

NEWSLETTER: The impact of governance on regional natural resource planning

About the project

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Regional governance in Australia is one of the most important, but complex public policy issues challenging sustainability. The management of natural resources at the regional scale, however, is challenged by complex decision-making processes and poor integration between different planning activities.

In Queensland, these challenges become acute in resource-rich

regions and in the Great Barrier Reef. In such regions competition for resources and resource-use impacts are contested, and these conflicts are expected to be more acute in a changing climate.

The ARC 'NRM planning and governance' project's focus is on the governance (decision-making systems) for regional natural resource management (NRM), including the collective interplay

between national, state and local government and different stakeholders. The project is a 3-year collaborative research project led by the Queensland University of Technology (QUT) in partnership with James Cook University (JCU).

The project is funded by the Australian Research Council with co-investment from Terrain NRM, Dry Tropics NRM, Fitzroy Basin Association, Queensland Murray Darling Committee, Condamine Alliance and the Queensland Regional Groups Collective.

Project Member Profile—Rachel Eberhard



In our last newsletter you met Jaime Olvera Garcia, one of the PhD students funded through this ARC project. I'm the other one!

My PhD is looking at collaborative governance at the policy level—when, why and how governments and other stakeholders can work effectively together on policy and program design and development. I'm using the last 10 years of policy decisions in the Great Barrier Reef and the Murray-Darling Basin as my two case studies. At present I'm just finishing the last of my interviews—a stage I've really enjoyed. Every-

one has been very willing to share their insights and perspectives—and I feel privileged to be hearing it from 'all sides'. This year will be a big one for me as I put myself to the task of writing my thesis.

My research interest in governance comes directly from my work experience—a fascination with the dynamics of the policy process and a frustration around the science-policy interface. Many of our policies are failing to deliver the environmental outcomes we need, despite the good intentions of most stakeholders. I know we can do much better at working together to achieve environmental and social justice outcomes. My PhD is helping me to read and think deeply about how we can achieve that.

I come to this research area with more than 20 years of work experience in the field, and degrees in agricultural science, natural resources and non-profit business. I've been a sole operator consultant

for more than 10 years, and that role suits me well. My consulting work is mainly brokering collaborations in various forms, planning and evaluation. I've done a lot of work with groups (including NRM, agricultural industries and governments) working to improve water quality in reef catchments. I worked on river health and environmental reporting in the Queensland Government for 8 years, including coordinating the Water Quality SIP under the National Action Plan for Salinity and Water Quality. I started life as an agricultural scientist, and spent time on the farm (wool, South Australia) with my father, before heading overseas for a volunteer role in Vanuatu (cattle under coconuts), where I met my partner Richard. I've been fortunate enough to do a lot of travel overseas, and now spend my time between Brisbane and a bush block in northern NSW.

"Everyone has been very willing to share their insights and perspectives—and I feel privileged to be hearing it from 'all sides'"

Project Happenings



NRM RGC Chairs March workshop

Since the early 2000s regional natural resource management (NRM) bodies have brokered and delivered critical on-ground conservation, biodiversity and ecosystem restoration across QLD

Review of alternative governance models for Queensland NRM

QUT have been working to support the Board of the Regional Groups Collective as they think through governance options to service the changing needs of Queensland Natural Resource Management.

Since the early 2000s regional natural resource management (NRM) bodies have brokered and delivered critical on-ground conservation, biodiversity and ecosystem restoration across Queensland in partnership with governments, industry, and the community. Queensland's non-statutory NRM model initially introduced community based arrangements under a Queensland and Australian Government bilateral framework for integrated planning and funding for delivery. Since 2007 these arrangements have been dismantled and this has had a significant impact on Queensland's NRM and has raised problems for delivering the broader community building objectives of NRM.

Over the past 18 months there has been growing Regional Body support for some form of restructuring of the delivery arrangements of NRM in Queensland so that regions can adapt while maintaining a strong community-based regional approach to sustainability planning and action.

To assist the RGC in this a group of critical friends led by Karen Vella and Rachel Eberhard (QUT) in collaboration with Andrew Drysdale (RGC), Bob Speirs, Norbert Vogel, Tim Ferraro (NRM NSW) and Mike Berwick (RGC) analysed alternative governance models for NRM and proposed a model to build the capacity of regional and local communities to engage in NRM through their Regional NRM Groups.

The review of options and the proposed governance model was presented and discussed at the Regional Groups Collective Board meeting on 16 March 2016. Over the next three months the RGC will collect further information from regional bodies to explore the opportunities and costs of implementation. For further information about this contact: Andrew Drysdale or Karen Vella



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Risk analysis of the governance system affecting outcomes in the Great Barrier Reef

Allan Dale, Karen Vella, Ruth Potts and Rachel Eberhard are part of a team that have now fully tested the application of Governance Systems Analysis (GSA) in the Great Barrier Reef (GBR). GSA is a novel analytical framework that identifies the governance themes, domains and subdomains most likely to influence environmental and socio-economic outcomes in complex natural systems.

