of policy making. In this multi-level governance environment, the European Commission has mainly acquired the roles of facilitator and stimulator in the development of partnerships and networks between interested stakeholders. Encouraging the participation of business interests and other stakeholders in the decision-making process is a means of ensuring the legitimacy of EU interventions. The open method of cooperation is also visible in the recent tourism strategy (European Commission, 2010a), which makes extensive reference to the establishment of networks and partnerships between stakeholders, coordination of activity in areas of common interest and exchange of best-practice information (also evidenced in the EDEN and NECSTouR initiatives). These measures also reflect some of the UNWTO and UNEP recommendations (2005) and vertical integration, reflexivity and participation (Steurer, 2009).

Nonetheless, there is currently no empirical evidence to prove or negate the diffusion of the EU tourism governance principles to national and sub-national systems. However, policy initiatives have mainly emphasised promoting collaboration and best-practice exchange between member states and rely heavily on the willingness of stakeholders to participate. This situation largely supports Halkier's assertion that the emerging EU approach to tourism has focused

In recognition of [tourism's] potential contribution, more than €6 billion (or 1.8% of the total cohesion policy budget) is planned to directly support tourism in the 2007–2013 funding period.

on spreading 'so-called best practices which have a limited impact on tourism practices' (Halkier, 2010, p.102).

If any changes to tourism governance have taken place at the national level, these are more likely to have come about because of the EU's cohesion policy, which aims to address the differences in development that exist between European regions, and which also features a designated Tourism and Culture funding theme. 'Cohesion policy promotes the development of policy mechanisms, such as the programming approach and multi-level governance that support sustainable development within programme management structures and encourage regions to pursue sustainable

development' (European Commission, 2009, p.12). Consequently, member states are expected to adopt multi-level governance and the partnership approach in order to be able to achieve the aims of the EU's cohesion policy.

Cohesion policy impact

In the area of cohesion policy, the EU invests in actions to promote sustainable development by integrating sustainable development initiatives into national and regional development strategies (European Commission, 2009). For example, in the period 2007–2013, €105 billion, or 30% of the total €347 billion allocation for cohesion policy funds, will be spent on the environment. In addition, sustainable development is a binding principle for all funding objectives of the 2007–2013 funding period (Ferry et al., 2008).

The policy also supports the development of policy mechanisms such as multi-level government and the inclusion of multiple actors to increase 'ownership' of programmes (European Commission, 2009, 2010b). The mobilisation of various partners can make planning and implementation more effective, but ensuring the active participation of key actors, including civil society, can be a challenge.

Positive spillovers to national governance systems are also possible. 'By creating procedures for the discussion and formulation of strategies, project selection, monitoring and evaluation as well as by allocating funds for administrative capacity building, cohesion policy helps to strengthen the policy-making and management ability of the authorities concerned' (European Commission, 2010b, p.244). Nonetheless, the evaluation of the 2006–2010 funding period revealed differences in the experiences of newer and older member states. In new member states, improvements in transparency, accountability, simplification of procedures, partnership, monitoring and evaluation were evident, but it was acknowledged that there was still room for improvement. In older member states, partnership, planning and evaluation had improved and positive spillover into domestic management practice was also noted. Strengthening

of territorial bodies, the establishment of new coordination arrangements, and changes in the administrative culture were also highlighted as positive outcomes (European Commission, 2010b). In addition, the partnership approach was a challenge for new member states, where the concept is still novel, and in older member states stakeholder involvement is more prominent in the design rather than in the implementation stages. Moreover, in all member states partnership was found to be higher in the EU programmes than in domestic policies.

These findings would suggest that local conditions and political systems in member states influence the application of multi-level governance and the partnership approach. According to Ferry et al. (2008), integrating sustainable development into structural funds programmes is a challenging process: defining what constitutes sustainable development is complex because there are many interpretations; integrating sustainable development into objectives and priorities may mean linking interventions across a wide variety of policy themes and project types; the progress and impact of sustainable development-related interventions may be difficult to disaggregate and measure, or may be intangible during the lifetime of the programme. It would be worthwhile to see, then, how tourism governance has been affected by the implementation of the EU's cohesion policy.

Cohesion policy and tourism governance

Tourism is recognised as an important mechanism for the creation of jobs and the development of Europe's less-developed regions. In recognition of this potential contribution, more than €6 billion (or 1.8% of the total cohesion policy budget) is planned to directly support tourism in the 2007–2013 funding period. €3.8 billion is allocated for the improvement of tourist services, €1.4 billion for the protection and development of natural heritage, and €1.1 billion for the promotion of natural assets (European Commission, [2011]). It can be inferred, thus, that cohesion policy has had a profound impact on tourism development and, possibly, tourism governance.

A study on coastal tourism funded by the European Parliament (CSIL, 2008) claimed that structural funding has had a positive impact in terms of institution-building and enhancement of planning capacity, especially in new member states which are less used to participatory planning and bottom-up approaches. Similarly to the findings of the fifth economic report on social, economic and territorial cohesion (European Commission, 2010b), the study on coastal

The review of cohesion policy will undoubtedly affect the governance and sustainability of future projects, including tourism and culture.

tourism claimed that the structural funds had a significantly positive impact on the designing of regional development policies that are based on the partnership principle. However, the study also suggested that in the new member states the bottom-up approach and the partnership principle are less integrated than in the old member states. In these states the bottom-up approach and the partnership principle appeared to have been embedded in both programming and project design, while in the new member states, large-scale involvement of stakeholders was yet to become standard, as the decentralisation process was still weak.

Furthermore, the study highlighted short-termism as a defining feature of partnerships, because the involvement of actors tends to be largely concentrated at the design and planning stages rather

than at implementation. It further argued that the project outcomes were more substantial where a larger range of actors was involved in all policy phases. In terms of private-public partnerships, the report suggested that the private actors engaged in grant-seeking behaviour for private investment needs. For other stakeholders, the promotion of a specific aspect is the only contribution foreseen in the design of the interventions (for example, environmental associations asking for environmentally-friendly measures). Furthermore, commercial companies have different aims, aspirations and standards to the public sector agencies. The combined effect of all these facts made establishing effective partnerships a challenge (CSIL, 2008, p.51).

Examples from the evaluation of other tourism projects funded through cohesion funds highlight similar successes and similar challenges. For instance, the integrated ecotourism development of the Dráva Basin project in Hungary consisted of 44 sub-projects which brought together 31 partners with a budget of €3.1million. The project evaluation report identified several obstacles in the partnerships and the rigidity of the monitoring process, largely because of local administration issues and lack of expertise in the managing authorities (Hajós, 2007). The marketing of Medzilaborce, Slovakia as Warhol City, (Višňovský, 2007) highlighted the disagreement of some local stakeholders with the artistic integrity and quality of some of the attractions that were created as part of the problem, and the need to involve local tourism entrepreneurs in future projects. Finally, in the development of 'World Heritage Laponia' in Sweden as a tourist destination (Aro, 2009), two local authorities set up an office to support and coordinate tourism in the area. The office helped bring together small companies which did not have the resources for direct marketing. There was strong demand from local entrepreneurs for these services, and the project helped create synergies in the local community.

It is obvious that the EU cohesion policy has had a substantial impact on the development of sustainable tourism in the EU, and the examples

presented here demonstrate that this impact has potentially extended to tourism governance at the national and regional levels. However, the absence of a long-term evaluation of such projects means that it is not possible to ascertain whether partnerships survive only during the programming period, or if they are sustained in some form or manner after the project has been completed. In addition, it is not clear to what extent the EU's governance principles gradually begin to influence or even change national practices, although the widespread use of bottom-up approaches and partnerships in the old member states would suggest that multi-level governance is gradually becoming the norm.

Conclusion

The purpose of this article was to review the EU's approach to tourism sustainability and consider the impact of cohesion policy on tourism governance in member states.

The review of the EU's approach to sustainable development and sustainable tourism demonstrated the permeation of sustainable development as a priority in all its policies. In addition, the EU has created a unique system of multi-level governance which promotes sustainability, partnership and multi-stakeholder involvement throughout the policy and decision-making processes. The same principles have also permeated the EU's conceptualisation of sustainable tourism, but the lack of a tourism competence until recently led to the creation of 'meta-policies' for tourism which are limited to the exchange of best practices and coordination of action (Halkier, 2010). Nonetheless, the implementation of the new EU tourism policy could also

have substantial implications for the governance of sustainable tourism.

Projecting the findings to Steurer's (2009) five principles for governance for sustainable development (horizontal integration, vertical integration, participation, reflexivity and intergenerational equity), it is clear that the EU's cohesion policy has met some of these objectives. It has promoted the inclusion of intergenerational perspectives (intergenerational equity) and has encouraged the involvement of a wide range of stakeholders in the policy process (vertical and horizontal integration). Evidence from the implementation and evaluation of the programmes, though, has demonstrated that stakeholder involvement (participation) is weak and some partners struggle to cooperate effectively because of their inexperience or lack of understanding of multi-level governance processes (reflexivity).

It is difficult to aggregate the impact of cohesion policy on tourism governance at the sub-national level, especially as there is variation in the structures at the local level, and some member states have greater experience in handling structural funding. It is likely that change has taken place as a result of the EU's cohesion policy, but the depth and extent of change may vary significantly between member states. Although all the tourism projects funded through the cohesion policy have to engage several partners, it is not clear whether these partnerships simply dissolve once the project is completed. Nonetheless, both the fifth report on economic, social and territorial cohesion (European Commission, 2010b) and the study on coastal tourism (CSIL, 2008) demonstrated that often stakeholders are involved only in the design stage, which

would suggest that the partnerships that are formed are mostly short-term and project-specific. In addition, the long-term impact of the projects is difficult to ascertain, as the final evaluation takes places only a few months after the project has been completed.

A review of the cohesion policy is currently under way and suggestions have been made to look more closely at the practice of partnership, which varies significantly between member states (Bachtler and Mendez, 2010), and at ways of securing the involvement of local authorities, economic and social partners and non-governmental organisations, which is frequently minimal and only in some stages of the policy process (Polverari and Mitchie, 2009). Through capacity-building – developing technical knowledge and expertise – non-state actors can become more credible and active partners in programme management and implementation (Bachtler and Mendez, 2010). The review of cohesion policy will undoubtedly affect the governance and sustainability of future projects, including tourism and culture.

In conclusion, the EU's approach to sustainable development and its unique style of governance has influenced the application of sustainability in its member states. In order to more fully assess the impact of the sustainable development and cohesion policies on tourism, a systematic review of tourism structures in the EU member states, as well as past tourism projects, should be undertaken. This analysis could also be complemented with some in-depth case studies, similar to the European Parliament study on coastal tourism.

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Biophysical Limits and Green Growth

For a world of seemingly unlimited resources, mankind is gradually accustoming itself to the Earth as a limited, crowded and finite space, with limited resources for extraction and a narrowing capacity for waste disposal of pollution.

Jean-Claude Trichet (quoted in Jackson, 2009, p.67)

In mid-June 2011 the Institute of Policy Studies and Landcare Research co-hosted a symposium in Wellington on ‘Biophysical Limits and their Policy Implications’.¹ The symposium addressed two interrelated sets of questions. The first are *empirical* in nature: what are the earth’s biological and physical (or biophysical) limits and what are the practical implications of these limits for humanity? For instance, is exponential global economic growth, as measured by GDP, technically possible on a planet with limited natural resources and waste absorption constraints, and, if so, under what conditions? Does ‘green’ growth, as proposed by the OECD (2011), offer a feasible way to circumvent or negate these

limits, and, if so, what policy changes will be required to enable such growth? Second, there are various *normative* issues: given the earth’s biophysical properties, how should we choose to live? In other words, how should the empirical reality of absolute constraints shape the nature of humanity’s goals and the means chosen to pursue them? Further, what ethical criteria and other considerations should inform the setting of global limits or thresholds – or what Rockström et al. (2009a, 2009b) call ‘planetary boundaries’ – within which humanity should endeavour to operate?

Drawing on the contributions to the symposium on biophysical limits, this article focuses on four main issues: the nature of the earth’s biophysical limits; the setting of ‘safe’ planetary boundaries; the implications of biophysical limits for economic growth; and the political economy issues involved in moving the global economy onto a ‘green’ growth path. But first, let me provide some context.

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Background

Debates about environmental limits and economic growth are not new. Nor are concerns over the capacity of this planet to sustain an ever-increasing human population. More than two centuries ago, in 1798, Thomas Malthus published his important study *An Essay on the Principle of Population*, in which he argued that the number of human beings would ultimately be limited by scarce resources, and especially by constrained food supplies. As he put it: 'The power of population is indefinitely greater than the power in the earth to produce subsistence for man' (Malthus, 1798, p.13). Thus far, Malthus has been wrong. The human population has continued to grow and the production of food has expanded even more rapidly (although significant distributional issues remain). But whether, and for how long, it will be possible to feed an ever-rising population is uncertain. After all, much global food production currently relies upon finite non-renewable and/or conditionally renewable resources, as will be discussed shortly.

Almost two centuries after Malthus, Meadows et al. (1972), of MIT, argued in *The Limits to Growth* (and various subsequent publications eg, 1992, 2004) that long-term exponential economic growth is impossible, given the earth's limited resources and constrained absorptive capacity. Indeed, the MIT team claimed that even under the most optimistic assumptions concerning technological innovation, continuing economic and population growth would eventually lead to overshoot and collapse. The thesis advanced by Meadows et al. proved to be highly controversial and was the subject of many sustained and detailed rebuttals (e.g. Cole et al., 1973). Such critiques – which covered a range of methodological, empirical and normative issues – led many policy makers to dismiss the core arguments in *The Limits to Growth* as utterly flawed and misguided.

But in recent years opinions within the international policy community have begun to change as concerns over the planet's biophysical limits have intensified (e.g. see OECD, 2011; Reynolds, 2011; UNEP, 2007; Whitehead, 2008). In part, this revisionism has

been prompted by growing anxiety over anthropogenic climate change and its likely negative ecological, economic, social and political impacts (see Garnaut, 2008; Hansen, 2009; IPCC, 2007; Stern, 2007, 2009, 2011). But there has also been mounting evidence that humanity is harming many other vital biophysical systems, living beyond the planet's means (i.e. consuming or damaging at a rate exceeding what nature can regenerate), and exceeding 'safe' planetary limits (Rockström et al., 2009a, 2009b). Such evidence is reflected in the findings of numerous reports from international organisations, scientific academies and

diversity is declining, as is the number of species on the planet. It is estimated that since around 1800 'humans have increased the species extinction rate by as much as 1,000 times over background rates typical over the planet's history'. Currently, up to 30% of mammal, bird and amphibian species are threatened with extinction. And to make matters worse, the growing human population, projected to reach at least 9 billion by 2050, is bound to increase pressures on already fragile ecosystems. As a result, the earth faces another great spasm of extinction – but this time caused by humanity, not natural forces (see also Sukhdev et al., 2008).

It is estimated that since around 1800 'humans have increased the species extinction rate by as much as 1,000 times over background rates typical over the planet's history'.

leading research institutions, as well as various studies updating (and to some degree confirming) the original arguments advanced by Meadows et al. (e.g. Randers, 2008; Turner, 2008).

To illustrate briefly: a large-scale project – the 'Millennium Ecosystem Assessment' – sponsored by the United Nations and involving 1,300 leading scientists over several years was completed in 2005. The authors of the synthesis report on *Ecosystems and Human Well-Being* observed that of the various ecosystem services² examined, approximately 60% were 'degraded' or being 'used unsustainably', including fresh water, capture fisheries, and air and water purification (Millennium Ecosystem Assessment, 2005). Similarly, the report highlighted evidence of an increasing 'likelihood of nonlinear changes in ecosystems (including accelerating, abrupt and potentially irreversible changes) that have important consequences for human well-being'. These include 'abrupt alterations in water quality, the creation of "dead zones" in coastal waters, the collapse of fisheries, and shifts in regional climates'. To compound problems, genetic

Related to this, a team of scientists concluded in 2002 that humanity's collective demands began to exceed the earth's regenerative capacity about 1980 (Brown, 2009, p.14). By 2009, the demands on natural systems exceeded their sustainable yield capacity by close to 30%. This means that human beings are depleting the planet's natural assets and doing so at an increasing rate. Such trends can continue only for so long before negative feedback mechanisms are triggered, critical thresholds are crossed, and irreversible ecosystem damage is inflicted. Hence, while the relevant timescales are uncertain, the long-term implications are clear.

More recently, in May 2011 the OECD published a major report on the implications of global ecological considerations for economic management, entitled *Towards Green Growth*. The study emphasises the finite nature of this planet, the vital importance to human well-being of natural capital, the huge value to humanity of the ecosystem services provided by the earth's biosphere, and the need to live within certain non-negotiable planetary boundaries. Reports such as

these underscore the growing awareness amongst senior policy makers and leading economists (e.g. Arrow et al., 1995, 2004) that humanity must take resource scarcity and ecological limits seriously, and do so, as appropriate, on multiple scales: global, regional and local.

Biophysical limits

Three types of biophysical limits have been the primary focus of attention in the relevant literature over recent decades: material or resource limits; waste absorption limits; and thermodynamic limits. Let me briefly explore each of these limits.

With respect to specific natural resources, considerable international attention has focused in recent years on the supply and demand for fossil fuels, and especially the issue of 'peak oil'.

