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# Community-based Regional Delivery of Natural Resource Management

Building system-wide capacities to motivate  
voluntary farmer adoption of conservation practices

**A report for the Cooperative Venture  
for Capacity Building in Rural Industries**

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# Draft Executive Summary

## What this research is about

The research was concerned with the challenges of succeeding with a community-based approach to governance under Australia's regional delivery model for natural resource management (NRM). More particularly, it explored the potential that 'nesting' of community-based systems within regions offers for addressing these challenges.

## Who this report is aimed at

This report is aimed at leaders and decision makers at all levels of the Australian policy community (from local groups through to the Commonwealth Government) responsible for, or concerned with, promoting voluntary adoption of strategic on-ground NRM actions through community-based NRM.

## Background

Since the 1980s, community-based NRM has evolved from its origins with small groups of landholders to the present situation where regional bodies, each responsible for an extensive landscape, are expected to foster 'community ownership' and voluntary cooperation from the large and diverse populations (comprising up to hundreds of thousands of people) inhabiting their regions. Aside from the challenge presented by this quantum up-scaling of the community-based approach, another challenge derives from the pressures on regional bodies to assume responsibilities (e.g., demonstration of upward accountability to the governments funding them) that risk them becoming perceived by their constituents as extensions of government. A further challenge follows from governmental expectations that regional bodies will invest their funds strategically, rather than spread available funds across their constituency, and the consequent risk that community ownership of regional decisions may be weakened by perceptions of inequity, favouritism or 'playing politics'.

International research has identified 'nested' approaches to community-based NRM as a potential way of responding to such challenges. This response involves structuring programs concerned with larger-scale NRM problems as nested multi-level systems of community-based governance. Nested governance systems of this kind differ from conventional multi-level systems which tend to be designed from the top down. In contrast, a nested multi-level system arises predominantly from a bottom-up process in which lower-level units are active participants in the design and operation of higher levels of the system. Such a bottom-up process offers the possibility of making manageable the problems of establishing voluntary cooperation from large and diverse populations that otherwise would likely remain insurmountable. This is not to deny important roles for governments in resourcing and facilitating the bottom-up process of institutional development, and in defining parameters for the process so that it might integrate effectively with governmental programs.

## Objectives

The purpose of the project was to strengthen the capacities of all levels of the Australian policy community, from local groups to regional bodies to the Commonwealth Government, to establish successful community-based arrangements under the regional delivery model for NRM. Accordingly, the primary objective of the project was to identify a set of guidelines that leaders and decision-makers at all levels might apply in designing nested systems of community-based NRM.

## Methods used

A case-study method was used that involved complementary application of qualitative techniques (data from workshops and semi-structured interviews) and quantitative techniques (data from mail-out farmer surveys analysed by multiple regression). This method was used to explore whether and how nested community-based NRM applies to the regional delivery model, particularly in respect of engaging farmers' voluntary cooperation in achieving targets set under this model. The qualitative research involved workshops and key informant interviews. It elicited stakeholders' perceptions of the regional delivery model as an exercise in community-based NRM, their assessments of its strengths and weaknesses in this respect, and their views on how the weaknesses might be ameliorated. The quantitative research involved multiple regression analyses, and was concerned with identifying whether farmers' trust in the

regional delivery model was associated with their plans to cooperate with that model by adopting the kinds of conservation practices promoted to them under the model.

The three regions used as case studies were the South West Catchments Region in Western Australia (for which the regional body is the South West Catchments Council), the Fitzroy Basin Region in Queensland (for which the regional body is the Fitzroy Basin Association (FBA)), and the Mallee Region in Victoria (for which the regional body is the Mallee Catchment Management Authority). In the South West Catchments Region, the subregional focus was on the Blackwood Basin, with the Blackwood Basin Group (BBG) as its subregional body. In the Fitzroy Basin Region, the subregional focus was on the Central Highlands subregion, with the Central Highlands Regional Resources Use Planning Cooperative (CHRRUP) as its subregional body. The focus in the Mallee Region was on dryland districts, to facilitate comparability with the other two subregions where agriculture was also mainly dryland-based.

### **Key findings**

From the qualitative research, four main themes concerning how the regional delivery model might be made more community-based were identified: (i) don't do what a lower-level group can do for itself; (ii) appraise lower-level capacities, and recruit with respect; (iii) invest in strengthening lower-level capacities; and (iv) establish and maintain vertical trust. The qualitative research also identified an array of issues associated with farmers' vertical trust in the regional delivery model. These issues were used in developing questionnaire items for measuring farmers' trust in the regional delivery model, and thus providing data on such trust for the subsequent quantitative analysis.