We also undertook a rigorous analysis and benchmarking of the wider governance system affecting GBR outcomes; a globally significant world heritage area under scrutiny from UNESCO.

This GBR-focused application of GSA identified governance subdomains that present high, medium, or low risk. This enabled us to determine that three "whole of system" governance problems could undermine GBR outcomes. First, we stress the integrative importance of the Long Term Sustainability Plan (LTSP) Subdomain. Sponsored by the Australian and Queensland governments, this subdomain represents the primary institutional arrangements for coordinated GBR planning and delivery, but due to its recent emergence, it faces several internal governance challenges.

Second, we found a major risk of implementation failure in the achievement of GBR water quality actions due to a lack of system-wide focus on building strong and stable delivery systems at catchment scale. Finally, we conclude that the LTSP subdomain currently has too limited a mandate/capacity to influence several high-risk subdomains not aimed at Reef management (e.g., the Greenhouse Gas Emission Management Subdomain). This wider analysis enables exploration of governance system reforms needed to address environmental trends in the GBR and reflects on the potential application of GSA in other complex land and sea-scapes across the globe.

The full report will be available soon, but a preliminary overview of the method is available at:

http://researchonline.jcu.edu.au/29942/1/29942_Dale_et al_2013.pdf

This project was possible due to funding from ARC and NESP TWQ Hub Funding.

Project Happenings cont.

PhD fieldwork

Rachel Eberhard has been interviewing policy stakeholders in the Great Barrier Reef and Murray Darling Basin.

International comparison of water policy governance

Rachel Eberhard and co-authors from the ARC team (Richard Margerum, Karen Vella, Severine Mayere and Bruce Taylor) have recently submitted a paper that looks at the history of water governance across six international case studies in the USA, Australia and Europe.

Monitoring and reducing human impacts on water quality entering the GBR through best practice urban planning and management

Karen Vella and Douglas Baker have a QUT Institute for Future Environments (IFE) project that aligns to Managing for resilient landscapes. This project will improve the resilience and condition of the GBR through better management of urban catchments. Through data collation, analysis and framework

development to understand urban impacts on sediment unlocking, mobilisation and transport, we will develop an approach and foundation for defining a state-of-the-art system of monitoring, data acquisition, modelling and evaluation to minimise the impacts of urban planning and management on water quality entering the GBR from urban catchments.

Land-sourced sediments and nutrients strongly influence water quality, the condition of coral reefs and seagrass meadows in the inshore GBR. Coastal inundation (storm surge and flood) events associated with extreme weather can mobilize significant volumes of sediments and aquatic contaminants into the GBR. These accumulate in shallow and poorly flushed coastal environments from urban, agriculture and industrial land use.

Though governments and stakeholders at all levels now clearly recognize the impacts of catchment land use on GBR water quality, current research and on-the-ground implementation programs focus entirely on reducing sediment, nutrient, and chemical loads from agricultural activities.



Monitoring and reducing human impacts on water quality entering the GBR through best practice urban planning and management

Upcoming Conferences

6th National NRM Knowledge Conference

Coffs Harbour June 2016

Karen Vella and Rachel Eberhard will present posters on "Evaluating governance models for Queensland NRM" and "Lining up the ducks - lessons about policy dialogue between governments and NGOs from the Murray Darling and the Great Barrier Reef"

www.conference.nrmregionsaustralia.com.au



24th World Congress of Political Science in July 2016

The main topic is "Politics in a World of Inequality". Jaime Olvera Garcia will present the paper "Coordination in the governance of Natural Resource management (NRM) planning: the struggle for equity", within the subtopic of Public Policy and Administration. Originally, the venue was at Istanbul, Turkey, but due to safety reasons they relocated it. At this moment, the conference committee hasn't confirmed yet the new city.

wc2016.ipasa.org/events/congress/wc2016/home



Interesting links



JCU image library

Murray Darling Ministers latest meeting

The latest Ministerial meeting on the Basin Plan implementation considered how to optimise strategies across states. A widespread algal bloom in the southern basin is being closely monitored. The Northern Basin Review is due to report later this year.

<http://www.mdba.gov.au/about-us/governance/ministerial-council/murray-darling-basin-ministers-meet-melbourne-11-mar-2016>

Reef Water Science Taskforce report

The water science taskforce convened by the Queensland Government released its interim report, which it is now finalising following public consultation.

<http://www.gbr.qld.gov.au/taskforce/interim-report/>



JCU image library

Shared services

Market forces are driving non-profit organisations to consider cost-sharing models - this paper looks at lessons from the public and private sectors for shared service models.

<http://eprints.qut.edu.au/5161/2/5161.pdf>

Models of water quality impacts in wet and dry tropics

How does water quality impact ecosystem health in the Great Barrier Reef? This paper summarises water quality risks for wet and dry tropic catchments of the GBR in conceptual models.