Limited resource inputs

While some natural resources are *unconditionally renewable* and essentially inexhaustible (e.g. sunlight, marine energy and wind energy), many resources required for human well-being are *non-renewable* (at least on non-geological timeframes). This includes minerals (both metallic and non-metallic) and fossil fuels (e.g. oil, gas and coal). Many other resources are *conditionally renewable*: they regenerate at relatively slow rates and are limited in supply (e.g. fresh water, soil and wood).

With respect to non-renewable and conditionally renewable natural resources, there has been vigorous debate about the following matters:

- the nature, quantity and quality of the reserves of the various minerals and fossil fuels used in production processes;
- the estimated life of these reserves at current and projected rates of consumption;

- the extent to which particular resources are *substitutable* (or likely to be substitutable with new and evolving technologies); and
- the consequences of natural resource constraints for continued economic growth (or even sustaining current consumption levels).

Optimists argue, for instance, that a combination of market forces (i.e. rationing by price), technological innovation and prudent policies will ensure that any scarcity of resource inputs does not seriously affect global economic growth, certainly during the 21st century. By contrast, other experts maintain that economic growth will be

severely constrained by limited natural resources well before 2100, not least because of limits to substitutability and because efficiency improvements may be constrained by the very nature and properties of the physical world. Many experts are also concerned about high levels of path dependence and inertia (e.g. with respect to various energy, transport and social systems), the potentially large social, economic and political costs involved in transitioning from one technological state to another (e.g. moving from a carbon-intensive to a low-carbon economy), the risks of inducing abrupt, non-linear and disruptive changes in the key biophysical systems, and the potential for crossing irreversible thresholds. Some of these matters were addressed during the symposium on biophysical limits (e.g. see Rutledge, 2011; Saunders, 2011; Turner, 2011; Walker, 2011).

Aside from this, advocates of 'strong sustainability' (e.g. see Adams et al., 2009) maintain that non-substitutable

resources should not be used up or destroyed. It is argued that such resources are intrinsically valuable and/or that 'intergenerational justice imposes stewardship obligations on the current generation to preserve options for future generations' (Hay, 2007, p.115). From this perspective, destroying non-substitutable resources (and ecosystems) is unjust because it violates the rights of future generations. Accordingly, certain resources (and ecosystems) should be preserved in perpetuity. Against this, advocates of 'weak sustainability' maintain that using up non-substitutable resources is acceptable, at least to a certain extent (although exactly how much is often not specified). Furthermore, preventing humanity from using resources that are potentially non-substitutable is unrealistic, impractical and costly. After all, without a universally agreed and collectively enforced approach, protecting non-substitutable resources is impossible.

With respect to specific natural resources, considerable international attention has focused in recent years on the supply and demand for fossil fuels, and especially the issue of 'peak oil'. This has included controversy over when oil production will peak (if it has not done so already), how rapidly production levels will fall after the peak, and the likely impact on energy prices and economic activity (see Department of Energy and Climate Change, 2009). But while oil is a crucially important resource, so too is fresh water. Indeed, not merely is water an essential input into many human activities, it is largely non-substitutable and very unevenly distributed. As Howard-Williams et al. (2011) noted at the symposium on biophysical limits, less than 3% of the world's water is fresh, and of this less than 1% is accessible and readily usable by human beings. To compound problems, the global availability of fresh water per capita has declined markedly over the past 50 years and the rate of decline is accelerating. As a result, demand now exceeds supply in around 80 countries. Population growth and climate change will exacerbate matters, with severe water stress becoming increasingly common.

While New Zealand has a relative abundance of fresh water, its spatial distribution is highly uneven. Further, some water resources are already fully allocated and shortages are growing. Better water management is thus of crucial importance. Fortunately, this is now accepted by most, if not all, stakeholders, as reflected in the deliberations of the Land and Water Forum.

Adequate water supplies are, of course, critical for food production. Not surprisingly, therefore, the risk of resource shortages having a negative impact on global food supplies has been of growing concern (see Cribb, 2010). According to the chief scientific adviser to the British government, Sir John Beddington (2009), the global community faces a 'perfect storm' over food production within decades. Contributing factors are likely to include:

- continuing population growth, especially in South Asia and Africa;
- a continuing loss of top soil and soil fertility due to poor agricultural and land management practices, rapid deforestation, desertification and erosion, pollution, the intensification of storms and droughts, etc. (Brown, 2009, pp.32-38);
- a growing loss of agricultural land due to urbanisation and industrialisation;
- a continuing loss of wild fisheries due to pollution, over-exploitation, ocean acidification and rising sea temperatures. According to some estimates, around three-quarters of oceanic fisheries are being fished at or beyond capacity or are recovering from over-exploitation (Brown, 2009, p.15). Acidification and rising sea temperatures, amongst other things, could result in a loss of 60% of coral by 2030 (Sukhdev, 2008, p.9), with huge implications for global fish stocks;
- rising energy prices, due to peak oil;
- growing shortages of fresh water due to the effects of climate change, together with falling water tables and the loss of once huge fossil aquifers (due to the excessive mining

of underground water). Declining supplies of groundwater are already contributing to the loss of millions of hectares of irrigated crop land;

- the loss of insect pollinators (especially bees) as a result of pollution and the excessive use of chemicals. Note that the value of pollination services provided by insect pollinators was estimated at €153 billion in 2005 for the main crops that feed the world (OECD, 2011);
- shortages of fertilizer (e.g. phosphate reserves are likely to be exhausted

... any serious and protracted global food shortages could have major economic, social and political consequences – including the risk of civil disorder and violent conflict.

within a century or so if consumption grows at 3% per annum) (see Gilbert, 2009);

- the limits to photosynthesis (Diamond, 2005, p.491); and
- the continued diversion of crop land for bio-fuel production.

Obviously, any serious and protracted global food shortages could have major economic, social and political consequences – including the risk of civil disorder and violent conflict. If sufficiently widespread or destabilising, such developments are bound to slow economic growth, if not provoke a worldwide recession. Having said this, net food exporters, like New Zealand, stand to gain financially from such shortages (and the related price increases). But any such benefits need to be seen against an otherwise potentially bleak global context, with severe human suffering. Avoiding such a scenario will require prudent management of key global resources, not least fresh water, soil, agricultural land and wild fisheries.

Thus far, the track record has not been encouraging.

Waste absorption limits

While the planet's natural resources are limited, so too are its 'sinks'. In other words, the capacity of the biosphere to absorb or assimilate the waste and pollution generated by economic activity is constrained. Hence, even if the scarcity of certain resource inputs does not constrain economic growth and human activity over the foreseeable future, waste absorption limits may well have adverse

consequences (see Reynolds, 2011). The limited capacity of the biosphere to absorb humanity's increasing greenhouse gas (GHG) emissions, especially carbon dioxide (CO₂), is perhaps the greatest single threat on the horizon. Currently, atmospheric concentrations of CO₂ are rising rapidly (at around 2.5 parts per million per annum); within a few years they will reach 400 parts per million (or more than 40% above pre-industrial levels). Global mean surface temperatures, which have already risen by about 0.8°C over the past century, are projected to increase by at least another 2°C by 2100, unless GHG emissions are substantially reduced. Such warming and related climate changes will have serious and potentially irreversible consequences, including substantial sea-level rise, more severe storms and droughts, and a massive loss of biodiversity. By the end of the century, the sea level could be as much as a metre higher (and possibly more). Such a rise will cause huge and widespread damage to coastal infrastructure and settlements (including roads, railway

lines and ports), and inundate many river deltas and low-lying islands. It is hard to believe that such damage could occur without having negative impacts on global economic growth, as well as human well-being. Despite these risks, few governments have implemented significant or effective policy measures to reduce GHG emissions.

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Thermodynamic limits

According to Herman Daly (1973, 2010), the laws of thermodynamics place an absolute limit on the efficiency with which resources can be utilised, thereby constraining the potential for long-term exponential economic growth. For instance, in keeping with the first law, the production of material objects requires an irreducible minimum quantity of resources, while the second law (or the law of entropy) means that the same matter-energy cannot be used repeatedly for similar purposes.

But whether (and/or at what point) these thermodynamic limits are likely to affect economic activity remains debatable. Hay (2007, p.114) highlights various counter-arguments to the claimed constraints imposed by the first law of thermodynamics. First, as economies have grown richer, the demand for services has increased much faster than for products. Since the provision of services typically requires fewer material inputs, any constraints imposed by thermodynamic limits are likely to lessen over time (or at least be delayed). Second, there has been a steady increase in resource efficiency over recent decades, the product of continuing innovation and human ingenuity. Thus far, there has been no evidence that productivity improvements are slowing

down or facing insurmountable physical barriers.

Regarding the second law, the concern is that energy is dissipated through the production process while, at the same time, natural resources are degraded. Ultimately, it is argued, this will limit economic growth. But the counter-argument is that solar energy can be used

to recover wastes and recycle dissipated materials (Hay, 2007, pp.114-5). The only constraint, from this perspective, is the amount of energy that can be captured from the sun. This will depend primarily on the level of technology – and this continues to expand. In short, there is no evidence to date that the laws of thermodynamics have constrained global economic growth or that they will do so in the near future. But over the longer term our confidence probably needs to be more tempered.

Establishing safe biophysical boundaries

Increasing attention has been given in recent years to determining 'safe' global biophysical limits (or planetary boundaries). The relevant literature is evolving, and many questions remain unanswered. Among the most comprehensive efforts to delineate such limits is the work of a distinguished team of scientists led by Johan Rockström (2009a, 2009b). The group has identified nine planetary boundaries (see Table 1). These include atmospheric CO₂ concentrations, extinction rates, global freshwater use, the quantity of phosphorus flowing into the oceans, and so forth. Their analysis suggests that humanity is already transgressing at least three of these boundaries (i.e. with respect to climate change, the rate of

biodiversity loss and changes to the global nitrogen cycle). As one might expect, the proposed parameters have prompted vigorous debate (e.g. Schlesinger, 2009). After all, determining what is safe is not just a scientific exercise. It also involves ethical judgements, some of which are profoundly difficult. For instance:

- How much harm, and of what kind, is morally acceptable? To be more specific, how many species should we be prepared to sacrifice on the altar of human 'progress'?
- What risks should we be willing to tolerate? For example, should we be prepared to take the risk of inducing the irreversible melting of a major ice sheet, such as the Greenland or the West Antarctic ice sheet – with the prospect, eventually, of a multi-metre sea-level rise?
- What costs should we be willing to bear in order to protect the interests of future generations and preserve non-human species?
- What safety margin should we incorporate into any internationally agreed limits or thresholds in order to reduce the chances of abrupt, non-linear changes, other unexpected outcomes, and wider systemic risks?

Such questions are not amenable to simple answers. Yet they deserve our urgent attention. After all, the best available evidence suggests that if we persevere with existing policy settings we will face mounting environmental problems and run very serious risks. While the topic of planetary boundaries was briefly canvassed at the Wellington symposium, it needs much more sustained, rigorous and interdisciplinary analysis.

Biophysical limits and economic growth

Thus far I have briefly discussed the nature of the earth's limited resources and sinks, and their implications for human activities. As will be evident, there is no consensus on whether long-term exponential economic growth is technically feasible. Many experts are sceptical. As the distinguished economist Lord Stern (2009, p.10) has put it: 'A picture of indefinite expansion is an implausible story of the future.'

But if continuing global growth is feasible at least, say, over the 21st century, it seems reasonable to conclude that such an outcome will be possible only if human activities are utterly consistent with the assimilative and regenerative capacities of the earth's biosphere. Above all, this means that growth must be *decoupled* from its negative ecological impacts and physical (or resource) throughputs. Where such impacts or resource use already exceed safe and sustainable parameters, such decoupling must occur in *absolute*, not just *relative*, terms. In other words, there must be an absolute reduction in environmental pressures per unit of output (e.g. GHG emissions or carbon intensity per unit of output), not merely improvements in ecological impacts and/or resource use per unit of output.³ Relative reductions will not be enough, certainly if overall output is increasing more rapidly than the improvements in resource efficiency or environmental impact per unit of output. As Jackson (2009, p.71) explains, for absolute decoupling to occur, the rate of relative decoupling must exceed the rate of increase in overall output (or GDP).

Moreover, to sustain growth over lengthy time periods, ever more extensive absolute decoupling will be required (i.e. across an ever wider range of environmental impacts). In practical terms, this means that the current carbon-intensive and resource-intensive global economy must be transformed through the application of resource-conserving technologies into one characterised by low resource intensity and minimal environmental impacts. Such an economy will need to reuse or recycle virtually all its natural resource inputs; rely primarily, if not solely, on renewable sources of energy; preserve critical (or non-substitutable) natural capital; and ensure that all forms of pollution and other environmental impacts – including GHG emissions – remain within safe biophysical limits.

Both the scale and rate of the decoupling required over the next few decades it vastly greater than anything so far achieved in human history. It will entail much more than is currently envisaged

Table 1: Planetary boundaries

Earth-system process	Parameters	Proposed boundary	Current Status	Pre-industrial value
Climate Change	(i) Atmosphere carbon dioxide concentration (parts per million by volume)	350	387	280
	(ii) Change in radiative forcing (watts per metre squared)	1	1.5	0
Rates of biodiversity loss	Extinction rate (number of species per million species per year)	10	>100	0.1-1
Nitrogen cycle (part of a boundary with the phosphorus cycle)	Amount of N ₂ removed from the atmosphere for human use (millions of tonnes per year)	35	121	0
Phosphorus cycle (part of a boundary with the nitrogen cycle)	Quantity of P flowing in oceans (millions of tonnes per year)	11	8.5-9.5	-1
Stratospheric ozone depletion	Concentration of ozone (Dobson unit)	276	283	290
Ocean acidification	Global mean saturation state of aragonite in surface sea water	2.75	2.90	3.44
Global freshwater use	Consumption of freshwater by humans (km ³ per year)	4,000	2,600	415
Change in land use	Percentage of global land cover converted to cropland	15	11.7	Low
Atmospheric aerosol loading	Overall particulate concentration in the atmosphere on a regional basis		To be determined	
Chemical pollution	For example, amount emitted to, or concentration of persistent organic pollutants, plastics, endocrine disrupters, heavy metals and nuclear waste in, the global environment, or the effects on ecosystem and functioning of Earth system		To be determined	

Boundaries for processes in light blue have been crossed

Source: Rockström et al., 2009b, p.473

in the sustainable development strategies which various countries have enunciated (e.g. see Frame and Bebbington, 2011). And the changes must be global in nature, not limited to a subset of jurisdictions.⁴

Take, for instance, atmospheric CO₂ concentrations: as noted earlier, these are now close to 400 parts per million, or nearly 50 parts per million above what Rockström et al. (2009a, 2009b) and Hansen et al. (2008) regard as 'safe' (or at least low enough to minimise the risk of large-scale, abrupt and irreversible environmental damage). Yet to stabilise CO₂ concentrations at 350 parts per

million (or even close to this level) will require massive cuts in emissions (especially, but not solely, in the developed world). In fact, negative net emissions globally will ultimately be necessary for a protracted period. This will not be possible without a dramatic fall in the carbon intensity of world output. Whether such reductions are achievable is open to debate. Many experts are sceptical, for either technical or political reasons. Jackson (2009) highlights the daunting nature of the challenge:

1. Global carbon intensity declined by almost a quarter from just over 1

kilogram of carbon dioxide per \$US in 1980 to 770 grams per \$US in 2006 (p.69). But while carbon intensity has declined on average by 0.7% per year since 1990, the global population has increased by 1.3% per annum and average per capita income has increased by 1.4% (in real terms) per annum. As a result, there has been a net increase of 2% per annum in CO₂ emissions (p.79).

2. To meet an atmospheric stabilisation target of 450 parts per million (for

moving to a safe concentration level will also be hard. This is because a dynamic and flexible global economy is needed if low-carbon technologies are to be developed and adopted on the scale and with the speed required. Quite apart from this, low or zero global growth will lock large numbers of people into absolute poverty (i.e. unless there is a considerable redistribution of income and wealth between developed and developing countries and within the developing world).

... developing and implementing new technologies and achieving the necessary improvements in the management of the planet's natural resources will require major policy changes.

CO₂), annual emissions need to be reduced at an average rate of 4.9% per year until 2050. Given population growth (of about 0.7% per annum) and income growth (of about 1.4% per annum), this requires a technological (or carbon-intensity) improvement of 7% per annum: this is ten times faster than the current rate of improvement. Put differently, by 2050 the average carbon content of economic output will need to be less than 40g of CO₂ per \$ of output, a 21-fold improvement on the current global average.

3. Achieving an even lower, and safer, stabilisation target for CO₂, such as 350 parts per million, would be even more demanding.

Overall, then, the challenges ahead are formidable, not least because the global economy is characterised by substantial path dependence (e.g. due to the long lifetime of most physical infrastructure, including carbon-intensive energy systems). Moreover, continuing economic growth will make it harder to achieve the emissions reductions required to stabilise CO₂ concentrations. Yet without growth,

Plainly, our capacity to decouple growth from environmental impacts will depend significantly on innovation and related technological advances. As the OECD (2011, p.10) has argued:

Existing production technology and consumer behavior can only be expected to produce positive outcomes up to a point; a frontier, beyond which depleting natural capital has negative consequences for overall growth. We do not know where this frontier lies in all cases but we do know that the ability of reproducible capital to substitute for (depleted) natural capital is limited in the absence of innovation. By pushing the frontier forward, innovation can help to decouple growth from natural capital depletion.

