OLD PROBLEMS

NEW SOLUTIONS

Integrative research supporting natural resource governance

Edited by: Shona Russell, Bob Frame & James Lennox

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Preface

Water is a taonga – a treasure, essential for life. Water is a resource, a vital input for agricultural production and manufacturing. Rain, rivers and lakes are sources of inspiration and creativity. Water permeates ecosystems, jurisdictions, and communities, linking complex and emergent social, cultural, technological and economic systems. Globally, droughts, changing rainfall patterns, increasing demands for irrigation and the modification of great rivers through dams are part of a water crisis that no one individual, group, sector or state can resolve alone. In response, integrative, adaptive and participatory approaches to water resource management are increasingly suggested as solutions on the basis that water means many things to many people.

Around Aotearoa New Zealand water bodies are under growing pressure from farming, manufacturing, and urban development with declining water quality and over-allocation of water resources. The challenges facing regional councils, central government, the agriculture sector and others concern how best to manage water for current and future generations. Creative approaches are underway on properties, in catchments, and in the realms of policy making and planning to address some challenges around allocation and restoring degraded water bodies. These include changes to legislation for managing water supplies. There are likely to be many heated discussions among citizens, farmers, academics, iwi, recreational users of waterways and many more communities about how water is used and managed (and who gets to have a say in these decisions). The emerging paths of water governance weave together issues of resource management, environmental governance, and production of knowledge for sustainability.

The Old Problems New Solutions programme examined how water governance has unfolded through disciplinary lenses of law, social science and economics, providing perspectives on a range of different water challenges facing communities, industry, government agencies and the research community. Specific issues include governance arrangements, participation in decision-making processes and the contribution of research for sustainability. We have sought out spaces and places in which water governance is created and undertaken by communities, to support decision-making around water governance for sustainability. This book is a culmination of work from a number of researchers that brings together insights framed within boundaries – a somewhat difficult task in that environmental issues often permeate many aspects of society and humanity's relationship with the world. Each chapter and the book offers, first, a perspective on water governance – about practices to enable action for water, and second, conversation starters through which to engage with issues of water governance and the contribution of research to address issues of sustainability.

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Most importantly we thank all of the contributors who have crafted these chapters from research completed during the programme to engage in current debates about water governance. Thank you for your time, energy, creativity, commitment and patience.

Shona Russell, Bob Frame and James Lennox
Lincoln, New Zealand
December 2011

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Abbreviations

CSWS	Canterbury Strategic Water Study
CWMS	Canterbury Water Management Strategy
DMCE	Deliberative Multi-Criteria Evaluation
ECan	Environment Canterbury
FRST	Foundation for Research, Science and Technology
HWP	Hurunui Water Project
ICM	Integrated Catchment Management
LAWF	Land and Water Forum
LGA	Local Government Act
MAF	Ministry of Agriculture and Forestry
MfE	Ministry for the Environment
MSI	Ministry of Science and Innovation
OPNS	Old Problems New Solutions
PCE	Parliamentary Commissioner for the Environment
RMA	Resource Management Act
TLA	Territorial Local Authority
VMO	Values, Monitoring and Outputs

