



Impacts and Achievements of the MTSRF

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Showcasing the Australian Government's investment
in the MTSRF for improved sustainability of the
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Abstract

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Governing environmental impacts of agriculture in the GBR: the role of uncertainty in policy and planning

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Principles such as cost-effectiveness, equity and political acceptability are important for the design of policy instruments for managing diffuse water quality. Our research on catchment and regional level management responses in the GBR suggests that, in practice, applying these principles is greatly affected by the conditions of uncertainty that permeate the planning and governance environment. At one level these uncertainties relate to the *effectiveness* and impact of farm-level practice change on local ecosystem response; and, on enterprise profitability. These are however exacerbated by two broader uncertainties: the uncertainty of public resource commitment to share the costs of implementation at a sectoral level (*distributional*); and, uncertainty of the future policy environment, irrespective of individual farmer response (*political*). These are compounded by claims about the absence of adequate knowledge linking farm practice change with monitoring of landscape scale response. This in turn raises further issues of accountability and questions over individual and collective risk. Through this paper we argue that understanding these uncertainties, and their impacts, can improve the successful implementation of government, community and farming sector partnerships on water quality.



Australian Government

Department of the Environment, Water, Heritage and the Arts



Marine and Tropical Sciences Research Facility

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The role of uncertainty in policy and planning

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CSIRO Sustainable Ecosystems



The problem

Regulating diffuse water quality from intensive agriculture

- nutrients, sediment, pesticides
- implementation deficit (e.g. Brouwer et al., 2003; Osborn & Datta, 2006)
- “universality, control and predictability” (Kaljonen, 2006)

The (broad) policy response

Initially ‘cooperative’ (e.g. Reef Plan and Reef Rescue) followed by new regulatory controls - GBRPA Act 2009*





Hybrid arrangements to govern farmer conduct

- agricultural governance + environmental mgt
- instruments: cooperative, market, prescriptive
- Mix of stakeholders, values and goals

as strategy for managing uncertainty

- collective action in partial knowledge (Pahl-Wostl, 2002)
- Hedging bets: spreading risk across a range of strategies

Criteria for policy implementation for diffuse water quality:
Cost-effectiveness; equity; political acceptability (G&S 2005)





How are these hybrid arrangements interpreted by farmer groups, agencies and regional bodies?

What can this tell us about improving policy and planning approaches?

Interviews and observations from the planning fora Tully, Wet Tropics and Reef level between 2006-9

Uncertainty emerged as one of several themes



Three types of uncertainty evident:

Effectiveness (instrumental)

Will this practice work, will it damage or improve my business? Will it have demonstrable environmental benefit? How will (my) performance be judged?

Distributional (allocating resources, costs and benefits)

What's in it for us and who pays? Are resources matched to responsibility? Is risk shared or concentrated?

Political (institutional trust)

Can we trust governments, what might governments do regardless? Will our members support this?





Effectiveness (and performance)

So the farmer has no way of knowing whether what he does today is going to reduce the impact down at the end of the estuary by...parts per billion or not, and indeed if they increase or decrease, the farmer has no way of knowing whether it's because of his action, or his neighbour's action, or the [whole of] catchment action.

Sugarcane industry interview





Distributional (and relational)

...so that's a lot of people to be negotiating all over the place with a lot of uncertainty about when contracts would be delivered to, if you could extend them, how much percentage of the reef rescue package could go towards partnerships, how much was incentives, lots and lots of unknowns.

Horticulture industry interview



Political

People were very nervous about targets and saying well, if we commit to these [voluntary] targets how can we be confident that those targets are not going to be picked up by government and used against us? Of course you had Beattie [Queensland Premier] saying that he was going to do just that.

regional NRM body interview



Implications

- While a strategy for managing uncertainty, hybridity creates new uncertainties
- Multiple, interrelated and are influential at range of scales
- Anticipate and negotiate acceptable risks of delivery
- More rich (and realistic) application of policy criteria:
 - cost-effectiveness; equity and political acceptability (Gunningham & Sinclair 2005)