But developing and implementing new technologies and achieving the necessary improvements in the management of the planet's natural resources will require major policy changes. To quote the OECD again:

A green growth strategy is centred on mutually reinforcing aspects of economic and environmental policy. It takes into account the full value of natural capital as a factor of production and its role in growth. It focuses on cost-effective ways of attenuating environmental pressures to effect a transition towards new patterns of growth that will avoid crossing critical local, regional and global environmental thresholds ... It is about fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies (ibid., pp.10, 18).

The central feature of a green growth framework ... is recognition of natural capital as a factor of production and its role in enhancing well-being. ... Natural capital contributes to production by providing crucial inputs, some of which are renewable and others which are not. It also influences individual and social welfare in various ways, through the effect that the environment has on health, through amenity value and through the provision of ecosystem services ... the contribution of natural capital to production is often not priced and the contribution of natural capital to individual welfare is not appropriately valued. (pp.20, 23)

Greening growth will require much more efficient use of resources to minimise environmental pressures. Efficient resource use and management is a core goal of economic policy and many fiscal and regulatory interventions that are not normally associated with a 'green' agenda will be involved. And in every case, policy action requires looking across a very wide range of policies, not just traditional 'green' policies (p.10).

The report goes on to outline in detail the kinds of policies needed to ensure that natural capital and ecosystem services are properly managed. In brief, such policies include:

- the proper pricing of pollution and the use of natural resources (e.g. via

- taxes and tradable permits) in order to internalise negative environmental externalities, minimise the over-exploitation of scarce natural capital and ensure that the true value of ecosystem services is reflected in decision-making frameworks;
- better regulatory standards to minimise ecological damage and enhance economic efficiency;
- the removal of subsidies that encourage pollution and the excessive extraction of natural resources;
- a new regime of metrics for measuring economic, social and environmental progress (see Stiglitz et al., 2009); and
- financial compensation for the least advantaged groups in society so that the distributional consequences of change are minimised.

Failure to implement such policies will almost certainly reduce incentives for business to invest in low-carbon technologies and new ways of using natural resources more efficiently. It will also undermine efforts to shift patterns of public investment (especially with respect to transport and energy infrastructure). And without a massive shift in private and public investment (and hence in production and consumption patterns), it is highly likely that an increasing number of 'safe' biophysical boundaries will be crossed (locally, nationally and globally). Eventually, the negative biophysical feedbacks from such overshooting will undermine global economic growth, if not generate a major economic crash.

But while it is easy to itemise the policies required for greater environmental (and hence economic) sustainability, most of the policies in question pose significant technical and design challenges. For example:

- What criteria should we use to determine the appropriate quality standards for water, air and soils, and how should these standards be enforced?
- How should we value natural capital and ecosystem services? For instance, in addition to the value derived from the direct and indirect uses of such capital, what weight should be given to non-use values (such as 'existence' values)?

- How should we determine the appropriate amount to charge polluters? For instance, with respect to climate change, how should we decide the monetary value of the environmental damage caused by rising concentrations of GHGs, and hence the cost that polluters should pay for each unit of emissions?
- What approach should be adopted when there is inadequate information about the natural rate of regeneration (of various kinds of natural capital) or the assimilative capacity of local ecosystems?

A common theme in the relevant literature ... was that the main barriers to adopting sustainable policies are political and institutional, not technical. Put bluntly, we have the means, but not the will.

- What new metrics for assessing environmental and social progress are required? And by what yardsticks should we measure and assess economic performance?
- In the case of global public goods (or common-pool resources), effective policy interventions to protect such goods will require international cooperation and collaboration. But how is this to be achieved? How are the required governance arrangements to be constructed?

There is, of course, no lack of thoughtful answers to such questions. And during the symposium on biophysical limits a variety of ideas, approaches and governance models were advanced (e.g. Dinica, 2011). Reference was also made to local and international examples of good practice with regard to sustainable resource management (e.g. Reynolds, 2011). Equally, however, it is evident that current policy frameworks and governance arrangements are not adequate to address the magnitude, range and urgency of the biophysical constraints facing humanity.

Much needs to be done, not least to enhance public understanding of the nature of the problems confronting policy makers and build consensus amongst key stakeholders on cost-effective policies for delivering green growth.

The political feasibility of sustainability

This takes us to the heart of the matter: what is politically possible and will it enable global sustainability? It is here that much pessimism abounds. A common theme in the relevant literature and during the symposium was that the main barriers to adopting sustainable policies are

political and institutional, not technical. Put bluntly, we have the means, but not the will.

Politically, the capacity to implement fundamental policy shifts is limited by institutional resistance (particularly from powerful vested interests), global coordination problems and weak international institutions, and human myopia and self-interest. These political constraints are most evident in the faltering efforts to ensure the sustainable management of our global common-pool resources, especially the atmosphere and oceans. Governance issues of this nature were the focus of several of the presentations at the symposium (Dinica, 2011; Hatfield-Dodds, 2011; McGinnis, 2011; Reynolds, 2011; Walker, 2011)

With respect to climate change, for example, policies to reduce GHG emissions have been thwarted or diluted across most of the democratic world because of four politically salient and deeply entrenched asymmetries (Boston and Lempp, 2011). First, there is a voting asymmetry: future generations, unlike

current generations, do not have a vote, yet their interests are profoundly affected by the decisions being taken currently. Second, there is a cost-benefit asymmetry: the costs of action to reduce GHG emissions are certain, visible, direct and immediate, whereas the benefits of such action are less certain, intangible, indirect and long-term. Third, reducing emissions will impose significant costs on powerful, concentrated interests (e.g. the fossil fuel industry). By contrast, the beneficiaries of such measures are dispersed over time and space, and have much less incentive to organise to protect their interests. Finally, as noted earlier, there is an accounting asymmetry: for firms and governments the loss of financial assets counts, the loss of natural capital does not. For such reasons, policy measures that make sense in environmental terms, and indeed also economically on a long-term basis, are extremely difficult to implement. Moreover, there are no simple or easy solutions to the four asymmetries identified above. If there were, we would surely have discovered them by now.

Such considerations lead to a further troubling question: will modern civilisation destroy itself? After all, previous civilisations have mismanaged their environments and suffered dire consequences – the Sumerians, Babylonians and Mayans, to name but a few (Brown, 2009; Diamond, 2005). The main difference is that these civilisations had much less knowledge about the consequences of their actions than we do today. But knowledge is one thing; a willingness to act prudently is quite another. Thus, as Brian Walker (2011) observed at the symposium on biophysical limits: ‘we lack the necessary,

effective global governance to allow our unprecedented information and technology to provide, in time, a solution to the global sustainability crisis ... There is a grave danger of a long nightfall if we fail – climate change, disease, famine, migration and state failure have together triggered long dark ages in the past; all five are now active’. Similarly, to quote Daniel Rutledge (2011): ‘We can choose to acknowledge limits and change our systems (institutions, values) accordingly and thus avoid undesirable outcomes (collapse). Or not ... The *Limits to Growth* and more recent research on many topics convey a common message: the longer we delay action the less likelihood we have of achieving desirable future outcomes due to inertia in the global system.’

Conclusion

In summary, the evidence suggests that maintaining global economic growth over an extended period of time will only be possible under very strict conditions; above all, the resilience of vital ecosystem services and biophysical systems must be protected. Currently, these conditions are not being met: collectively, humanity is overshooting critical biophysical parameters (on multiple scales) and seriously degrading ecosystems on a planetary-wide basis. This can continue only for so long. Eventually, the negative impacts will overwhelm our capacity to cope, and de-growth will become inevitable. The resulting social and political tensions will be immense – and probably unmanageable. As Paul Hawken has put it: ‘At present we are stealing the future, selling it in the present, and calling it gross domestic product. We can just as easily have an economy that is based on

healing the future instead of stealing it. We can either create assets for the future or take the assets of the future. One is called restoration and the other exploitation’ (quoted in Brown, 2009, p.15).

A critical challenge over the coming decades will be not only to deepen our understanding of the biophysical properties and limits within which humanity must live, but also to design and implement new governance arrangements to ensure that these limits are respected and any overshooting is minimised. This will require a concerted effort to learn from our experience with existing policy models and frameworks and then apply this learning with wisdom and skill. But new approaches will also be needed, especially if the crucial global collective action problems – like climate change and the protection of marine ecosystems – are to be addressed effectively and expeditiously. This will require an unprecedented level of international cooperation and solidarity. Is this a realistic possibility? Let us hope so.

- 1 I would like to thank Valentina Dinica, Bob Frame, Daniel Rutledge and Simon Smelt for their helpful comments on earlier versions of this article, and Clare Hammond for the energetic assistance she provided over the summer months of 2010–11 in researching some of the issues addressed during the symposium.
- 2 There are four main kinds of ‘ecosystem services’: provisioning services (e.g. the production of energy, food, water and life-saving drugs); regulating services (e.g. water purification, pest and disease control, and climate regulation); supporting services (e.g. seed dispersal); and cultural services (e.g. recreational and spiritual benefits).
- 3 For non-renewable resources, absolute decoupling will be essential eventually, whether desired or otherwise.
- 4 This point is important because in recent decades many developed countries have reduced their energy consumption (and carbon intensity) per unit of output, but much of this reduction has been the result of ‘the outsourcing of heavy industrial activity to emerging economies’, especially China (IIER, 2011). As a result, there are now large embedded energy transfers occurring from developing to developed economies.

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David Penman, Andrew Pearce
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From Competition to Collaboration Challenges for New Zealand Science

Science has long been based on a model of individual and institutional competition. The reforms of the sector in the 1990s led to the formation of the crown research institutes (CRIs), which had responsibilities for specific economic or environmental sectors, independence and separate governance. The bulk of funding came via the Foundation for Research, Science and Technology, with often intense competition for resources. This was exacerbated by the openness of the investment processes to universities, research associations and other research providers. Over the past decade there were various attempts to encourage

interdisciplinary and collaborative programmes, manage overbidding and establish alternative models, such as outcome-based investments, but there were still significant transaction costs in the competitive bidding processes. Doubts remained as to whether the nation was maximising benefits.

A full analysis of the performance of the science system is beyond the scope of this article. However, we can provide some perspectives from a review of a large-scale global collaborative programme in marine biodiversity, the Census of Marine Life, and frame these within the context of how emerging policy settings for science in New Zealand may encourage more collaborative science. In 2010 the government initiated a process of reform of the sector, with an emphasis on expectations for performance of the CRIs. The reforms have given a greater proportion of funding decisions to the boards and management of the CRIs, based on more comprehensive and

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distinctive statements of core purpose. These statements give some national responsibilities for capability to specific CRIs, with expectations that collaborations will be developed across institutions and with end-users. This provides some challenges to the accepted system, to policy makers and to the prevailing culture of science. Collaboration may be easy to say but hard to do.

However, there is little experience in building large-scale international collaborations in the biological (including ecological) sciences. In contrast, the physical sciences, such as physics or astronomy, often require significant capital investments that can only be met by international collaboration. Our participation in the Australian Synchrotron facility and the bid for the Square Kilometre Array are but two of many examples. In biology we have more limited investment in global initiatives such as the Global Biodiversity Information Facility (GBIF). The Global Research Alliance for Agricultural Greenhouse Gases is also an emerging example of our leadership in a collaborative programme, which integrates biological and physical sciences to provide solutions for a key issue for the agricultural sector.

We face challenges in moving from a competitive model towards greater collaboration, so we may be able to learn from how other large-scale collaborations have built new partnerships, capability, infrastructure and cultures. The authors of this article were commissioned by the Alfred P. Sloan Foundation (New York) to review the impact of the Census of Marine Life over their decade-long involvement and provide some lessons that might be relevant to other future collaborations in science. This article highlights some of the lessons of particular relevance to policy development and science management in New Zealand. The full report is available through Landcare Research.¹

The Census of Marine Life

The Census of Marine Life was conceived as a science discovery programme to address significant information gaps in our knowledge of the biodiversity of the oceans. In 2010 a decade-long \$US650 million programme was completed; this

involved 2,700 scientists from 80 nations and 640 institutions who spent 9,000 days at sea on more than 540 expeditions, plus countless days in labs and archives. As one of the largest scientific collaborations ever conducted, the Census produced over 3,100 scientific papers and many thousands of other information products. The global community now has a data baseline legacy

Scientific research in New Zealand is dominated by significant government investments in the biological sciences, as befitting an economy with a base in biological enterprises.

on life in many of the ocean's realms that will shape policies and management of the oceans for decades to come.

The Census pioneered a way to build scientific and community collaborations for the biological and ecological sciences. It was created with a simple and visionary goal: to understand the diversity, distribution and abundance of marine life.

The Census emerged from a convergence of the need for information, largely expressed through the energy and advocacy of Dr Fred Grassle of Rutgers University in the United States, and the willing support of an initial investor in the idea, the Sloan Foundation (Ausubel, 1997, 1999). The Foundation provided funding to support initial workshops and proposal preparation, eventually culminating in a more than \$US75 million investment over ten years. The Foundation then supported the governance and secretariat functions of the whole programme, administration

of each project, development of core infrastructure for data sharing, synthesis of overall results, and outreach. Several key elements coalesced around the Census, including recognition of an identifiable issue; a lack of response from traditional funding agencies in the United States; a research community which was fragmented and used to small projects shaped within existing funding constraints; a limited culture of collaboration and data sharing; and no recognised open-access data portal for information sharing, while at the same time increasing demands were being faced for more integrated management of the oceans.

We interviewed over 60 people from around the world, and views were also gained from participation in, and observation of, a number of Census-related meetings and review of relevant documents. The review did not analyse the impact of the science; these impacts will continue to expand once the science moves into new projects, policy development and management of the oceans. Instead, the review focused on the lessons from processes such as governance, leadership, management, collaboration, globalisation, data management, synthesis, education and outreach, and future legacies. We were able to compare our findings with the perceptions of the Census leadership which have been published elsewhere (Alexander, et al., 2011).

Key lessons

Governance

The Census developed at a time when our understanding of effective models for governing science was rudimentary. The Census had no real defined governance structure, but functional relationships evolved despite limited documentation of roles and responsibilities. The Sloan Foundation as the key 'investor' ensured its interests were maintained through a strong link with the scientific steering committee (SSC), which provided review and support for the various projects making up the Census. The SSC was a de facto governing board. A complex programme such as the Census required more regular oversight than the SSC meetings (usually three per year), so the later development

of an executive committee with more defined functions provided better support for the delivery of the Census. This included a more formal consideration of risks, especially as the programme neared completion. Many science projects appear to have limited views on true end-points, so there were challenges to governance in getting participants in the Census to deliver results by the end of 2010. There was also no successional plan or process at the governance level, so the Census missed the opportunity to develop new leaders to take the project forward beyond 2010.

Our full report more comprehensively examines the principles and function of governance and compares the Census with other initiatives. Governance arrangements for institutions are often well documented around lines of responsibility and accountability, and governors, through some form of board structure, take responsibility for approving strategy, approving plans to deliver the strategy, allocating resources, assessing and managing risks, measuring performance, and appointing and assessing leadership.

More challenging is how governance might work in collaborative contexts where projects cross a range of boundaries (e.g. institutional, disciplinary, national, etc.). Such projects will have their own governance structures and performance expectations, and the challenge is how to link those to wider expectations for benefits from large-scale collaboration, and what might be an effective model for governance given the sometimes overlapping expectations of the boards of participating institutions. Such projects often have complexities arising from areas such as financial resources, differences in capability and capital assets, policies on internet protocol and data sharing, political realities, and social and cultural differences.

There are differing expectations for governance and accountability and it is clear that there is no single model that is likely to meet the diversity of funding instruments, partnerships and stakeholder demands. In our view, there is no single 'right' model of governance – every set of governance arrangements contains compromises that reflect particular

organisational circumstances, and often each compromise has to be balanced by another action to offset potential negative consequences. Thus, the design of effective governance needs to reflect a core set of governance principles rather than a rigid set of rules. From our review of governance of the Census and comparisons with other initiatives,

The traditional and linear view of science is that potential technologies emerge from basic research, and, with the assistance of institutional technology transfer and business development offices, new investors help to bring the ideas to commercialisation.

we contend that the design of governing structures should note the following key aspects:

- A 'cornerstone' investor is critical, and the willingness of the Sloan Foundation to commit a substantial sum for a decade underpinned the development of the Census community.
- The 'cornerstone' investor should establish goals and expectations, including preferred governance models, performance measures and reporting processes.
- A substantial degree of autonomy and trust should be given to the programme director/executive director to enable rapid decisions about early investments to be made.
- A clear strategic plan should be developed early in programme

planning to ensure progress towards achieving the goals, outcomes and impacts. Progress can be assessed and alterations made during the course of the programme.

- Clarity on the respective roles within governance groups, including decisions on representative, skills-based or mixed memberships is needed.
- Risk-assessment and management is an important part of project direction and needs to be explicit.
- Leadership should be regularly assessed and reviewed to ensure new leaders are developed to support ongoing activities.