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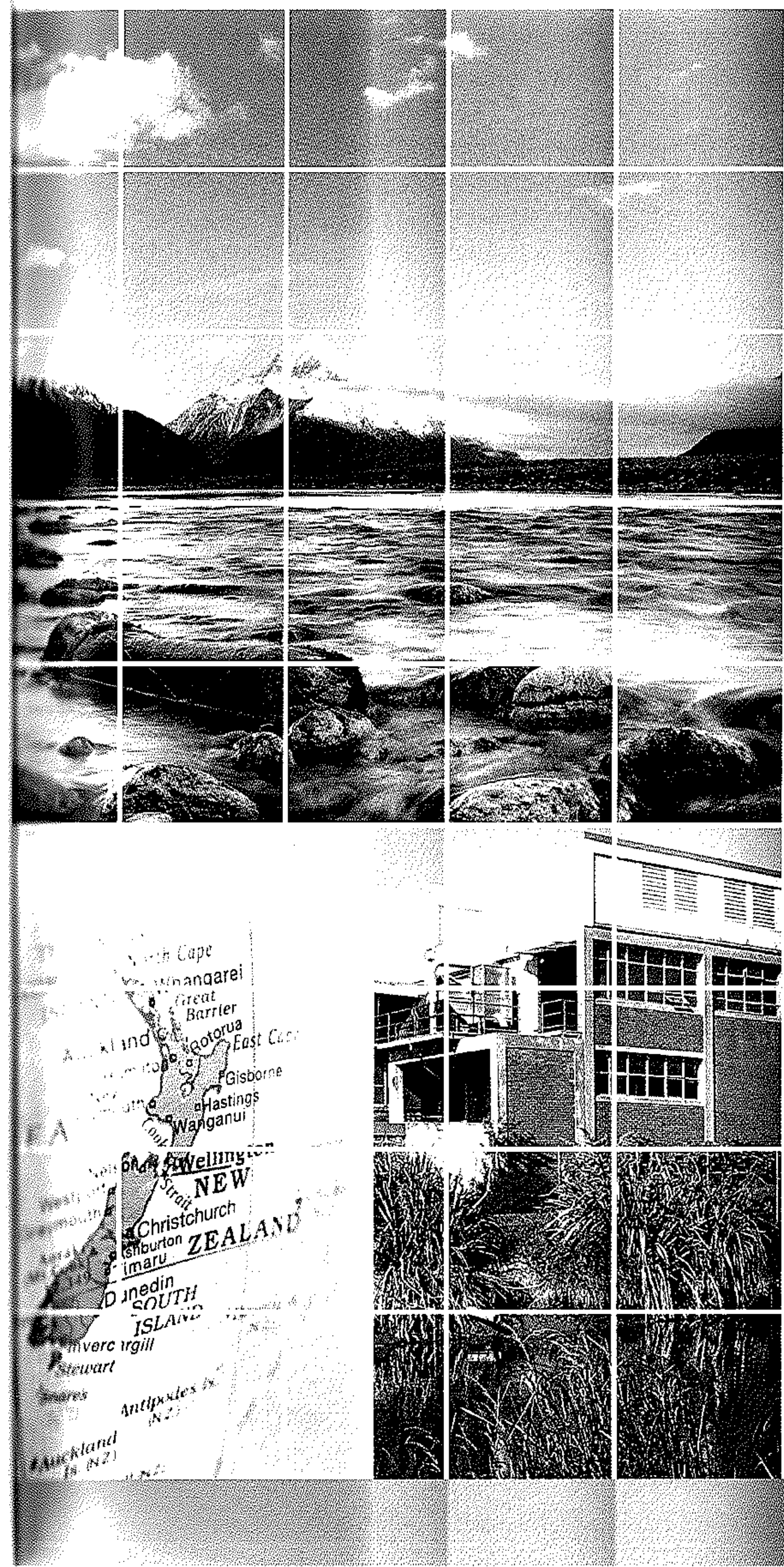

