Manaaki Whenua Landcare Research

### Examining co-production and the role of brokers within New Zealand's 'science advisory ecosystem'

Ronlyn Duncan, Manaaki Whenua Landcare Research, Lincoln, New Zealand Melissa Robson, Manaaki Whenua Landcare Research, Lincoln, New Zealand Sarah Edwards, Lincoln University, Lincoln, New Zealand

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### Questions

- whose knowledge counts and from where does science draw its credibility?
- how does the imperative for usability change how science is produced?
- how does useable knowledge move beyond its context of production?

### Structure

- a critical reflection on current conceptions of New Zealand's science advisory ecosystem and the assumed role of brokers
- analysis of semi-structured interviews with three 'tech leads' employed in a broker role with regional council
- overview of findings



# Different roles in a science advisory ecosystem

	Knowledge generators	Knowledge synthesizers	Knowledge brokers
Individual academics	+++	++	
Academic societies/professional bodies		+	
Government employed practicing scientists	+++	+	
Scientist within regulatory agency	+	+++	++
Independent think tanks		++	
What works units etc	+	+++	+
National academies		+++	+
Government advisory boards/science councils		++	+
Science advisors		+	+++



Sir Peter Gluckman March 2017

Figure 2: Different roles in the SAE align with Pielke's typology from left to right – pure scientist as generator, science arbiter as synthesizer and brokers who create options for policy (Gluckman, 2017, p. 12).

### New Zealand's Science Advisory Ecosystem

## Enhancing the uptake of scientifically developed knowledge into public policy



Figure 1: The broker links the domains of science, society and policy and science advise moves between them (Gluckman, 2017, p. 11)

#### New Zealand's Science Advisory Ecosystem

## So what is the value of science advice in the 'post-trust context?



Figure 3: The messy policy world into which science seeks to find relevance and traction. (Gluckman, 2017, p. 7)

### Assessment framework: consequences of scenarios

This report summarises the process and the technical work used to support the policy process. The following table summarises how each scenario and solutions package performs against the Zone Committee's aspirations for the catchment, called priority outcomes.

Priority outcomes	Scenario 3	Scenario 2+	Current	Scenario 1	Scenario 2	Solutions Package 1	Zone Committee Solutions Package		
	Does the scenario support priority outcomes?								
Thriving communities and sustainable economies	Unlikely to improve across whole catchment	Probably improved	Possibly supported currently	As current	Probably improved	Probably improved	Probably improved		
High quality and secure supplies of drinking water	Possibly	Possibly	Possibly supported currently	Unlikely	Unlikely	Unlikely	Unlikely		
Wahi Tapu and mahinga kai are respected, understood, protected and enhanced	Possibly	Possibly	Unlikely/is not supported currently	Highly unlikely/no	Highly unlikely/no	Possibly	Possibly		
Healthy lowland streams	Possibly	Unlikely	Unlikely to be supported currently	Highly unlikely/no	Highly unlikely/no	Probably	Probably		
Te Waihora is a healthy ecosystem	Probably	Possibly	Unlikely to be supported currently	Unlikely	Unlikely	Probably	Probably		
Hill-fed waterways support aquatic life and recreation	Possibly	Probably	Possibly supported currently	Possibly	Probably	Probably	Probably		
Enhanced indigenous biodiversity across the Zone	Possibly	Possibly	Unlikely to be supported currently	Unlikely	Unlikely	Probably	Probably		

Robson, M. 2014. Technical report to support water quality and quantity limit setting in Selwyn Waihora catchment: predicting consequences of future scenarios: overview report. Accessed 3-1-2014. <u>http://files.ecan.govt.nz/public/lwrp/variation1/tech-report-sw-overview.pdf</u>

You're trying to do something that can incredibly useful and powerful but also bloody risky with a high level of responsibility in terms of, jeepers, if you translate that in a way that [pause] you've just got to wear that responsibility and deal with it as best you can by being aware of the fact that you're human and have your own value sets and being aware of the role you're trying to play. If you're too pure and take the 'I'm only interested in providing brokered and objective knowledge for the options', ok, but you run the risk of being less effective and expedient at the expense of purity.

### Questions

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## Thank you!

#### References

- Jasanoff, S. 2004. *States of Knowledge: the Co-production of Science and Social Order*. London: Routledge.
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#### Figures:

- Gluckman, P. 2017. Dialogue on science and science policy for the SDGs in the Pacific SIDS 2017. <u>http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Apia/pdf/INGSA.pdf</u> See also <u>http://www.pmcsa.org.nz/publications/</u>
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