Leadership

Much leadership in science is individual, with the generation of ideas and hypotheses tested by experimentation or observation which then leads to peer-reviewed conclusions published in journals. Many scientific advances and societal benefits can be linked to this enduring process. However, occasionally some issues are so large and complex or require such a significant capital investment that they can only be addressed by a large collaborative initiative. The Census had its inception in a visionary leader (Fred Grassle) who was able to convince a small group of colleagues of the need for such a project and find a like-minded individual (Jesse Ausubel of the Sloan Foundation), who saw the opportunity for the Foundation to take a key role in bringing the Census to fruition. This was not leadership that sought out problems to solve; it identified an issue that could not be addressed through conventional national funding mechanisms and could be approached only through a large-scale global collaborative endeavour.

We focus this article on public-good science, where the benefits of the research have wide societal outcomes and are not readily captured for direct private or commercial benefit. The traditional and linear view of science is that potential technologies emerge from basic research, and, with the assistance of institutional technology transfer and business development offices, new investors help to bring the ideas to commercialisation.

Such a process recognises the role of the idea generator and his/her key role in the further development of the concept or product. However, it is now commonly accepted that the role of the ‘inventor-scientist’ should diminish as external investment increases towards ‘product development’. Other professional managers and governors with different and wider business skills should then take increasingly significant leadership roles. The role of the ‘inventor-scientist’ (founder) becomes more one of a senior adviser, but with significant ‘ownership’ rights, which may, in turn, be diluted as more investors enter the project. We contend that this approach is equally valid in considering leadership of more public good-oriented projects.

The Foundation was very clear that they would provide support (effectively as an ‘angel investor’) for a finite period to build the baseline in knowledge, the personal networks and the data infrastructure. Should the analysis of the results justify a positive business case, some new investor may take the Census to the next phase. Scientists, as a rule, are not very good at such business decisions and disciplines. Comments from interviewees support the view that the SSC could have been more influential in recommending work to stop in some areas and enhancing investment in areas that promised a greater return – ‘scientists are not very good at stopping things’. As a result, the Census failed to generate a substantial and well-argued ‘prospectus’ on which to base a case for continuing some priority parts with new investors from 2010 onwards.

From our review, we contend that the following lessons are relevant to future collaborative projects:

- Apply the life-cycle model of ‘inventor-scientist’ followed by professional management and governance to the expected duration of the project, and form some initial views on the type of leadership that might be needed at different phases of the life cycle, and the approximate timing of any changes.
- Document roles and responsibilities for leadership at various levels and

have processes in place for regular review and feedback.

- Consider term delineations, especially in advisory/leadership roles.
- Have a specific leadership development programme in place to develop the new echelon of leaders.
- Assign clear responsibility for completion of the initial phase of investment and for the preparation needed to obtain investment/investors for the next phase.
- Have a close understanding of the expectations of the lead investor.

Large-scale collaborative science projects often have very complex management issues to deal with. Stakeholders want systems that are low-cost but enable their voices to be heard.

Management

Large-scale collaborative science projects often have very complex management issues to deal with. Stakeholders want systems that are low-cost but enable their voices to be heard. The challenge is to have the right degree of support for the higher levels of leadership but ensure that issues raised by those who largely conduct the programme can be heard. It is almost universal that some form of secretariat provides management services, but the scope is very variable. In some cases it is merely administrative support, including planning and logistics for meetings; in others the secretariat does a substantial amount of the work.

The Census established a secretariat based at the Center for Ocean Leadership in Washington, DC. This was independent

from any research institution and provided access to politicians. The secretariat did not have full oversight of the financial status of the Census, as the Sloan Foundation controlled its investments and the requirement for substantial leverage funding from participating institutions/countries to carry out much of the research meant that gaining a full understanding of the financial position of the Census proved to be challenging. However, the secretariat did an outstanding job of project coordination and support; but the effective role of executive director was subsumed into the role of Jesse Ausubel as the representative of the Sloan Foundation. It was only in latter years that the executive committee began to provide some additional support to the interface between the management and expectations of the funders.

In designing a management structure for collaborative programmes, participants should consider the following:

- Design a programme management structure that has clear roles, responsibilities and accountabilities.
- Consider the use of collaborative information-sharing tools from the start of the project. Some uses can lead to closed teams, not shared systems.
- Manage risks as a key role of governance and management. The more complex the project, the greater the risks.
- Build an exit strategy to keep the community together. There is a risk participants may drift apart unless some secretariat functions can be sustained.

Data management

A critical innovation at the initiation of the Census was the establishment of a means to share data. Grassle’s promotion of the establishment of the Ocean Biogeographic Information System (OBIS) (Grassle and Stocks, 1999) and the investment by the Sloan Foundation in establishing some core infrastructure was very forward looking at the time. OBIS has been central to the delivery of primary data to a wide community, including researchers, policy makers and the wider public, and has been a crucial data portal for marine biodiversity data with links into GBIF.

Biologists and ecologists in many countries have been slow to recognise the value of data sharing. The Census played a critical role in changing cultures among a community which had been resistant to making primary data more widely accessible. OBIS has become a key infrastructure project, but its future is not entirely secure and, while its move to come under the umbrella of the International Oceanographic Commission gives some institutional security, obtaining funds to maintain the infrastructure and build links to other organisations remains a challenge. These are issues which should receive more serious consideration as we examine how to make research data more widely available within the context of the open government and e-research policies.

Other issues relative to data management include:

- Having an explicit data-sharing policy at the outset of the programme, including standard protocols for metadata, data quality, intellectual property, etc. that meet best international practice.
- Ensuring that projects and individuals have specific expectations for data sharing and attribution, with appropriate sanctions; encouraging institutions to recognise data sharing as part of their individual reward systems.
- Considering having an advisory committee with specific responsibility for data management and ensuring the infrastructure is supported within an appropriate organisation.

Collaboration

Census participants who were interviewed were universal in their view that being involved in such a big programme enabled them to work across disciplines, institutions and countries in ways that were not previously possible. They built new research teams, and the funding available to support face-to-face meetings early in the formulation of ideas and the subsequent development of proposals was critical to working together. The groups built trust, with an ability to articulate some big goals and build ownership of a strategy to achieve them.

Collaboration in the Census had no theoretical framework; instead, it was pragmatic and involved people who were willing to be engaged in a new sharing culture to achieve some challenging goals. Collaboration within projects led to innovative science, resulting in many publications in a wide range of journals. Questions were answered that would be beyond a more disciplinary and small-project approach. However, there were many other personal benefits from building a collaborative environment. Early-career scientists gained enormously from the Census through building

The reforms to the CRIs in New Zealand, the emergence of core purpose statements and funding, and the merging of policy and investment processes within the Ministry of Science and Innovation provides the basis for some innovative development of large-scale collaborations, both nationally and internationally.

relationships with highly credible scientists and institutions. This has led to invitations to publish together and conduct joint research, while late-career scientists who had established their status were delighted to be able to put their work into a wider context and find a way to share data and ideas.

As previously outlined, building the Census programme committed participants to data sharing. This was a significant challenge for scientists who have operated in a more competitive environment. The initial workshops were critical for developing a culture that shared data and ideas, and most Census-aligned scientists have undergone a significant change in their culture and views towards the benefits of data sharing. This has not been without its challenges, such as institutional barriers towards internet protocol and data ownership, concerns about misuse of data, such as drawing unjustified conclusions, lack of recognition for data sharing, issues of data quality and coverage, etc.

The Census built a new community that recognised the value of collaboration to address some big questions in biology and ecology. New technologies were deployed and some of these promise significant commercial opportunities, and, through OBIS, there is an infrastructure to support data sharing. The challenge is how to sustain the community, the technologies and the infrastructure in any future initiative.

Delivering benefits

The Census was conceived as a science discovery programme. A key driver was the development of the baseline of information of life in the oceans that might then be used for future policy development and management of marine resources. Providing information in a format relevant to policy and management was not an initial objective. As the Census progressed and expanded in depth and breadth of coverage, the debate on potential relevance also grew.

Building links where the science becomes 'relevant' to a stakeholder or end-user can be challenging to some scientists. Many participants in the Census were comfortable in doing the 'science we always wanted to do' but were more challenged when their results were being placed in a policy or management context. While the Census did develop significant baselines of information on marine species, there are still many gaps. Policy makers cannot wait for the definitive science but must use current

information and integrate this with other economic, environmental, social and cultural considerations.

However, the Census had a simple message with clear goals. It was understood by funding agencies, institutions and researchers, and by stressing 'baselines, baselines and baselines' the basis for developing future policy and management options became possible. The Census provided 'additionality' by bringing multiple funding sources together. It was held together by the innovative funding from the Sloan Foundation, which supported the development of trust and collaboration, built a culture of data sharing within a supporting infrastructure, and built a public profile and 'brand' by a very active outreach and education project. Our analysis provides the basis for programme design for any similar initiatives that might emerge. Such developments should include consideration of:

- Developing a governance structure that endorses an early investment strategy, supports proposals to potential funders with collaboration as a key objective, and supports some long-term planning for future legacies.
- Identifying a business model that will best facilitate programme delivery and ongoing support.
- Having a specific leadership development programme and successional processes.
- Having a globalisation and collaboration strategy that builds early links and capability with key countries, institutions and individuals.
- Seeking support for an independent secretariat to coordinate the programme.

- Having clear expectations for data sharing, attribution and storage.
- Building early links with potential end-users of the research.
- Identifying and supporting specific capability needs.

Conclusions

The Census of Marine Life challenged marine biologists and ecologists to find new ways of working together and it succeeded in building a new community which values collaboration and data sharing. A conventional process of competitive bidding would be unlikely to achieve such outcomes. Rather, it took the willingness of an investor (the Sloan Foundation) to facilitate the development of a culture committed to the sharing of data and the generation of widely-accepted research questions, the development of compelling proposals, supporting secretariat services and funding an outreach programme. The Foundation did not ask for these activities to be funded from existing individual or institutional resources. Instead, it provided funding on top of existing or proposed grants. This was very innovative and enabled a true competition for ideas rather than a competition between individuals and institutions.

The reforms to the CRIs in New Zealand, the emergence of core purpose statements and funding, and the merging of policy and investment processes within the Ministry of Science and Innovation provides the basis for some innovative development of large-scale collaborations, both nationally and internationally. There will be challenges, especially in bringing universities and other agencies with different funding streams and drivers into such programmes, but New Zealand does have opportunities in being able to

embrace transdisciplinary approaches to research on key issues more readily than many other countries. It is essential that we provide funding over and above the core institutional resources if we are to develop effective collaborations.

Through the review of the Census of Marine Life we have identified some of the key issues relevant to any collaborative programme design, especially for governance, leadership and management. There is no one 'right' answer, but we contend that, with the right incentives, we can overcome any existing reticence to share data and ideas, especially in biology and ecology. This will require ongoing commitments to open access, especially to public-good data and research, to improved links to key end-user agencies, and to support of the key infrastructures to share data.

Finally, to quote Ian Poiner, chair of the scientific steering committee of the Census of Marine Life: 'The Census changed our views on how things could be done. We shared our problems and we shared our solutions.'

¹ http://www.landcareresearch.co.nz/publications/researchpubs/MarineLifeCensus_Review.pdf

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Jo Cribb, Robbie Lane, Heather Penny,
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Pragmatism and Caffeine: lessons from cross-agency, cross-sector working

The ways forward for addressing complex policy problems have been well documented and concepts like network leadership, collaboration and citizen engagement espoused. In reality, for those working in cross-agency, cross-sector teams, the way forward is messy, frustrating, and simultaneously exciting. This article shares the practical experience of a cross-agency, cross-sector project team in the

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hope that thinking is invested not only in the virtues of new ways of working, but in how to operationalise them.

'Wicked' policy problems

Gill et al. (2010) predict that New Zealand public policy development over the coming decades will need to address more complex problems, for a more diverse and differentiated population, in a context of constrained resources and faster, less predictable change. Increasingly, policy problems will go beyond the capacity of any one organisation to understand or respond to.

Gill and his team characterise such problems by adopting Kurtz and Snowden's model (Kurtz and Snowden, 2003). Problems can be thought of as:

- complex, that is, cause and effect become clear only in retrospect and the pattern is not repeated;
- chaotic, that is, no cause and effect relationships can be identified;
- knowable, that is, cause and effect are separated over time and space;
- known, that is, cause and effect relations are repeatable, perceivable and predictable (as cited in Gill et al., 2010).

Complex and chaotic problems have also earned the label ‘wicked’ and have an identifiable set of characteristics, as outlined by the Australian Public Service Commission:

- the policy problem will be defined in a number of different ways – all appropriate – depending on the lead agency or stakeholder and the lens they apply to it;
- within the problem, there will be conflicting and competing objectives, interdependencies, and multiple causes; stakeholders and agencies will place different emphasis on different aspects of the problem;
- addressing wicked problems can lead to unforeseen consequences elsewhere;
- wicked problems evolve, so those addressing them will also need to evolve their approach;
- there is no clear, or technical solution; the problems are not ‘fixed’ but ‘managed’;
- wicked problems are characterised by social complexity, that is, solutions will need to involve coordinated action by a range of stakeholders, including government, non-government agencies, private businesses and the public;
- such problems will not sit neatly with one organisation, but rather a group;
- wicked problems often involve the need for changed behaviour. (Australian Public Service Commission, 2007)

Improving outcomes for vulnerable children: a ‘wicked problem’

Improving outcomes for vulnerable children involves a complex array of competing agendas; legislative obligations; the behaviours of parents, families and whānau, professionals and government officials; funding rules; and many different interventions that address specific areas of children’s vulnerability.

Consider a five-year-old child with signs of developmental delay and exhibiting behaviour problems who starts attending the local primary school. This is a momentous step for this child and its family. However, the child will require specific supports to ensure he/she engages in lifelong learning, and

develops and learns to socialise with other children of the same age. While the child comes from a good family, the father has recently lost his job at the local meat works and the family are now reliant on the part-time cleaning work by the mother at local motels. They live in a small rural community and new job prospects are slim. The increased stress of living with less money has been made harder by the arrival of a younger sibling two years ago and the ongoing post-natal depression experienced by the mother after this second birth. There were also no appropriate local services available within suitable travelling time for her to go to to get support.

There are no care and protection needs for this family, but the complexity of the individual, family and community risk

factors in this situation means the child, without appropriate and timely supports, is vulnerable to poor life outcomes.

There is not one complete ‘fix’ or agency response which would enable this child and family to flourish. However, government agencies and NGO providers are restricted as to what they can do by the funding, contractual and legislative rules placed on their services. The needs of the child, parents and siblings are dealt with separately, addressing parts that each individual agency can ‘fix’.

Working on ‘wicked problems’

The consensus in the literature, drawn from New Zealand, across the ditch and further afield, is that ‘traditional’ policy processes that involve a group of officials working through a linear process – defining the problem, gathering data, generating options and consulting with

stakeholders – will not address ‘wicked problems’ such as improving outcomes for vulnerable children and their families and whānau (Australian Public Service Commission, 2007; Dovey, 2003; Eppel et al., 2011). Instead, collaborative strategies working across boundaries within government and beyond government are seen as effective for generating sustainable solutions and change (State Services Commission, 2008; Managing for Shared Outcomes Development Group, 2004).

Collaboration could include adopting a model of policy clusters and building horizontal connectedness, as proposed by the Committee Appointed by the Government to Review Expenditure on Policy Advice (2010); or delegating authority for problem solving to a selected group (such as a group of

stakeholders or experts) (Australian Public Service Commission, 2007). This mechanism has been adopted here through the use of taskforces and advisory groups (Committee Appointed by the Government to Review Expenditure on Policy Advice, 2010).

A cross-agency, cross-sector process: the Green Paper for Vulnerable Children project

While many improvements have been made to agency collaboration, still many New Zealand children do not get the best start to their lives. This is despite the commitment of thousands of professionals who work tirelessly with vulnerable children and their families and whānau. With this in mind, in April 2011 Cabinet announced that a green paper for vulnerable children would be prepared by a cross-agency, multi-disciplinary team, and the appointment

While many improvements have been made to agency collaboration, still many New Zealand children do not get the best start to their lives.

of an independent person to lead it. It also sought the establishment of two expert advisory groups which would oversee the preparation of the paper – a group drawn from academia, and a ‘frontline forum’ drawn largely from non-government agencies and practitioners. A team drawn from the social sector agencies was assembled in May 2011 to develop the paper in conjunction with the advisory groups. The authors of this article were all members of this team.

The first task of the Green Paper cross-agency team was to conceptualise and define ‘vulnerability’. New Zealand longitudinal studies and international research point clearly to the difficulty

The team then went on to review relevant evidence and research across the social sector, interviewed key people, and undertook the associated analysis and drafting of the Green Paper. It was launched on 27 July 2011 and public consultation will continue through to February 2012.

This example illustrates the value of cross-agency working. A richer and integrated ‘problem definition’ was created, based on outcomes for children, that may not have been possible if one agency was positioned as ‘lead’ and tasked with defining vulnerability through their particular ‘lens’. The definition developed provides the basis for an ongoing cross-

solutions need to be found.

The team identified four lessons it would highlight:

1. *Cross-agency team members need permission to address the wicked problem at hand*

Given the multi-causal nature of wicked problems, defining the issue and finding ways of moving forward involves looking at the issue from different angles. Team members from different agencies needed to bring their agency lens and perspective, but also be given permission by their agency to work collaboratively to find suitable solutions to the problem.