Shona Russell

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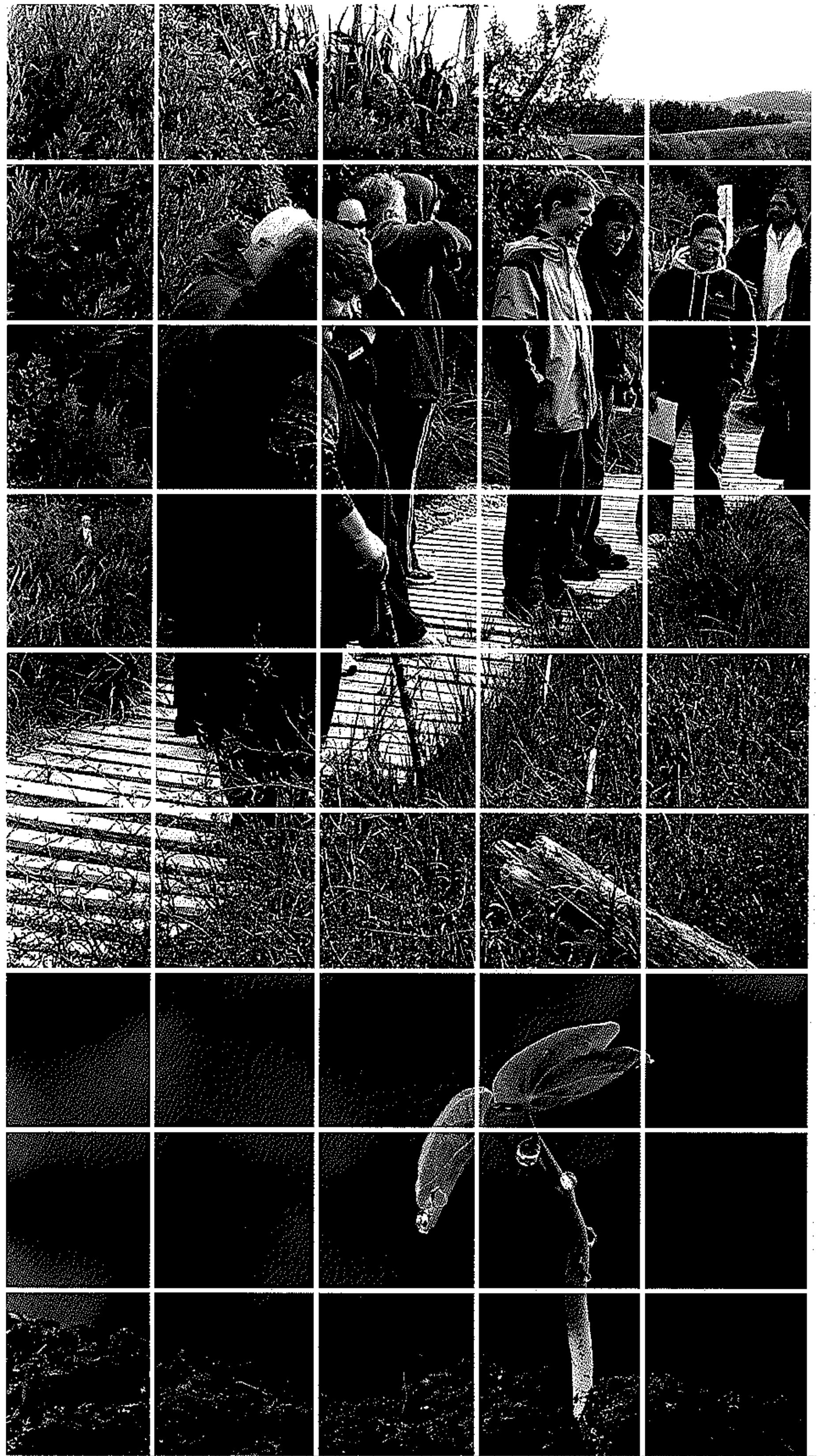
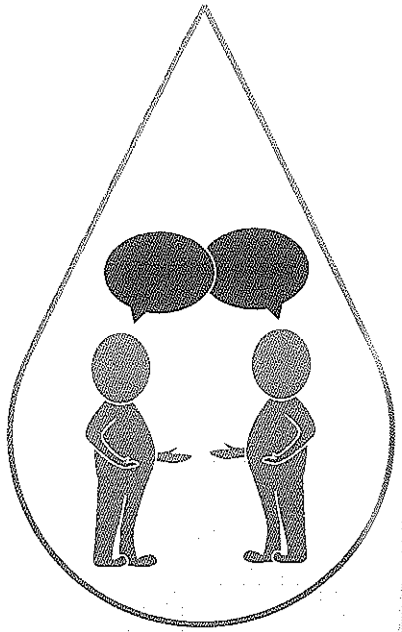
CHAPTER 12

Innovations in collaborative governance





Neil Gunningham

12. Innovations in collaborative governance

Neil Gunningham

Summary*

- Approaches to the allocation of scarce water resources by policymakers involve decisions about whether to rely on hierarchical systems, such as command-and-control regulation; to place greater faith in market mechanisms such as water trading; or to shift to much more collaborative, community-oriented forms of decision making, and to identify ways to resolve differences between the interests and values of different stakeholders and overcome conflicts between them[1].
- This chapter describes some of the recent innovations in collaborative governance underway in Canterbury and the emergent successes from collaborative initiatives that involve a paradigm shift in water management thinking brought about by regional collaboration and significant improvements in the water quality of small streams.