<http://dx.doi.org/10.1071/MF15301>

How local institutions mediate the delivery of reef programs

The delivery of national agricultural-environmental programs is influenced by local institutions such as agricultural extension networks. This paper looks at farmer perceptions of these sorts of programs, including the perceived risks of participating.

<http://dx.doi.org/10.1016/j.jrurstud.2014.11.011>

[note this is a pay to view article]



Orpheus Island JCU research station

Re-interpretation of ecologically sustainable development goals

Peter Burnett looked at the goals of environmental policy since the 1970's and found that the objective of ecologically-sustainable development, established in has been progressively reinterpreted since it was introduced in the 1990s. See the paper '[What Are We Really Trying to Achieve? Australian Environmental Meta-Policy Objectives since 1970.](#)'

http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/APF/Past_Scholarship_research

Building bridges between science and society

This a good piece about the need to build stronger bridges between science and society in order to face the world's environmental challenges

<http://ensia.com/voices/to-build-a-sustainable-world-academics-need-to-tear-down-the-ivory-tower/>

Recent publications include

Dale, A., Vella, K. J. & Cottrell, A. (2015). Can social resilience inform SA/SIA for adaptive planning for climate change in vulnerable regions? *Journal of Natural Resources Policy Research*, 7(1), 93-104. doi: [10.1080/19390459.2014.963371](https://doi.org/10.1080/19390459.2014.963371)

Dale, A., Vella, K. J., & McKee, J. (2014). Analysing governance of Australia's system of landscape-based greenhouse gas abatement. *Australasian Journal of Environmental Management*, 21(4), 378-395. doi: [10.1080/14486563.2014.954644](https://doi.org/10.1080/14486563.2014.954644)

Dale, A. P., Vella, K., Pressey, R. L., Brodie, J., Gooch, M., Potts, R., & Eberhard, R. (2016). *Monitoring and adaptively reducing system-wide governance risks facing the GBR: Final report*. Cairns: Reef and Rainforest Research Centre Limited. (19pp.).

Davis, J., O'Grady, A. P., Dale, A., Arthington, A. H., Gell, P. A., Drive, P. D., . . . Specht, A. (2015). When trends intersect: The challenge of protecting freshwater ecosystems under multiple land use and hydrological intensification scenarios. *Science of the Total Environment*, 534, 65-78. doi: [10.1016/j.scitotenv.2015.03.127](https://doi.org/10.1016/j.scitotenv.2015.03.127)

Olvera-Garcia, J., Vella, K., & Sipe, N. G. (2015). Governance and regional planning outcomes: Using governance indicators to support a policy implementation approach. Paper presented at the State of Australian Cities National Conference 2015, 9-11 December 2015, Gold Coast, Qld.

Potts, R., Vella, K., Dale, A., & Sipe, N. (2015). A study of governance arrangements for land use and natural resource management planning in Cape York Peninsula. *Australian Geographer*, 46(3), 389-409. doi: [10.1080/00049182.2015.1048594](https://doi.org/10.1080/00049182.2015.1048594)

Stephens, A., Oppermann, E., Turnour, J., Brewer, T., O'Brien, C., Rayner, T., . . . Dale, A. P. (2015). [Identifying tensions in the development of northern Australia: Implications for governance](#). *Journal of Economic and Social Policy*, 17(1), Article 5.

Vella, K., Sipe, N., Dale, A., & Taylor, B. (2015). Not learning from the past: Adaptive governance challenges for Australian natural resource management. *Geographical Research*, 53(4), 379-392. doi: [10.1111/1745-5871.12115](https://doi.org/10.1111/1745-5871.12115)

Conference papers

Margerum, R., Vella, K., Eberhard, R., & Mayere, S. (2015). The impacts of policy change on collaborative governance networks. In 55th Annual ACSP Conference. Justice and the City: (re)Examining the Past to Create the Future, 22-25 October 2015, Houston, TX. (Unpublished) <http://eprints.qut.edu.au/90961/2/90961.pdf>

Olvera-Garcia, J., Vella, K., & Sipe, N. G. (2015). Governance and regional planning outcomes: Using governance indicators to support a policy implementation approach. In State of Australian Cities National Conference 2015, 9-11 December 2015, Gold Coast, Qld. Available from: <http://eprints.qut.edu.au/90100/3/90100.pdf>

Potts, R., & Vella, K. (2015). Analysis of governance for sustainability planning in the Cairns Region. In State of Australian Cities National Conference 2015, 9-11 December 2015, Gold Coast, Qld. <http://eprints.qut.edu.au/90963/3/90963.pdf>



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Townsville



Queensland University
of Technology



April workshop

Rachel Eberhard and Karen Vella hosted a second workshop on the 22 April 2016 that brought together the CEOs and business managers from across QLD NRM bodies. The workshop focused on reform options for QLD NRM looking at how best to collaborate for shared delivery across NRM groups.



NRM RGC CEOs

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