No single agency perspective will be sufficient to address a wicked problem; indeed, if a single agency perspective could address the problem there is no need for a cross-agency team. It will be the combination of cross-agency knowledge and perspective, and the debate and refining that occurs in a cross-agency team, that will produce a more suitable solution. Agency positions may need to be compromised and new solutions beyond single agency positions created. Cross-agency team members live in a ‘grey’ world in which they bring their agency perspective but will be accountable for a product that, in the end, may not represent their agency’s view. Unless team members are given permission to move away from their agency positions, cross-agency teams are unlikely to be productive.

While this makes sense, it can be difficult to put into place. Policy processes in the past may have been based on more ‘adversarial’ models, where a lead agency defines the problem, undertakes the analysis and then works to bring others on board. Moving to a process where no one perspective is dominant requires thoughtfulness, and the structures and processes within contributing agencies to enable it to happen.

The Green Paper team were clear about their mandate: working collectively to identify potential solutions and the pros and cons of such solutions, for public discussion, to improve outcomes for vulnerable children, and then bringing their agency perspective and knowledge to bear on this.

Policy processes in the past may have been based on more ‘adversarial’ models, where a lead agency defines the problem, undertakes the analysis and then works to bring others on board.

in doing this. Vulnerability often results from a combination of factors affecting an individual child and their environment – such as their genetics, parents, families and whānau, neighbourhood and access to services (Fergusson et al., 2004). Each social sector agency has a different ‘lens’ and conceptualisation of the vulnerable children they work with. A public health view of vulnerability could, for example, prioritise a different set of factors to define and describe vulnerability than would an educational achievement lens or a care and protection frame. However, it is likely that the agencies are working with some of the same children and their families and whānau.

Working together, the cross-agency team defined vulnerability from the perspective of a child – rather than from their individual sector perspectives – and identified, based on evidence, what are the key aspects of vulnerability facing New Zealand children. These key aspects range across the areas of responsibility of the social sector agencies.

sector approach to vulnerability and a platform for future joint policy work and integrated service delivery. The use of a dedicated team of officials with an independent leader informed by two reference groups is a new model for policy development. It is an interesting test case for working on ‘wicked problems’, as it adopts both a collaborative cross-agency and an ‘expert’ cross-sector model.

At the end of the project, the team completed a project debrief and sought feedback from the frontline forum and two members of the expert reference group. While some of the experiences of the team were specific to the personalities and context, the team identified a number of generic lessons that are shared here.

Lessons from the Green Paper team

As in most things, the Green Paper team concluded, it is how the team operates and the processes around it that will dictate how successful it will be and where behavioural, process and structural barriers come into play and pragmatic

2. *Cross-agency team working is not for everyone*

The Green Paper team identified a number of key competencies and attributes members of a cross-agency team will need in order to make a useful contribution to the team:

- *Focused on problem solving.* By their very nature, cross-agency teams are working collaboratively to solve or manage problems. Team members need to be flexible, creative and focused on solutions.
- *Resilient.* Working across agencies and with academics and non-government organisations means any work produced will be critiqued by many stakeholders, and from multiple perspectives. Being open to constant scrutiny and continual revising and re-working as the process unfolds means team members must be resilient and adaptable.
- *Effective written and verbal communicators.* Team members will need to be able to bring their agency perspective and knowledge to the cross-agency table and express it in a way that others with different backgrounds can understand. Similarly, once a decision has been made within a cross-agency team, team members will need to be able to translate this decision in a way that their agency will understand and connect with. Well-developed analytical and written and oral communication skills are essential.
- *Comfortable working in ambiguity.* Working on wicked problems with many stakeholders means the working environment will be fluid and dynamic. Team members will also be working in a 'grey' space, slightly apart from their agency, where clear specification of relationships and accountability may not be possible. The ability to 'get on with the job', and manage relationships and issues as they evolve, are crucial.
- *Comfortable working in a team environment.* The very nature of collective problem solving means there will be face-to-face meetings, debate and the necessary sharing of ideas and perspectives. For those who do

not enjoy such an environment, cross-agency teams will be a nightmare.

How the cross-agency team is led also matters. Cross-agency team members may not know each other and need to be melded into a trusting, coherent team quickly. Team leaders need to be able to quickly understand the preferences, strengths and weaknesses of their team members and create a positive and trusting team environment quickly, and this is perhaps more important in cross-agency work than in a more stable, organisational-based team.

Selection to a cross-agency team needs to be well thought through. Not only do team members need to bring

their specific knowledge, but also the attributes above. They also need to have the confidence of their agency and ability to access senior leaders in their agency to update them on progress and explain the analysis that is occurring within the team. A cross-agency team is likely to re-frame a problem and find cross-agency solutions. Senior leaders in agencies need to be engaged with and connected to this process, as ultimately they will be tasked with implementing the results.

3. *The value of outside perspectives*

The Green Paper team found the advice of the two reference groups invaluable in the preparation of the green paper: they provided efficient and effective access to research, evidence and operational knowledge and supported the framing, analysis and write-up of the document. For example, unwanted 'policy jargon' was identified by the frontline forum, and the expert reference group was instrumental in framing the definition of vulnerability.

As this was a document prepared for public debate, the reference groups' insights into how it should be presented and what information should be included were invaluable. Because they met face to face, the Green Paper team was able to understand their debates and the breadth of views around the issues. The reference groups also allowed the Green Paper team to gain an understanding of how the paper would be received, and are proving valuable in promoting public debate now that it has been released.

Eppel et al., (2011) draw the same conclusion about the value of outside perspectives in their case studies of recent New Zealand policy processes.

Because [the reference groups] met face to face, the Green Paper team was able to understand their debates and the breadth of views around the issues.

They advocate iterative testing of policy assumptions and hypotheses between government agencies and non-government actors throughout the policy process.

4. *The importance of the initial investment in the team*

The short timeframe for developing the green paper underlined the importance of ensuring team members were dedicated and would give priority to the project. Taking time to establish relationships within the team – using workshops – was a good investment. This meant the trust and common purpose needed for robust debate and scrutiny was established quickly.

The fundamentals of building a kaupapa Māori perspective into the team at the very beginning was critical to unravel the 'wicked problem' in question. This was vital to ensure a New Zealand- and topic-relevant end product.

Taking time to work out how team members would relate back to their agencies was also a good investment.

Establishing clear reporting lines at the beginning, with team members spending time both in the cross-agency team space and at their home agency desks, were useful to bridge the 'grey' space in which cross-agency teams operate and maintain opens lines of communication.

Having an independent project leader who was not associated with any of the contributing agencies was viewed as positive by team members and others involved in the process. A neutral leader, without a single agency interest, avoids potential conflicts. Nor can the importance of good administrative support be underestimated. The needs of cross-agency teams do not fit comfortably with the systems and processes of host departments. Having someone who can navigate around these and advocate for the team in terms of the information technology, human resource, travel and meeting room needs will save much time and frustration.

Working across sectors: observations from the frontline forum and expert reference group members

Members of the frontline forum reported that they appreciated the opportunity to comment and be part of the development of the green paper. In particular, the opportunity to be engaged in the process

from start to finish was appreciated; as was the opportunity for face-to-face debate and the understanding of other perspectives this allowed.

Members of the expert reference group found the process a useful means of bringing policy and research paradigms together to solve a common problem in a short period of time. They reported that the process showed transparency in dealing with the wicked problem and that they could see directly their input into the final product.

Future opportunities

Tight timeframes, the Green Paper team argue, are no excuse for not approaching a policy problem from a cross-agency perspective when the nature of problem indicates the need for such an approach. A well-established and clearly mandated team can achieve good solutions in a timely and cost-effective fashion.

From our experience, the Green Paper team would recommend future collaborative teams working on 'wicked problems' be supported as follows:

- Thought being given to how the policy process is structured at the commissioning phase: is the problem best solved by a lead agency defining and solving an issue and seeking peer review from other agencies; or

is it a 'wicked problem' that needs a collaborative approach to both defining the problem and addressing it?

- The preparation of a job description of the personal attributes needed for cross-agency work and team members being selected accordingly. If possible, a 'neutral' leader should be appointed.
- Cross-agency team leaders giving thought to how they create a team. Using workshops, encouraging team members to get to know each other, and identifying and discussing individual and team strengths are strategies that worked for the Green Paper team.
- Thought being given to how 'outside' perspectives are included in policy development processes, at the problem definition phase and throughout the process. Establishing reference groups in this case was a cost-effective and time-efficient way of bringing frontline delivery and research perspectives into a process.

Our final conclusion would most definitely be that cross-agency working and working across sectors involves a fair dose of pragmatism – rolling up ones sleeves and finding ways forward – and good coffee.

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Does the Reform of English Local Government Contain Lessons for New Zealand?

In recent decades, despite differences of form and function, local government reform in England and New Zealand has exhibited very similar characteristics, with each system borrowing from the other: changes introduced in one country have usually been followed a few years later in the other.¹ It is interesting, then, that at a time when both countries have centre-right governments, that trend now appears to have changed, and local government policy is showing signs of major divergence. Where the New Zealand government appears to believe that only by greater ‘hands-on’ involvement can the nation’s economic development be guaranteed, the British government has taken quite the opposite view, identifying the country’s high level of centralisation (second only to New Zealand’s in the OECD) as the problem, not the solution.² The new Conservative–Liberal Democrat government has set itself the objective

of unwinding years of increasing centralisation and removing what it calls the culture of inspection characterising central government’s relationship with local government. New Zealand, in contrast, appears to be committed to the opposite path, with greater top-down inspection and a continuing accretion of powers and decision making by the centre.

Historically, policies towards local government have been remarkably similar. The British government drove through a programme of amalgamation in the early 1970s, creating the largest councils in Europe. New Zealand followed suit a decade or so later. Where Margaret Thatcher’s government shifted functions from councils to stand-alone quangos (for example, water and waste water), New Zealand created local authority trading enterprises to run anything having a commercial focus. Both countries drew extensively from the private sector as they sought to modernise their local government sectors, with the United Kingdom opting for compulsory competitive tendering and extensive performance benchmarking, while New

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Zealand focused more on strengthening transparency through techniques such as annual planning and reporting. In the mid-90s the requirement that New Zealand councils adopt long-term financial strategies morphed, four years later, into an obligation on English councils to adopt community strategies.³ This synergy or complementarity appears to be ending.

With the election in both countries of centre-right governments, local government reform appears to be headed

Although local government in the UK was given a 'power of well-being' in 2000, recent judicial decisions have interpreted the power narrowly, perhaps more narrowly than Parliament intended ...

in quite different directions. While government policy in New Zealand appears focused on 'winding back' council discretion through what might be called a policy of a thousand cuts, David Cameron's Conservative–Liberal Democrat coalition has made explicit its intention to roll back the centralism that was a feature of its predecessors. To quote Cameron before the release of the Conservatives' local government green paper in February 2009:

I mean we've got a government now that has set up this enormous regional bureaucracy which I think we can get rid of and drive those powers down to the local level. We've got a government that issues so many orders and instructions and bureaucratic targets to local government, we can sweep a lot of that away. (Cameron, 2009a)

The British government's enthusiasm for removing restrictions on local government, promoting greater devolution and empowering communities arguably represents a paradigm shift that they hope will not only distinguish the new government from the overwhelming interventionism of New Labour and its predecessors, but also prepare the

British economy for the challenges of the new millennium. The philosophical underpinning of the government's new approach is captured in its enthusiasm for what it refers to as the 'Big Society', an overarching policy agenda that has three core planks:

- *Social action*: a successful society depends on the decisions of thousands of people, therefore government should foster and support a new culture of voluntarism, philanthropy and social action.

- *Public sector reform*: the country's centralised bureaucracy wastes money and undermines morale, therefore professionals need more freedom and public services need to be opened up to new providers like charities, social enterprises and the private sector.

- *Community empowerment*: neighbourhoods should be given charge of their own destiny and feel that by clubbing together they can shape the world around them (Cabinet Office, 2011)

In relation to local government, these themes, social action, public sector reform and community empowerment, are reflected in the Decentralisation and Localism Bill (Localism Bill) which, if enacted in its current form, will change the manner in which councils operate and, potentially, what they do.

The Localism Bill

The name of the bill gives us a clue to the government's primary objective, which is to empower communities rather than councils. The communities and local government secretary and architect of the bill, Eric Pickles, has described it as heralding:

a ground-breaking shift in power to councils and communities overturning decades of central government control and starting a new era of people power ... For too long, everything has been controlled from the centre – and look where it's got us. Central government has kept local government on a tight leash, strangling the life out of councils in the belief that bureaucrats know best. (Department for Communities and Local Government, 2010)

Cameron reinforced the argument when he stated that 'these changes add up to a massive redistribution of power from central government to local government – just like our plan to give our cities real civic leadership through directly elected mayors and to put policing under local control' (Cameron, 2009b). To achieve this fundamental shift in authority the bill offers something of a 'grab bag' of measures which would directly affect English local authorities (see Appendix 1).⁴ A number of them are discussed below.

One of the more conventional proposals in the bill involves the introduction of a power of general competence. Although local government in the UK was given a 'power of well-being' in 2000, recent judicial decisions have interpreted the power narrowly, perhaps more narrowly than Parliament intended and certainly more narrowly than desired by councils (even though there is little evidence of councils actually making use of the power). New Zealand councils, in comparison, have had a form of general empowerment since 2002, and, although criticised by many in and outside Parliament as responsible for growing council expenditure, the power has been left largely untouched. General empowerment is strongly supported by councils in the UK; other provisions have not been given the same regard. For example, the bill will allow residents to require councils to hold referenda on any local issue, as well as require mandatory referenda should a council wish to increase property taxes beyond a set amount.⁵

Where the bill begins to look particularly radical is in the proposal

to empower neighbourhoods and community groups to set their own policies and rules. For example, one provision will allow neighbourhoods to 'opt out' of council planning rules and regulations, which includes the right to develop their own 'neighbourhood plans', with government assistance, to control development, regardless of the council's overall plan. The aim is to encourage parish councils and 'neighbourhood forums' to come together to decide where new shops, offices or homes should go and what green spaces to protect – to be voted on by local people in local referenda – and they will also be able to define developments which should have automatic planning permission. Debate continues as to whether this will result in a flood of NIMBYism ('not in my back yard') or, as ministers expect, will relax planning rules to increase development, given fewer controls on environmental and social effects. The bill also removes a number of national bodies and processes, for example disbanding the regional spatial strategies (in direct contrast to New Zealand, which is toying with the idea of introducing regional spatial strategies) and the Infrastructure Planning Commission (New Zealand has recently set up an Infrastructure Unit located within Treasury). The intention is to replace those bodies with what the government describes as more responsive democratic mechanisms.

In a further effort to empower communities, the bill allows groups of local citizens to take over 'failing' local public services, such as council housing and community facilities, whether they are run by the council or by a government department. Councils will be required to compile a list of public and private assets that are deemed to have community value. Should these assets be put up for sale, communities will have six months to prepare a bid to purchase them; assets might include the local pub, post office or community centre.⁶ In addition, the bill will establish a 'community right to challenge' to help different groups run local services if they want to. Voluntary groups, social enterprises, parish councils and others will be able to express an interest in taking over council-run

services, for example libraries, with a requirement on the local authority to consider the proposal.

The direction of reform in New Zealand

Where the coalition government in Britain appears committed to reversing the country's centralised approach to decision making by empowering councils and communities, there are reasonable arguments to say that the opposite is occurring in New Zealand, although policy tends not to be driven by any form of grand narrative and contains

- a gradual shift of funding away from local roads to the state highways; an investigation into road classification systems that has the potential to reduce local discretion regarding levels of service.

Ministry for the Environment:

- The establishment of the Environmental Protection Agency to consider proposals for projects of national significance (a less than technical term).
- The creation of a ministerial override power for aquaculture applications.

... recent governance decisions reflect a greater willingness to intervene when sub-national government fails to live up to the centre's expectations.

its share of internal tensions. It is also helpful to remember that this centralising tendency is not new. John Cookson dates it back to the early 1930s, a point in the nation's history when nearly 50% of all public expenditure was made by local government; today that figure is closer to 10%. It is a trend that has continued through successive governments, but which might be seen to have increased speed over the last two years with a government that has succumbed to the rhetoric of the 'national interest' to justify an increasing and often unprecedented interference in local affairs. Consider the range of recent initiatives essentially designed to reduce council discretion:

Department of Building and Housing:

- greater standardisation of building regulations and processes, as well as a desire to create a small number of 'super' (non-local) building regulators.

Department of Internal Affairs:

- the creation of standardised performance measures for the five major infrastructural activities delivered by councils.

The New Zealand Transport Agency:

- An enthusiasm for national policy statements and national environmental standards that by definition reduce local and regional discretion.

Ministry of Health

- A commitment to national drinking-water standards.

In addition, recent governance decisions reflect a greater willingness to intervene when sub-national government fails to live up to the centre's expectations. Examples include the decision to replace the democratically-elected members of the Canterbury Regional Council with government-appointed commissioners; the acquisition of quite draconian powers through the Rugby World Cup 2011 Empowering Act 2010; and the establishment of the Canterbury Earthquake Recovery Authority (CERA). While noting that in some cases the government has few choices, given the severity of the challenges faced by communities, the propensity to take a 'command and control' approach is a concern, for no other reason than that it obscures the constitutional separation between the two levels of government. Even the establishment of the super city, Auckland, with its focus of strong,

unified government for that city and the requirement to adopt a regional spatial plan, sits in contrast to the British government's decision to halt moves by its predecessor to amalgamate local authorities into larger unitary councils and to disband the regional spatial planning agencies.