* This chapter draws on material published in Gunningham N 2008. Innovative governance and regulatory design: managing water resources. . Landcare Research Contract Report LC0708/137.

Introduction

Governance arrangements in Canterbury are widely perceived to be seriously inadequate, prompting a search for innovative alternatives (see Chapter 6). Individuals, groups and segments of society differ markedly in how they perceive the challenges of water resource governance. The current governance arrangements involve an uncomfortable relationship between de facto highly restricted rights to participation under the RMA and the much more expansive approach under collaborative arrangements initiated by the regional council outside of the RMA. The unsatisfactory nature of this relationship is illustrated by the fact that those who disagree with purported outcomes under collaboration can defect by exercising rights of court appeal under the RMA, thereby effectively undermining these collaborative initiatives[2].

The multi-level and multi-scale nature of water resource management in New Zealand can give rise to multiple problems of governance such as:

- What if other regions are able to lower the cost of water as a competitive bait to attract rural industry to their area?
- What if regional councils are captured by special interests?
- What if upstream sub-regions are unwilling to agree to a particular allocation because they have little to gain from providing more water to lower-catchment communities?
- Will the lowest level of government agree to take responsibility for implementing measures specified at the next level of government (in regional plans) when it perceives this as yet one more resource burden from which it will gain little benefit?

The lack of opportunity under current governance arrangements to provide economic incentives for efficient water use and the limitations of current hierarchical arrangements make it particularly important to explore alternative mechanisms under collaborative governance. At first sight, it might be assumed that such mechanisms cannot be engaged in under that legislation since the RMA does not address the prospect of collaborative governance directly. Yet philosophically, one can also argue that the RMA is not hostile to collaborative approaches and indeed directly encourages them, at least in the context of developing resource management plans. On close inspection, where the RMA is silent as to a particular prospect or initiative, then there remains substantial policy space for experimentation. Such is the case with regard to collaborative governance.

In the future, questions about environmental governance may concern whether responsibilities at the regional level should be discharged directly by regional councils through traditional bureaucratic structures and mechanisms (hierarchy) or whether they should be substantially devolved to regional or local communities under a form of collaborative governance that is more scale-sensitive.

Collaborative governance offers more scope to explore differing perceptions (e.g. about the science and appropriate solutions) through dialogue and debate. This approach encourages a better appreciation of the positions of others, and increases the chances of developing some shared understanding of the problem and means of best addressing it. Collaboration is often undertaken in combination with hierarchical models governance where government agencies establish components of the governance model (see Table 12.1) by setting the framework for collaborative arrangements, creating a hybrid solution similar to those described in Chapter 2.

Table 12.1: Possible state contribution to a hybrid governance model (combined hierarchy with local collaboration)

Components	Explanation
Definitional guidance	State defines the nature of the collaborative governance arrangement with reference to: - scope and anticipated outcomes - extent of participation - geographical boundaries - funding arrangements
Participatory incentives	State provides positive or negative incentives for participation
Enforcement capability	Mechanisms through which the state ensures that collaborative governance participants fulfil their obligations

Collaborative governance in Canterbury in 2007

ECan is shifting from its traditional statutory role to one of facilitator of sustainable development. The Local Government Act 2002 (LGA), with its emphasis on achieving sustainability by delivering community outcomes through government, community and industry partnerships, provides a legislative underpinning for such a new role. Environment Canterbury is developing a number of collaborative initiatives with programmes that are engaging with communities at each of four levels (see Table 12.2).

As part of the Canterbury Strategic Water Study (CSWS), a suite of water supply options for each part of Canterbury was studied (see Chapter 11). Each option comprised the physical components such as water sources, storage and water conveyance facilities, and management components such as river allocation rules. In its later stages, it also involved a multi-stakeholder evaluation. Ultimately integrated water management as conceived under this initiative is likely to include development of water storage, redesign of existing irrigation infrastructure to improve water delivery efficiency, and development of water delivery systems for distribution of water from water-rich to water-poor catchments.