While official policy towards local government appears to be less tolerant towards local difference and discretion, we should acknowledge those policy

change in local government working (Filkin et al., 2000). A related concept is the principle of subsidiarity which has been adopted by the European Union when determining the distribution of responsibilities between states and sub-national governing bodies. It was also a recommendation of the New Zealand Royal Commission on Social Policy, which stated that 'no organisation should be bigger than necessary, and nothing should be done by a larger and higher unit that

attempt to address these shortcomings by distinguishing between local government as a provider of services and local government as an enabling agency using its full range of powers to influence service providers to enhance the quality of life in localities.

Perhaps one of the key lessons we might take from this bill is a general view that UK councils are simply too big and bureaucratic. For example, Geoff Mulgan, until recently the chief executive of the think tank the Young Foundation and visiting professor at the London School of Economics, is reputed to have commented that local government in England was neither local nor government – a telling observation on its distance from citizens and its general lack of decision-making discretion which helps explain that government's dual interest is in strengthening local democracy and giving power back to the people.

... one of the key lessons we might take from this bill is a general view that UK councils are simply too big and bureaucratic.

initiatives that echo the English focus on decentralisation and seek to reduce central control by empowering communities. Many of these are driven by information asymmetry concerns: for example, the community response forums, established by the minister of social development, which appear to be an attempt to utilise local/regional intelligence with regard to the allocation of family and community services funding; similarly the Whānau Ora programme. In a different policy context, the minister for the environment's Land and Water Forum is attempting to address complex environmental issues by seeking a consensus from the major stakeholders, as opposed to the more traditional approach of top-down policy. Common in both cases, of course, was the absence of organised local government.

Understanding the philosophy

Policy towards local government in the United Kingdom has coalesced around the relatively nebulous concept of new localism, with the major parties having been competing to be seen as the new localist champion.⁷ 'New' localism (in contrast to 'old' localism) promotes the involvement of local people in governance (not simply councillors); high-quality vertical as well as horizontal linkages; community leaders rather than primarily service producers; and a fundamental

can be done by a lower and smaller unit' (Royal Commission on Social Policy, 1988, p.806). However, the concept has had a limited impact in New Zealand, unlike in Europe where it has been incorporated into the European Charter of Local Self-Government.⁸

Localism is not without its critics. Cashin (2000), for example, argues that voters behave more self-interestedly when decision-making authority is brought closer to them, citing a common practice in the United States for well-off suburbs to incorporate as separate authorities in order to avoid the cost of supporting the urban poor. She uses the phrase 'tyranny of the favoured quarter' to describe the increasing fragmentation of local governance in many states that has resulted in metropolitan regions stratified by race and income. Localism, in this context, represents extreme parochialism and a political NIMBYism. Localist forms of governance are also poorly placed to deal with externalities and spillovers, such as where one community freeloads by using services provided by its neighbour. Regional coordinating mechanisms are often required for those services which need an economy of scale (see also Dollery et al., 2005). The interesting thing about the new localist movement that has influenced local government policy throughout the United Kingdom is its

Although the Decentralisation and Localism Bill is still a work in progress and may be subject to major change as it makes its way through both houses of Parliament, it represents a significant change in the relative roles of central government, local government and communities. Yet many of the proposals have never been tried before and it remains to be seen whether they are practical. For example, will there be enough volunteers with the time and skills to 'take over' local services, such as libraries, and how will accountability be exercised? The bill makes a number of assumptions about the capacity and willingness of citizens to take over local services that are yet to be tested. Despite the fact that much of the overall package rests on somewhat heroic assumptions, it represents a range of innovative measures that attempt to shift decision making from Westminster to local authorities and further to smaller communities and groups and citizens themselves.

English councils have been highly critical of the bill, despite their enthusiasm for its overall objectives, with 81% indicating they are unsupportive of the government and 91% disagreeing with the statement that Eric Pickles and his ministers will listen to local government. Writing in the Guardian, Simon Jenkins

stated: 'I have read parliamentary bills all my life, but the localism one is the most wretched capitulation to a single lobby I know. It is a junk heap of cliché.'⁹ Other critics have noted that despite the bill's objectives, ministers retain more than 200 call-in powers over council decision making and operations. For example, under the bill the secretary of state will have a general power to order councils to pay fines to the European Union. Certainly councils' views towards change have been coloured by massive cuts in council income, nearly 80% of which come from the state forcing significant reductions in local services.¹⁰

One of the interesting contrasts between politics in the United Kingdom and New Zealand is the lack of an organised lobby for what we might call the localist agenda which has dominated local government policy discourse in the United Kingdom for more than a decade. Led by one of that nation's more successful think tanks, the New Local Government Network, the call for a 'new localism' has been endorsed by all the major political parties, with Eric Pickles, the architect of the Localism Bill, quoted as saying as early as 2003 that 'we were absolutely wrong. We're born-again local.'¹¹ The Localism Bill seems to be unique when considered in the context of international local government reform, although, given that England is the second most centralised state in the OECD, the government believes it is faced by a set of unique challenges.

If we were to try and locate the policy direction within a broader strain of political thinking it might be worth looking at the degree to which the concept of the 'Big Society' echoes the main strands of communitarian thought, and even a nostalgia for the idea of self-governing communities, an idea that is particularly prevalent in the United States. The idea that public decision making is something that should belong to a class of experts, and therefore be done nationally, seems to have been on the rise in the last century, which has seen public affairs gradually removed from the reach of the average citizen to become a matter for policy elites operating at the highest levels of government (Novak,

1996). Novak points to the rise of at-large city-wide systems of representation which 'handed governance to corporate and professional elites [who] possess a scientific and rational view of governance' (ibid., p.16), and to a resurgence of interest in response in more localised forms of organisation and decision making, including nostalgia for the Jeffersonian idea of participatory democracy – citing President Bush senior's description of America as a nation of communities and President Clinton's view of society as a series of organic networks.

Whether the Localism Bill results in empowered councils and communities or ends up as a Clayton's localism, it offers us a fascinating case of public sector reform heading in the opposite direction to our own.

Conclusion

The reversal in the state's approach to local government in the United Kingdom reflects a larger programme than simply a desire to strengthen the role of councils; indeed, some of the proposals being considered have caused considerable concern among councils as they specifically seek to bypass formal local government. The key difference, at least at a rhetorical level, is the recognition that local representative government should play a larger role in what Michael Lyons (2007) called 'place shaping' (the creative use of its powers to promote the general well-being of a community and its citizens), free from the direction of Whitehall officials. In comparison, it is interesting that New Zealand, regarded as the most centralised country in the OECD (putting aside city-states like Singapore, which, coincidentally, is currently facing calls for the re-establishment of local government), has failed to create the same momentum. In fact, only recently there were calls for central government to appoint members to regional councils to ensure greater consistency.¹²

While parties like ACT argue for reducing the power of the state and empowering citizens, locally-elected government is seen to be part of the problem rather than the solution. New Zealand suffers from a lack of organised think tanks and policy networks on both the left and right of politics committed to a localist agenda. This is hard to understand, given that local government investment in infrastructure made such a crucial contribution to making this country one of the richest in the world. However, it is a story that universities

have seldom bothered to investigate and few of our histories found interesting enough to recount.

Whether the Localism Bill results in empowered councils and communities or ends up as a Clayton's localism, it offers us a fascinating case of public sector reform heading in the opposite direction to our own. If nothing else, we can learn from the British experience, and, who knows, similar measures might be introduced here. An opportunity exists with the government's 'Smarter Government, Stronger Communities' review currently being undertaken by the Department of Internal Affairs. The review was heralded by the minister of local government as a first principles review of local government and given a time frame of more than three years. While its terms of reference include a review of local government functions, their failure to include central government functions and whether or not they would be more effectively handled by local government is likely to diminish the likelihood that its recommendations will reflect a localist approach.

The challenge for policy makers in New Zealand is that the national interest,

whether defined as the government of the day's strategic objectives or a broad-based well-being indicator, will not be best served by strengthening control at the centre. We need to remember that those countries we aspire to replicate in terms of standard of living – Switzerland, the United States and the Scandinavian countries – all have one thing in common: they decentralise significantly, providing communities with much greater say about local matters. It's not a new idea: as the introduction to New Zealand's first Municipal Corporations Bill (1841), which was the main item of business on the new Legislative Council's second day 170 years ago, stated:

the inhabitants themselves are best qualified, as well by their more intimate knowledge of local affairs,

as by their direct interest therein, to provide for the wants and needs of their respective settlements. ... the central government would thus be deprived of the power of partiality in its legislation; it would be relieved from the necessity of much petty legislation; while at the same time, the prosperity of the country at large, would be promoted by the honourable rivalry which would spring up among the various settlements, thus entrusted with the unfettered management of their own local affairs. (Legislative Council, Wednesday, 29 December 1841, quoted in Carman, 1970)

1 It might also be argued that New Labour's enthusiasm for directly-elected mayors is another example of England borrowing from the New Zealand approach. Note also the similarity between the purpose statement in the Local

Government Act 2002 and the power of well-being in the Local Government Act 2000 (UK).
 2 See *Economist*, 31 Oct. 2009, p.59.
 3 Discussions between the author and the Local Government Information Unit.
 4 Local government in Wales and Scotland is devolved to their respective assemblies.
 5 Ironically, similar referenda were promoted here by Rodney Hide when minister of local government. Cabinet failed to support the idea.
 6 Controversially, the bill also requires councils to compensate owners who lose value due to costs incurred or delayed sales (*Local Government Chronicle*, 4 Aug. 2011).
 7 Political localism should be distinguished from the recent interest in what might be called ecological localism, which encapsulates a desire to establish local economies not dependent on imported goods, an anti-globalisation movement.
 8 See <http://conventions.coe.int/Treaty/en/Treaties/html/122.htm>.
 9 Guardian online, 28 July 2011. Jenkins failed to articulate which lobby group the government had capitulated to, whether the champions of localism or the development community which expects to gain by the relaxation of planning rules.
 10 In contrast, councils receive 11% of their income from the state, and even that figure is problematic as it represents local government's share of the petrol taxes and various road charges collected by central government, so is not technically a transfer at all.
 11 www.economist.com/node/1749999.
 12 Land and Water Forum, Radio New Zealand news, 7.00 am, 28 Sept. 2011.

Appendix 1: Decentralisation and Localism Bill

Headings	Content	Relevance to New Zealand
Running local services	The bill will establish a 'community right to challenge' to help different groups run local services if they want to. Voluntary groups, social enterprises, parish councils & others will be able to express an interest in taking over council-run services – the local authority will have to consider it.	No equivalent measure exists in New Zealand.
Buying local assets	The bill provides an opportunity for local community groups to bid to buy buildings or land which are listed, by the local authority, as assets of community value, e.g. post offices, pubs. Locals will be able to place certain buildings on a 'most wanted' list, and if those buildings are put up for sale they would have to be given time to develop a bid and raise the money.	No New Zealand equivalent.
Council tax vetos	Councils, police and fire authorities which propose an increase in council tax beyond the ceiling set by government would automatically face a referendum of all registered voters in their area.	No New Zealand equivalent.
Local referenda	The bill gives people, councillors and councils the power to instigate a local referendum on any local issue. Although these referenda will be non-binding, local authorities and other public authorities will be required to take the outcomes into account during decision making.	No equivalent in New Zealand, although councils have the discretion to hold polls and referenda and can resolve to do so themselves or after a community request. Referenda are frequently used to gauge support, for the introduction of, for example, fluoride.
Powers for councils	The bill gives local authorities a 'power of competence', which is the right to do 'anything apart from that which is specifically prohibited'. The intention is to free councils from 'Whitehall diktat' and help them 'innovate'. The bill also includes measures to allow councils to go back to being run by committees – instead of by a mayor and cabinet. (Councils have three governance models which they can use; this would create a fourth.)	New Zealand councils already have a general power of competence and have full discretion when deciding whether or not to establish committee structures. The position of mayor has been created by statute. (England has approximately 250 councils but only 12 mayors.)
Removal of the predetermination requirement	The bill makes it clear that if a councillor has given a view on an issue, this does not show that the councillor has a closed mind on that issue, so that if councillors have campaigned on an issue or made public statements about their approach to an item of council business, they will be able to participate in discussion of that issue in the council and to vote on it if it arises in an item of council business requiring a decision. It also provides for the establishment and maintenance of a register of members' interests.	Predetermination rules continue to be strongly enforced in New Zealand, to the consternation of many elected members who campaign on issues but find they cannot vote on them. Registers are discretionary in New Zealand local government but many councils have incorporated them in their codes of conduct.

Headings	Content	Relevance to New Zealand
Housing targets	Regional spatial strategies – aimed at building three million homes by 2020 – are being scrapped. The Localism Bill will remove the primary legislation which set up the strategies. The government says construction has slowed down despite what it calls ‘Soviet tractor-style top-down planning targets’.	The requirement to develop a spatial strategy has been placed on the Auckland Council. The Ministry for the Environment is considering mechanisms to require councils to make more land available for housing regardless of community views.
Charges on developers	The bill makes changes to the ‘community infrastructure levy’ which councils charge developers to contribute towards local infrastructure – to ensure some money goes directly to the neighbourhood where developments have been built, so that it can be spent on local facilities such as cycle paths or playgrounds if needed.	There are some similarities between this requirement and the ability of New Zealand councils to charge development levies to enhance community facilities to meet additional demand created by new developments.
Local development	The bill introduces ‘neighbourhood plans’. The idea is that parish councils and ‘neighbourhood forums’ come together to decide where new shops, offices or homes should go and what green spaces to protect – which is then voted on by local people in local referendums. They will be able to define developments which should have automatic planning permission.	No equivalent exists in New Zealand, although councils must consult when developing plans and can involve community boards in the process.
Planning permission	Local communities will be able to propose developments which, if they meet certain safeguards and get 50% of support in a local referendum, they will be able to build without planning permission. This is aimed at tackling lack of building in rural areas where planning authorities restrict building but local people want new housing or other facilities. Also, big developments will require early consultation with local people. The bill also confirms the abolition of the Infrastructure Planning Commission – instead ministers will make decisions on big planning projects such as airports and wind farms.	No similar ability exists in New Zealand. In relation to decisions on major projects of national significance, decisions are made through the EPA process.

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Paul Barber

How to Get Closer Together

Impacts of Income Inequality and Policy Responses

Inequality cannot simply be explained as wrong choices or behaviours. Inequality of resources and opportunity are powerful background forces. In order to get ahead, people need more equal access to resources – more income and wealth equality creates more equal opportunity for everyone in society. (National Equality Panel, 2010)

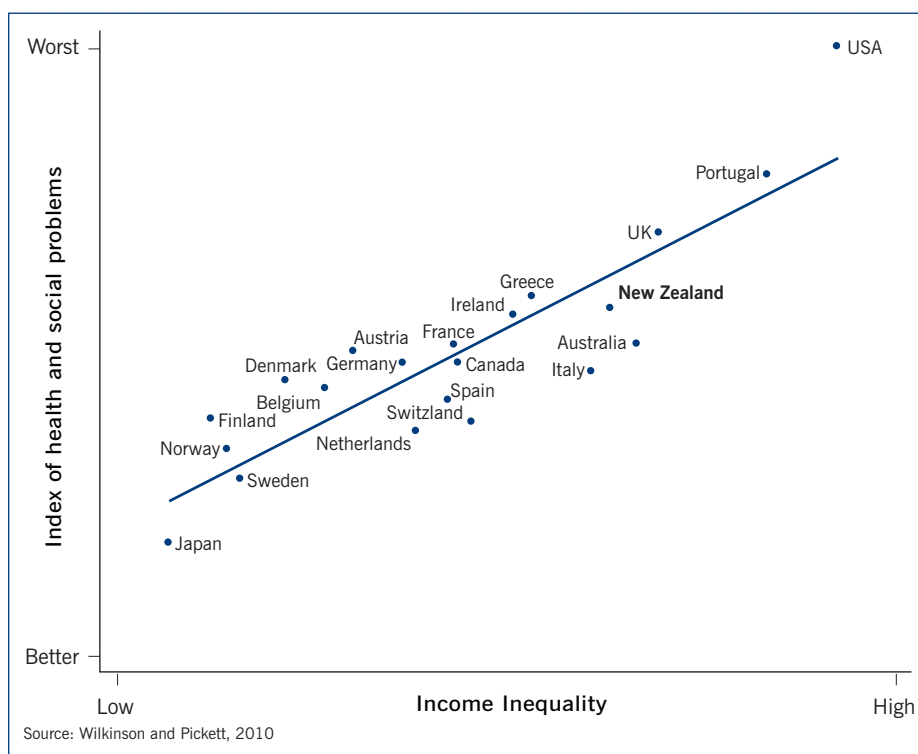
Professors Richard Wilkinson and Kate Pickett in *The Spirit Level* (2010) have documented the relationship between income inequality and health and social dysfunction across 25 developed countries including New Zealand, and summarised their findings in their Index of Health and Social Problems (IHSP). The results of this work show that New Zealand is performing poorly in comparison to countries with lower levels of income inequality. Their research has prompted debate in New Zealand (see *Policy Quarterly* issues of May and August 2011), and an example of the influence of their work can be seen in the references and measures chosen for the Treasury's Living Standards Framework released in May 2011.