Table 12.2: Collaboration in water issues across scales[3]

Scale	Issue	Examples of collaborative initiatives
Regional	Water availability Land use intensification	Canterbury Water Management Strategy
Catchment	Sustainable level of water use and effects Cumulative impacts of water use Reliability of supply	Catchment engagement started more than 5 years ago with the Waihora Ellesmere Trust, Avon Heathcote Ihutai Trust, South Canterbury Water Enhancement Group and Lower Waitaki Water Management Society
Sub-catchment or stream reach	Environmental flow requirements, river reaches Management of streams and their riparian margins	Informal stream-reach groups commenced in the late 1990's and the 'Living Streams' programme (covering streams of greatest interest) was launched in 2002 and covers more than 30 sub-catchments and a quarter of the region; property-level interventions (seeking beyond-compliance approaches rather than just consent conditions) also commenced around 2002
Property	Land use practices that influence water quality and quantity are defined	Audited self-management

ECan has sought to avoid the adversarial setting of hearings and courts by developing collaborative initiatives with local stakeholders at the subcatchment scale (Table 12.3), seeking to gain their agreement to a particular form of action, and then seeking legal endorsement (via the consents process) at a later stage. For example, a community forum might be conducted, consultations undertaken with rural industry and key water scientists, and substantial agreement reached, and criteria agreed, on how best to go forward.

ECan initiatives working in partnership with communities in the Canterbury Region involve[4]:

- Getting stakeholder engagement to define issues and request information
- Compiling information for stakeholder evaluation and a search for options
- Option development in consultation with stakeholders
- Responses by ECan to requests for analysis and means of resolving differences
- Reaching agreement and negotiating compromises, and
- Giving statutory backing to the agreements

Following the concept of *facilitating self-governing communities*, ECan is working with groups of farmers to form water user groups that work together to manage their combined water takes so that rivers are not placed on restriction[5]. This improves environmental outcomes by keeping flows above the minimum flow restrictions for longer and improves resource availability by keeping water available for extraction for longer.

Table 12.3: Collaborative Initiatives in Canterbury[6]

Initiative	Details
Lower Waitaki River Management Society	Formed from a group established in July 2004 to produce a community-based management plan for the Lower Waitaki River using the principles of integrated catchment management (ICM)
Upper Waitaki Water Quality Trust	Formed by the community in the Mackenzie Basin to address water quality effects and their management associated with possible irrigation development in the upper Waitaki
Avon–Heathcote Ihutai Estuary Trust	A partnership between the community, ECan and Christchurch City Council to integrate implementation of a management plan for improving the estuary
Orari Catchment Group	Facilitated by ECan and the Landcare Trust to work with the community to develop an integrated catchment strategy
Pahau River Enhancement Group –	Formed to implement a community-based action plan that addresses water quality issues in the Pahau catchment – involves the irrigation company, coordinated work on river reaches, and property owners in remedial actions
South Canterbury Water Enhancement Group	Open-forum, multi-stakeholder group set up to investigate and try to resolve water management conflicts such as algal build-up in the Opuha River

Following the concept of *audited self-management*, ECan is also 'encouraging the rural sector to self managed water use whilst providing a platform for more cost effective collection of resource information'[7]. As the CEO of ECan at the time pointed out: 'The system had resource threshold alarms so that the water user and ECan were informed when the river's trigger level or cut off level was reached, the rate of take exceeded the consented rate, the daily or weekly volume was exceeded or the combined rate of take of all users exceeded the available water'[8]. Notwithstanding some early success (see Box 12.4), particularly at local level (i.e. at catchment and sub-catchment level) where genuine community can often be mobilised, challenges remain at a wider geographical scale because the difficulties of gaining active engagement and ownership of the problem increase with scale[9,10].