This article briefly assesses the nature and impact of inequality in New Zealand using the evidence from the IHSP. It then discusses the policy options that need to be considered in order to reduce income inequality and the corresponding health and social impacts. The New Zealand Council of Christian Social Services (NZCCSS) has been working to analyse the impacts of income inequality through its Closer Together Whakatata Mai programme and detailed analysis of the data for each of the indicators in New Zealand can be found on the website www.closetogether.org.nz.

New Zealand is at a significant point in the overall social and economic policy debate. The lingering effects of the economic recession, plans for significant welfare reform, and a government committed to restraining expenditure growth, especially in health, welfare, housing and education, make it unlikely

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Figure 1: Index of health and social problems



that poverty can be reduced in the short term and more likely that income inequality will grow further. Social service agencies are responding every day to the needs of people who bear the burden of our ongoing social problems (see NZCCS, 2011). There is an urgent need to design effective policies that will reduce the inequalities that are key contributors to these social problems.

High levels of income inequality have a pervasive effect which reduces or even negates the effectiveness of other policy interventions, such as targeted assistance programmes. The evidence is very strong that reducing economic inequality is an effective way to improve many key areas of health and social well-being. To quote the recent Marmot Review in Britain: 'Although there is far more to inequality than just income, income is linked to life chances in a number of salient ways' (Marmot, 2010). Reducing income inequality is not the *only* solution, but it is a powerful tool in the policy maker's tool kit; the policy options available to reduce inequality are discussed below.

Appeals to principles such as fairness, equity, justice and human rights or to enlightened self-interest highlight the fact that the debate about income inequality is also a test of our values as

a society. Recent work on social attitudes to inequality sheds some light on where New Zealanders currently stand on these issues and suggests that there is support for reducing inequality. Evidence on its own does not settle the social and political debate, but failing to take account of a large and coherent body of evidence is undoubtedly a mistake.

New Zealand and inequality

Wilkinson and Pickett use ten measures in relation to income inequality for the IHSP. Figure 1 shows that New Zealand fits the international pattern among developed countries. Our high level of income inequality is associated with poorer health and social outcomes across our whole population.

New Zealand data were available for nine of the ten indicators. Data on social mobility are not available, although some limited data has been published recently (Gibbons, 2010). The overall rankings for New Zealand are shown in Figure 2.

Increasing inequality has been accompanied by worsening social outcomes:

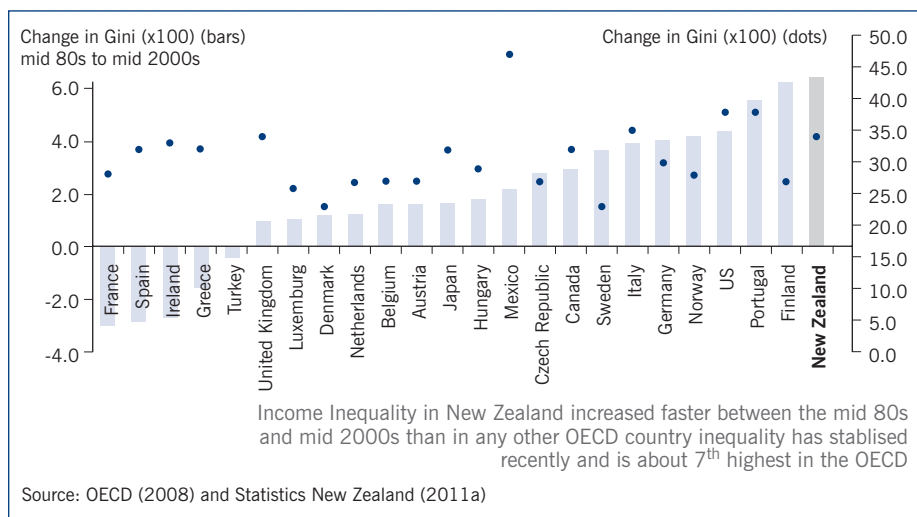
- The prevalence of mental health problems in New Zealand is more than twice that in more equal countries such as Japan and Spain.

- The prevalence of obesity is rising and is more than double that of more equal countries such as Sweden or Norway. Obesity is a major risk factor for diabetes and cardiovascular disease, as well as some common types of cancer.
- Teenage pregnancies are higher. New Zealand's teenage birth rate is five times higher than that of countries with lower inequality, such as Sweden.
- Imprisonment rates have doubled in this country since the mid-1980s and we lock up people at more than three times the rate of countries such as Japan and Finland.
- Overall life expectancy continues to rise, but New Zealand continues to rank poorly compared with more equal countries.
- Infant mortality is falling but our overall rate is high, and we compare poorly with more equal countries that have been able to reduce infant mortality at a faster rate.
- Maths and literacy average performance is high, but the same data shows that New Zealand has the highest level of inequality in education outcomes in the OECD (Treasury, 2011).
- Social mobility comparisons are not available because there is no internationally comparable evidence about the impact of income inequality on social mobility in New Zealand. A recent Treasury working paper using proxy data on social status was not

Figure 2: Index of health and social problems – rankings

Key indicator	NZ ranking	No of countries
Imprisonment	20	23
Teenage births	19	21
Obesity	13	21
Infant mortality	21	22
Mental illness	9	12
Life expectancy	16	24
Trust	6	23
Maths and literacy	5	21
Homicide	6	23
Social mobility	No ranking	

Figure 3: Gini Coefficient (Treasury, 2011)



able to make any definitive conclusion (Gibbons, 2010).

Despite high income inequality, New Zealand performs well comparatively on other indicators:

- The level of trust is still high and not showing any signs of declining.
- Our homicide rate compares favourably with that in other countries; it is difficult, however, to conduct effective comparisons of other data on violence.

There is also a strong relationship between inequality and poverty. Continuing high inequality affects life chances, health, education and employment opportunities, and hinders effects to reduce poverty, especially child poverty (Dale et al., 2011). A detailed analysis of the source data and the New Zealand evidence is available on the website www.closertogether.org.nz.

Income inequality in New Zealand

New Zealand has one of the highest rates of income inequality among developed or wealthy countries, ranking 17th out of the 21 countries ranked by Wilkinson and Pickett. Their index uses income inequality figures from the United Nations Human Development Report 2006, based on a 20:20 ratio which calculates the ratio of the richest 20% of income earners to the lowest 20% of incomes. Figures are household incomes after tax and transfers, adjusted for the number of people in each household.

Using a different measure (the Gini coefficient), inequality is seen to have

increased faster in New Zealand than in any other OECD country over the two decades 1985–2005 (see Figure 3), while some OECD countries, such as France, Ireland and Spain, experienced reduced inequality (OECD, 2008).

Most of the increase was due to large rises in the incomes of the top 20% of income earners. The incomes of the bottom 20% actually *decreased* over the two decades from the mid-1980s (Ministry of Social Development, 2010). Over that time, the rich got richer while the poor quite literally got poorer.

The increase in inequality occurred mainly between the mid-1980s and the mid-1990s. During the following decade the increase slowed. Since the mid-2000s income inequality in New Zealand has decreased slightly, due largely to the impact of the government’s Working For Families package (Perry, 2011), and the latest data show a drop in income inequality in the year to June 2010. Income inequality is still, however, embedded at rates well above those of the mid-1980s. The most recent comparative data from the OECD are from 2008–2009 and place New Zealand as around the tenth most unequal country in the OECD (Perry, 2011). This reflects the trend of increasing income inequality across the most of the OECD (OECD, 2011).

The effects of the October 2010 income tax cuts and related tax policy changes are not included in the latest New Zealand data. The increase in New Zealand Superannuation which was introduced in October 2008 as part of the 2008 tax

changes appears to have contributed to a rise in income for the lower income deciles (where superannuitants are strongly represented). At the same time, there is a drop in the highest two income deciles, due to a loss of investment income (Perry, 2010).

Critics of *The Spirit Level* analysis

The critics who have challenged the methodology used by Wilkinson and Pickett, such as Saunders (2010) and Snowden (2010), have been well responded to (e.g. Noble, 2010). The statistical robustness of Pickett’s and Wilkinson’s work is strong and reliable. The Joseph Rowntree Foundation commissioned an independent review of the research on income inequality from a United Kingdom perspective. This review, conducted by Professor Karen Rowlingson from the University of Birmingham, confirms that there is a strong correlation between income inequality and the ten health and social indicators identified in the Index of Health and Social Problems (Rowlingson, 2011).

The extent of the causal relationship between income inequality and health and social problems is the real focus of debate, because this also influences the policy choices to respond to inequality. Causal relationships independent of other factors vary between indicators, but the effect is real. Rowlingson concludes that the evidence is strong about the negative impacts of income inequality, and, conversely, that there is virtually no evidence that increasing income inequality produces any positive effects (Rowlingson, 2011). In a similar vein, the New Zealand Treasury has acknowledged the importance of distributional issues in their work: ‘While empirical evidence of causation remains inconclusive, both historical and contemporary events demonstrate that societies in which the benefits of growth are captured by a minority can face considerable social, economic and political upheaval’ (Treasury, 2011).

Drivers of inequality

Income inequality across most of the OECD countries rose over the two decades from the mid-1980s to the mid-2000s and appears to be converging at a common and higher average. In other words, other

OECD countries are ‘catching up’ to New Zealand when it comes to increasing inequality. The OECD points to three broad drivers of the growing inequality developed countries (OECD, 2011):

- Globalisation, skill-based technological progress and institutional and regulatory reforms have all had an impact on the distribution of earnings.
- Changes in family formation and household structures have had an impact on households earnings and inequality (e.g. a rising number of single-person/sole-parent families).
- Tax and benefits systems have changed the distribution of household incomes.

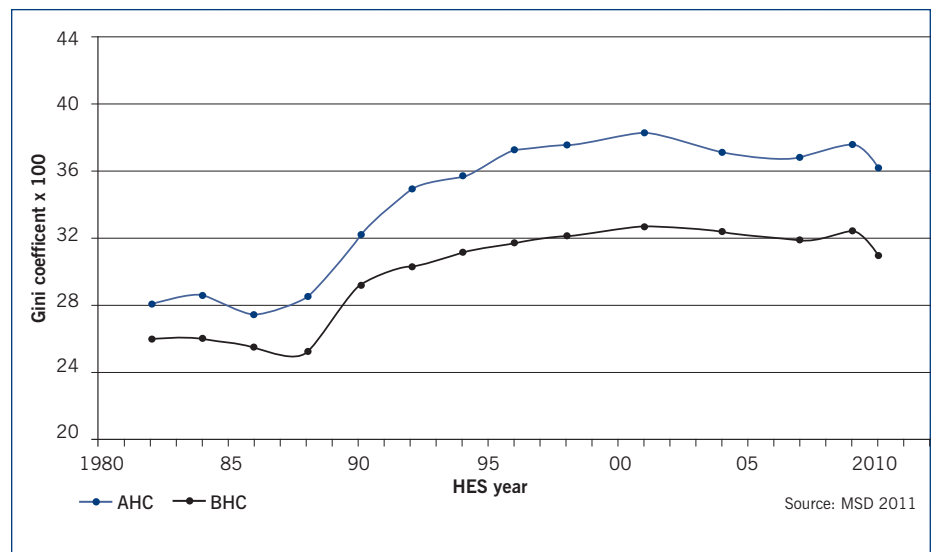
The deregulation of the New Zealand economy over recent decades, especially in labour markets and trade protection, has opened up wage earners to direct competition from lower-income countries. This has had the effect of holding wage increases down for low-income earners. Family structure in New Zealand is undergoing significant change, with a rising number of smaller households and sole-parent households. Our tax and benefits systems have undergone significant change: the top income tax rate has been reduced from 66% in the mid-1980s to 30% by 2011, and benefits were reduced by up to 20% in 1991 and have been maintained at that level since.

The increase in income inequality in New Zealand over the past 25 years has been characterised by a large rise in the incomes of the top 20% of income earners and static or declining incomes for the lowest 20%. Most households in the lowest 20% of incomes are either reliant on benefits or earning close to the minimum wage. While benefit levels have remained static, the pay rates of executives and chief executives have been increasing rapidly (see Boyle and Roberts, 2004; Strategic Pay, 2008).

Māori inequality: a colonial legacy

Distinctive to the New Zealand profile of inequality is the place of the tangata whenua. The Treaty of Waitangi guaranteed the legal rights of Māori and their ownership of lands and taonga –

Figure 4: Income inequality New Zealand (Gini coefficient)



assets and material and cultural resources. But the legacy of colonial policies that disempowered Māori and alienated them from their land and economic base continues to define the position of Māori in New Zealand society. Despite positive developments in recent decades, Māori face massive challenges to building an economic, social and cultural base that can ensure well-being on terms that are acceptable to them. Māori bear an unfair burden of the health and social costs of inequality: they experience much higher rates of infectious disease among children, higher imprisonment rates, higher rates of mental illness and poorer education outcomes.

Indeed, the whole equality analysis is strongly criticised in some quarters as simply a continuation of the colonial mentality. Current ways of measuring inequality, poverty and disadvantage are seen to ‘fail’ Māori and Pacific children. The ‘welfarism’ of the current system, based on economic welfare, material well-being and limited human agency, is criticised (Henare et al., 2011). The current inequality measures compare Māori with non-Māori and represent a ‘colonising’ approach. Henare et al. call for a new ‘dedicated well-being survey’, with questions designed to reflect the capabilities approach promoted by Armatya Sen and used in measures such as the United Nations Human Development Index. The move to develop the Whānau Ora approach to social services as a holistic response based in Māori tikanga

has been influenced by the desire to free Māori from this perceived dependence on a Pakehā-driven welfare model.

Policies to reduce income inequality

Deputy Prime Minister Bill English, responding to questions about income equality in Parliament on behalf of the prime minister, commented that he does not accept the view that New Zealand is a deeply unequal country, but, he said, ‘the big issue about inequality is what we do about it’ (New Zealand Parliament, 15 June 2011).

Achieving a sustained and meaningful reduction in income inequality (and wider socio-economic inequality) requires long-term policies aimed at raising the incomes of the lowest income earners while at the same time moderating increases of higher incomes. There are various policy options that could achieve this, and public debate needs to be informed by accurate information about these options and their impacts. Wilkinson and Pickett point out that the social and economic policies of, for example, Japan and Sweden are very different yet both have relatively low levels of income inequality and good social outcomes. The New Zealand experience of income inequality has common features with other developed economies, but also our own distinctive experience.

Changing our attitudes to inequality

Our social attitudes are caught in the tension between believing that people

should take responsibility for themselves and thinking that the government should take responsibility to make sure everyone is provided for. Research from the New Zealand Values Survey reports that the majority of people prefer to blame the poor for their poverty. The survey respondents thought people were in need because of 'laziness' and 'lack of will-power' rather than because 'society treats them unfairly'.

On the other hand, nearly two thirds of people in the survey thought it was the government's responsibility to reduce the income difference between the rich and poor. They were also willing to pay more taxes to fund health services, education, pensions, job training and assistance for the unemployed and those on lower incomes (Carroll et al., 2011). These results align with other recent research by the International Social Survey Programme (2010), where a similar proportion of people said that income differences in this country are too large.

Research has also been undertaken in the United Kingdom on people's attitudes to inequality and how it might be possible to build a public consensus about tackling inequality (Bamfield and Horton, 2009). Both the New Zealand and UK research shows that people tend to have more negative and judgemental attitudes towards the poor than towards the rich. There does not appear to be much evidence to support the so-called 'tall poppy syndrome'. People tend to respect wealth as a measure of success and believe that it is mostly deserved. From the UK research it appears that people are more willing to support policies based on 'proportionate universalism', designed so that most people receive some benefit from government programmes as long as most benefit is directed towards the more disadvantaged. Therefore, the political challenge is to design policies which recognise that 'reducing inequalities is about fairness and self-interest' (Carroll et al., 2011).

The three R's: restraint, regulation and redistribution

Accordingly, the policy mix needed to address income inequality must negotiate the inherent tensions between individual

self-responsibility and government responsibilities to ensure fairness. Broadly speaking, approaches to reducing inequality can be characterised as a combination of a culture of restraint, a commitment to good regulation and effective income redistribution. In Japan, a culture of restraint from those on higher incomes has been combined with a traditional commitment to ensuring comparatively modest differences in earnings between employees and their managers and executives. In contrast, Sweden has focused more strongly on redistributing income via taxation and government transfers, to ensure adequate income for those on lower incomes. Both Sweden and Japan share a historical commitment to ensuring high levels of employment. New Zealand can learn from these examples in finding its path to reducing inequality.

Employment growth

The current government believes that developing a strong economy that produces jobs and opportunity is its main priority. This can only reduce inequality, however, if people moving off benefits actually move into employment and earn more than what they would receive on a benefit. Paid employment also brings with it entitlement to transfers such as Working for Families tax credits. The effectiveness of increased employment in reducing income inequality is conditional on there being sufficient employment opportunities at rates of pay that actually do increase household incomes. It does not address income inequalities of those who are already in employment or the incomes of households relying on benefits for their income.

Industrial democracy

The decline in union membership has mirrored the rise in income inequality in New Zealand. The ability of workers to organise and bargain for better wages and conditions was greatly reduced after the introduction of the Employment Contracts Act 1991. Although the act was replaced by the Employment Relations Act 2000, which brought in some changes to improve opportunities for collective bargaining, union membership remains

a fraction of what it was during the mid-1980s before the structural reforms were introduced (Department of Labour, 2009). A recent International Monetary Fund paper (Kumhof and Ranciere, 2010) notes the significance of employee bargaining power in achieving reductions in wage inequality.