Box 12.4: Examples of measured success

- Reduced bacterial contamination in Lyell Creek
- Reduced phosphorous load in Pahau Creek
- Reduced periphyton cover in Opuha River downstream of the dam
- Reduced sediment load and improved fish spawning habitat in Harts Creek
- Improved aquatic ecology in Boggy Creek
- Improved management of environmental flows in Te Ngawai River
- Improved nesting success of braided-river bird species in the Ashley River

In addition to a growing number of hybrid initiatives that sit somewhat uncomfortably alongside the RMA, there is a limited use of market mechanisms. The principal such mechanisms at work in Canterbury are: trading of shares within irrigation companies; transfers under the RMA (in 2007, there were 40 transfers being processed by ECan); and sales of land with consented water.

Concluding comments

In 2007, collaborative governance initiatives were expressly provided for under the RMA, and had no legislative backing, thus they relied substantially on consensus solutions. Unless all sides have incentives to participate in dialogue and negotiate mutually agreed solutions[11], collaboration can be a serious problem when there is conflict. For example, there may be tension between the protection of instream environmental flows (or flushes) and maximisation of productivity (and sometimes water use) by landholders who then reject 'working together' towards consensus solutions.

Similarly, there are no default penalties that provide a credible threat of a (less desired) regulatory resolution if parties do not reach agreements. Indeed, under the RMA (and the LGA) there are no penalties whatsoever for failing to engage in collaborative governance and those who fear being disadvantaged by the outcomes of community-based decisions can opt out of them entirely by the simple expedient of exercising their rights under the RMA and going to court[12]. Doing so fundamentally undermines the integrity of the collaborative process. It is also the case that court action, being adversarial in nature[13], undermines the trust that may well be necessary for collaboration to succeed.

Balancing the economic needs of various stakeholders and the environmental interest might most effectively be achieved by a combination of direct regulation (hierarchy) and collaboration. A hybrid involving both collaboration and the state will also enable water managers to maintain legitimacy in the face of conflicting demands, while the adaptive nature of collaboration best takes account of the fact that the science is unclear and the future demands for water and the capacities of water resources to meet them are uncertain. But such a hybrid also requires the state to play the sort of facilitative role described above. This approach is already yielding some positive results, not the least of which is the shift in water management thinking occurring as a result of regional collaboration achieving significant improvements in the water quality of small streams.

Acknowledgements

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1 Huitema D, Bressers H 2006. Scaling water governance: the case of the implementation of the European Water Framework Directive in the Netherlands. Bali conference paper, available at http://www2.bren.ucsb.edu/~idgec/abstracts.

2 Any collaborative arrangement or agreement that involved the allocation or use of resources would need to be finally 'sealed' with a consent or plan change to secure it into the future. This being the case there is opportunity for it to be challenged through the courts.

3 Jenkins BR 2007. Water allocation in Canterbury. Keynote address to the New Zealand Planning Institute National Conference, Palmerston North, 27–29 March 2007.

4 Jenkins 2007. (see Endnote 3)

5 Jenkins 2007, p. 15. (see Endnote 3)

6 Jenkins 2007, p. 15. (see Endnote 3)

7 Jenkins BR 2005. Giving statutory backing to non-statutory strategies through regional policy statements; a case study of the Urban Development Strategy for Greater Christchurch. Presentation to the Resource Management Law Association Conference, Christchurch, 6–8 October 2005. (p. 16)

8 Jenkins 2005, p. 16 (see Endnote 7).

9 Jones C, Hesterly WS, Borgatti SP 1997. A general theory of network governance: exchange conditions and social mechanisms. The Academy of Management Review 22: 991–945.

10 Lane, MB McDonald GT, Wentworth TH 2004. Decentralisation and environmental management in Australia: A comment on the prescriptions of the Wentworth Group. Australian Geographical Studies 42: 103–115.

11 Nelson R 2005. Legislation for ICM: advancing water resources sustainability? Environment and Planning Law Journal 22: 96–129. (p. 123)

12 Notified applications for consents under the RMA typically go to a Commissioner Hearing and on occasion to the Environment Court (and ultimately to the higher courts) on appeal. The commission and courts provide a framework that enables both sides to put forward the relevant scientific and technical evidence and for a reasoned decision to be made on the basis of that evidence.

13 This is in large part because both consents and regional plans are statutory documents, and in consequence, decisions are necessarily made on legal rather than environmental grounds, following the standard adversarial courtroom contest.