Wilkinson and Pickett point to other forms of industrial democracy, such as shared employee ownership, that could act as vehicles for greater income equality by allowing employees direct share in the returns from their work.

A culture of restraint

Rediscovering a culture of restraint on the part of those in leadership in business, local and central government based on restraint, and transparency in setting remuneration for directors, executives and senior management could help change the inequality dynamics. In Japan it has proved possible for businesses to be highly successful while maintaining comparatively low differentials between the highest- and lowest-paid employees. It is clear that it requires a change in attitude from those in leadership to recognise the greater good in restraining differences to fair and reasonable levels. Organisations could explore using ratios in setting pay scales to ensure that the lowest paid are not left behind as executive pay increases.

High Pay Commission

Researchers have found that people greatly underestimate the differences in incomes in New Zealand, and we are tolerating ever greater difference (International Social Survey Programme, 2010). There is a need to talk about and agree on what level of income inequality is 'fair'. The independent High Pay Commission in the UK in its initial report asks whether the rise in the highest pay rates has led to us paying 'more for less' (High Pay Commission, 2011). Looking at the top 100 UK-listed company executives, the report charts the excessive increases in rewards that executives have been receiving that bear no relation to company performance. Chief executive remuneration has quadrupled in the past ten years, while share prices have fallen. There is little evidence of 'executive poaching' of executives by

overseas companies, and neither does the risk involved in the roles appear to be sufficiently high to justify the huge increases in remuneration. Poor oversight by company boards and regulatory bodies of the remuneration of executives (and board members), and lack of shareholder power are identified as factors hindering attempts to restrain excessive growth in executive pay.

The commission is in the process of developing what it describes as a 'fair framework for fair pay' and it would be wise for New Zealand to consider a similar process. In New Zealand, the Remuneration Authority sets the salaries of Members of Parliament and judges and is required to consider 'fairness to the taxpayers or ratepayers who ultimately foot the bill' (Remuneration Authority, 2010). This requirement is not currently interpreted as including trying to avoid increases in income inequality or trying to reduce income inequalities.

Regulation

Forms of regulation and legislation that require decision makers to pay attention to reducing inequality can work either as a minimum 'safety net' underpinning agreed social consensus (e.g. minimum wage legislation), or can help 'raise the bar' and drive change in a positive direction. The minimum wage regulations can be used to reduce inequality. The Department of Labour reports on the impact of changes to the minimum wage on wage inequality, and its 2010 report notes that increasing the minimum wage to \$15 an hour would 'strongly improve' income distribution (Department of Labour, 2010).

It may be appropriate to explore regulatory means to manage public sector relativities through introducing maximum ratios between the highest and lowest paid. It has been pointed out that currently the mid-point of the top band of public sector salaries is around 11 times that of the bottom band (Brommell, 2010). It may be possible to come to a consensus on a lower maximum ratio.

Fairness test

Another regulatory approach could be to introduce a fairness test, a formal impact assessment of all policy and legislation that

comes before Cabinet and Parliament, in the same way Treaty of Waitangi, gender and environmental impact statements are currently considered. It would involve an inequality impact assessment of policies and legislation (e.g. tax rises and spending cuts) to assess whether they would lead to an increase or decrease in inequality of incomes, assets or access to services. In a similar vein, the UK Equality Act 2010 required government agencies to show 'due regard to the desirability of exercising [their functions] in a way designed to reduce the inequalities of outcome which result from socio-economic disadvantage'. (As it happens, this section of the act has since been repealed by the current coalition government.)

Redistribution

Redistributing income via the taxation system to share income and wealth more fairly involves a range of possible policy tools. Our current progressive tax system is already reasonably effective in reducing before-tax income inequalities, reducing them by about half (Perry, 2010). Changes to the tax system need to be analysed by asking whether they increase or decrease inequality. Treasury estimated that the 2010 tax package would not increase income inequality (Treasury, 2010). It would be a further step to require changes to seek actively to decrease income inequality.

The Working for Families system of tax credits is demonstrably the most successful policy of the past 25 years in reducing income inequality and poverty. Its introduction saw income inequality fall for the first time in two decades (Perry, 2010). Extending the benefits of this kind of programme to all families with children (i.e. to the unemployed and those on welfare benefits) would be another significant step by helping those on the lowest incomes. The \$60 per week in-work tax credit for families in employment with children could be changed to a child tax credit for all families with children, which would have an immediate impact of lifting the incomes of lowest-income families and reducing inequality.

Introducing a minimum income free of tax is another way to reduce inequality. The recent tax changes reduced the initial

rate from 12.5% to 10.5%, but in Australia, for example, the first \$6,000 of income is tax-free, so New Zealand still has a relatively high initial tax rate on the first dollar. Calculating the benefits of tax-free minimum income policies is made more complicated because of the impact of the transfers and tax credits low-income households receive. The Treasury's 2001 tax review looked at the issue and concluded that such a policy might well deliver more benefit to second-income earners in middle- and high-income households than it would to those on the lowest incomes.

Universal basic income

The idea of a universal basic income (UBI) has been promoted for many years without ever having been fully implemented (although Canada conducted a significant social experiment with it in some regions during the 1970s). The idea has been brought back into the public debate through a proposal for an Unconditional Basic Income (Morgan and Guthrie, 2011). A UBI has the advantage that it recognises and rewards work carried out by people in unpaid roles (such as child rearing and care of sick, disabled or older people). It offers the possibility of simplifying the complexities of the welfare system by effectively replacing all benefits with a UBI. The challenge is to set it at a level that lifts people out of poverty while also addressing the complexities of meeting additional welfare needs beyond the level of the UBI. The impact a UBI system would have on reducing inequality depends on the other tax and welfare policies with which it is combined.

Widening the tax base

The absence of any significant wealth taxes in the New Zealand tax system has repeatedly been identified as a major gap in ensuring tax equity (e.g. Tax Working Group, 2010). Widening the tax base to include some form of capital gains tax or other wealth taxes is an effective way to redistribute income and wealth and reduce the heavy reliance New Zealand has on income tax and GST. The challenge in designing a capital gains tax is to make it effective in raising revenue and limiting tax avoidance.

GST and other consumption taxes affect most significantly those with the lowest incomes because they have to spend a higher proportion of their income. The 2010 increase in GST and associated rises in the cost of living hurt low-income families hardest. Reducing GST and/or excluding essential food items from GST, or having a reduced rate for them, are policy options that would reduce hardship for low-income families and influence overall socio-economic equity, but by nature do not have an impact on income inequality because they are taxes on consumption, not income.

New forms of taxation need to be considered, including some form of financial transaction tax (such as the Tobin Tax). Such taxes target speculative financial transactions by taking a very small percentage (a fraction of a per cent) from every transaction. The low rate means it has no material impact on genuine transactions, but it could generate considerable tax revenue from the otherwise untaxed large speculative transactions.

Opportunity costs are higher than redistribution costs

The costs of doing nothing far outweigh the costs of increased tax transfers; this is the message of recent reports on child poverty (Grimmond, 2011; Dale et al., 2011). These two reports arrive at a similar figure for the overall costs to society and the taxpayer of leaving 200,000 children in poverty. At least \$6–8 billion (3.5–4.5% of GDP) is a huge and long-term cost to our society. In the debate about the ‘fiscal burden’ of reducing inequality we do well to compare it to the multi-billion dollar price tag of not reducing inequality and poverty.

Conclusion

The evidence suggests that reducing income inequality in New Zealand will have a range of desirable social outcomes. But to achieve such a goal will require a careful mix of policies, efforts to promote changes in social attitudes (especially concerning the acceptability of very high incomes), and better access to good-quality paid employment, particularly for

those on low incomes. Regulatory activity needs to complement voluntary restraint through active regulatory oversight of board and executive remuneration and use of minimum wage regulations to raise the lowest incomes. Redistributing income can be achieved through a widened tax base, including through effective wealth and transactions taxes that generate revenue sufficient to allow income transfers to those not able to earn sufficient income in the private market.

The evidence about the advantages of reducing income inequality is clear and many policy tools are available. New Zealanders generally share an underlying sense of fairness and appear willing to support a range of policies to reduce income inequalities. Hence, policy makers and those in political leadership can be confident that implementing policies to increase equality is not merely good policy and but will also enjoy public support.

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Paid Parental Leave Policy – A Response to Maureen Baker

In the August 2011 issue of *Policy Quarterly*, Maureen Baker sets out to outline ‘Key issues in parental leave policy’. One aim of the article was to examine ‘some of the continuing debates about paid parental leave’. However, we argue that the article fails to advance debates about paid parental leave in New Zealand, because: 1) it does not adequately engage with recent national and international literature; 2) it lacks new empirical evidence; 3) its theoretical basis is confused; and 4) no clear, new policy directions are promoted.

Baker’s article is primarily a literature review. We therefore begin by outlining some of the key literature in this field that was overlooked. Most of this literature is easily accessible by using simple search techniques such as Google Scholar. Most is also freely downloadable.

An article of our own entitled ‘Paid parental leave in New Zealand: a short history and future policy options’ is a puzzling omission, given that it was published in 2006, also in *Policy Quarterly*. As indicated in the title, our article outlines the history of parental leave in New Zealand but, more importantly, suggests some future options, including some ideas that Baker subsequently discusses. This article puts into a wider historical context Baker’s first sentence, which claims that ‘in 2002, New Zealand employees gained access to paid parental leave’. While obviously not a universal scheme, a limited form of paid maternity leave was introduced in 1948, which was available to some women in the public service. Over time, various other employers offered their own paid maternity, and sometimes parental, leave schemes. Then, in 1999, the parental tax credit was introduced as part of a wider Family Assistance package. This

was available to qualifying families with a child or children born on or after 1 October 1999. Although the government at the time did not support the provision of European models of paid parental leave, it clearly wished to provide financial support to some new parents.

These developments indicate that parental leave policy in New Zealand developed over a long period and involved incremental change. Thus, a key policy question is whether future incremental change should continue to be supported or whether, in fact, new, more radical models of leave should be investigated.

In terms of relevant government reports, Baker mentions the report on parental leave by the Families Commission (2007), but fails to engage with two other significant government reports. One is the National Advisory Council on the Employment of Women’s (NACEW) 2008 report entitled *Priority Improvements to Parental Leave* (NACEW, 2008). Both the Families Commission and NACEW reports recommend continuing incremental improvements to parental leave policy. Perhaps even more important is the Office of the Children’s Commissioner’s 2011 report entitled *Through Their Lens: an inquiry*

into non-parental education and care of infants and toddlers (Carroll-Lind and Angus, 2011). This report engages with the difficult issue of determining specific policy configurations that are in the best interests of children in the first months and years of their lives. It raises complex issues of whether, especially in times of constrained government finances, support for the early months of a child’s life should take the form primarily of parental leave rather than taxpayer supported early child care and education. This represents a more fundamental shift in thinking about parental leave and child care. Engagement with the recommendations of the government’s Welfare Working Group would also have increased the policy relevance of Baker’s article. In particular, this working group developed recommendations about parents’ return to work relative to the age of the youngest child, an issue which is directly relevant to parental leave policies.

But we consider that there are also other important omissions. While referred to indirectly through mention of a television news item, there is no in-depth engagement with the Child Poverty Action Group’s important background paper *Paid Parental Leave in New*

Zealand: catching up with Australia? (St John and FAMILTON, 2011). It is necessary to consider Australia, if only because of New Zealand's strong labour market flow across the Tasman. Other studies that we believe the author should have considered include a number of our own, such as Galtry (1995, 1997, 2002 and 2003), Galtry and Callister (2005) and Callister and Galtry (2009). But even if Baker chose not to engage with the ideas presented in these particular studies, there are the New Zealand studies of James (2009), Forbes (2009) and Brough et al., (2009). Then there are relevant overseas studies. In Australia, Baird wrote an excellent article in 2004 setting out various typologies for parental leave at the same time that Australia was designing its own scheme. Finally, while the article notes the work of UNICEF when comparing leave schemes internationally, a significant paper by Ray et al., (2010) entitled *Who cares? Assessing generosity and gender equality in parental leave policy designs in 21 countries* is not referred to. Between these papers, all the issues that Baker raises in her own paper, as well as other important issues, are discussed. It would have been useful to build on this previous work.

A lack of evidence and misleading statements

Here, we focus on a number of statements about the labour market, as well as men and parental leave, that are not backed by evidence or seem to be misleading. As an initial example, highlighted on page 59, there is the statement 'leaving employment for child bearing and returning years later was feasible for women when labour markets were expanding in the 1960s, enabling them to re-enter more easily'. There is no evidence presented in support of this statement. In fact, it is unclear how entry into and exit from the labour market in the 1960s could be assessed given that there are no data sets, such as the current LEED data, which allow such rates to be calculated.¹ However, indirect measures cast doubt on Baker's statement. While there was growth in employment for women in the 1960s, even by the end of that decade just under 40% of women were employed. In contrast,

by mid-2011 just under 60% of women were employed, with much of the growth occurring amongst women with young children. While these data do not indicate ease of re-entry, they do indicate a more expansive labour market for women in recent times. In addition, a raft of public and private policies supporting parents, including parental leave and subsidised child care, should now make it easier to re-enter employment after childbirth or adoption.

An example of a confusing, and again highlighted, statement is that 'parental benefits were introduced as a separate social programme which was available to women and men employees (gender-neutral or at least transferable from mothers to fathers)' (pp.57-8). We query this description of gender neutrality. For comparison, it is highly unlikely that a policy would be regarded as 'gender neutral' if the benefit went directly to the male partner in a heterosexual couple but was able to be transferred (if he so wished and it was mutually agreed) to his female partner. This current New Zealand policy configuration appears to be a double-edged sword for the goal of gender equity, as it attributes not only decision-making power to the mother, but also, by implication, the responsibility for child-rearing. It is therefore curious that this policy is sometimes perceived as a feminist policy (as discussed later). What Baker also fails to mention is that this transferable benefit disadvantages couples where the man is eligible through his work record but the woman is ineligible and thus unable to transfer the right to 'parental' leave to him.

In relation to fathers' rights to leave, Baker notes a case taken in Canada by a father who argued that biological fathers should have the same rights as adoptive fathers. It would have been useful if Baker had also mentioned the long campaign by New Zealand fathers' groups to have equal rights with mothers to paid parental leave. In our 2006 *Policy Quarterly* article it was noted, for example, that '[a] formal complaint was also lodged with the Human Rights Commission on the grounds that the legislation discriminated against biological fathers, as they did

not have an independent right to take a period of paid leave'.

In her discussion of men taking (or not taking) leave, Baker also fails to refer to the Department of Labour's finding that most women do not want to pass on their parental leave. There are various reasons for this, including that most new mothers in New Zealand breastfeed in line with national and international health guidelines (Galtry, 2000). Although Baker mentions lactation once in the article, she does not engage with the complexity this poses for leave-sharing, especially when the duration of paid parental leave is relatively short, as in New Zealand.

Finally, on page 61 Baker mentions that mothers are less able than fathers to take on high-paying and secure jobs. But this assertion needs to be examined. Increasingly, women are better educated than men and many women now have partners who are less educated than themselves (Callister and Didham, 2010). Prior to their having children there are few constraints to women taking jobs that pay more than those of their male partners. This shows up in the lack of a significant gender pay gap among people under 30 years of age (Ministry of Social Development, 2010).

The most significant pay gap occurs after women and men have children. What researchers and policy makers need to grapple with is why many women and men continue to adopt traditional gender roles once children are born. Instead, Baker portrays labour markets as being far friendlier to men than women. But, given changes in global employment, both men and women with low formal skills face major barriers to finding 'decent' work. This is one reason why, in a number of our own articles about parental leave, we suggest a universal payment, so that work history, which is increasingly uncertain for some groups, does not determine eligibility.

Lack of a coherent theory

In her introduction Baker claims that her article is written from a 'feminist political economy perspective'. Later she notes the arguments put forward by 'feminists and progressive reformers'.

But the particular strain or strains of feminist theorising to which she refers are never clearly identified. One of the complexities of parental leave debates is that many feminist perspectives have been applied to them, ranging from clear-cut arguments about the importance of 'equal treatment' for women and men to equally strong views about the need to support 'difference', especially around pregnancy, childbirth and breastfeeding (Galtry, 2000). Baker uses a range of feminist perspectives but fails to outline clearly which she is using at any particular time. In addition, as already noted, a

much clearer depiction of parental leave typologies would have been useful. The article could have usefully identified and examined, for example, the differing objectives and construction of various maternity/parental leave schemes and their gendered effects. Instead, it concludes with vague calls for policy that supports gender equity in both the workplace and the home.

Conclusion

Debates about parental leave are important, especially in the period before an election. Parental leave is a critical

component of any strategy for investing in children and requires rigorous analysis and debate. But through a lack of acknowledgement of past debates and unclear policy formulation, Baker's article fails to take such discussions forward. It is a shame such an important opportunity was wasted.

¹ The Linked Employer-Employee Data Research Programme (LEED) is a multi-year project that is generating new research findings about workers and firms using linked employer and employee data. These data have been used to investigate a wide range of research questions, including re-entry to paid work for parents following a period of paid parental leave.

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