The quantitative analysis indicated that farmers' vertical trust in the regional delivery model was associated with their adoption plans for most of the conservation practices promoted to them under that model that were analysed in the present study. It also found, at least in the Blackwood Basin case and Central Highlands case for which a subregional body existed, that farmers' trust in their relevant subregional body (BBG and CHRRUP, respectively) was the element of farmers' trust in the regional delivery model most likely to be associated with their adoption plans. Farmers' trust in their regional body was the element of this trust second most likely to be associated with farmers' adoption plans. Of all 17 variables included in the models, the quantitative analysis indicated that farmers' trust in their subregional body, where relevant (i.e., not in the Mallee dryland case where a subregional body does not exist), was second most likely to be associated with farmers' adoption plans.

Farmers' adoption plans were also found in the quantitative analysis to be more sensitive to changes in their trust in their subregional body (in the two cases where this variable was relevant) than to most other variables found to be associated with such plans. Hence, it appears that trust of this kind was not only more likely than most other variables to be associated statistically with farmers' adoption plans in these cases but also, when association exists, to be relatively strongly associated with those plans in a substantive sense (i.e., such that a relatively small proportionate change in this trust is associated with a relatively large proportionate change in these plans).

The quantitative analysis also indicated that farmers' vertical trust in the regional delivery model was more likely to be associated with their adoption plans for 'green' practices (i.e., concerned with biodiversity conservation) than for 'brown' conservation practices (i.e., concerned with sustaining agricultural production). This is consistent with claims that the introduction of government regulations restricting farmers' rights to clear native vegetation has led many farmers to distrust anything with the 'whiff of a green agenda'. However, regional bodies, and subregional bodies where they exist, will be advantaged compared with governments in reversing this distrust only to the extent that they do not become perceived as extensions of government or 'under their thumb'.

Overall, these findings suggest that community-based NRM at the scale of regions defined under the regional delivery model can be capable of motivating voluntary cooperation from farmers in adopting practices promoted to them under this model, but only to the extent that community-based bodies are able to establish trust from their farmer constituents and engage them effectively enough that they come to follow reciprocity strategies in their dealings with these bodies. It seems that subregional bodies have an advantage over regional bodies in eliciting such behaviour from farmers because the former are better positioned to engage them effectively. This indicates the value of a nested multi-level approach to community-based NRM within regions, at least where capacities below the regional level are

sufficient to justify devolution of significant responsibilities to subregional or other levels. However, it needs to be appreciated that these findings were based on patterns observed over a sample comprising three of the 56 NRM regions defined under the regional delivery model. Further research on a broader sample of regions is warranted to determine the degree to which findings from this study can validly be generalised across the full population of regions.

The qualitative and quantitative findings complemented one another in highlighting the challenges of successfully pursuing a community-based approach under the regional delivery model, and in identifying guidelines for how such challenges might fruitfully be addressed. A final set of eight guidelines were identified as listed and elaborated below.

<b><i>Guidelines for community-based governance under the regional delivery model for natural resource management</i></b>	
<b>Guideline</b>	<b>Elaboration</b>
Establish vertical trust	Fulfil responsibilities at any level in ways that establish trust from units at other levels. Various attributes of 'good governance' are relevant here, including: transparency, accountability (upward and downward), inclusiveness, fairness, and deliberativeness. Procedures for establishing such attributes should be decided deliberatively, not imposed from the top down.
Subsidiarity	Decentralise each governance responsibility to the lowest level of a multi-level system with capacity to conduct it effectively. This guideline should not be interpreted solely from the top-down, but rather through deliberation among all affected parties.
Representation	The capacity at a given level to conduct a responsibility effectively depends partly on whether all parties substantively affected by the responsibility are represented at that level.
Competence	The capacity at a given level to conduct a responsibility effectively depends also on whether there is sufficient access at that level to the requisite physical, financial, human and social capacities.
Build and maintain lower-level capacities	The capacity at a given level to discharge a responsibility effectively can often be enhanced by strengthening access to the requisite capacities. Subsidiarity obliges decision-makers at one level to exhaust all reasonable opportunities before ruling out decentralising a responsibility to a lower level. Meanwhile, it urges due caution in ensuring decisions do not weaken lower-level capacities (e.g., over-stretching or under-utilising capacities, encouraging dependency, triggering conflict, causing demoralisation, etc.).
Secure lower-level rights	Efforts to build capacity at lower levels are unlikely to succeed unless the target population has secure rights to benefit from the capacities developed.
Respect lower-level autonomy	Units assigned responsibilities in accordance with the subsidiarity principle should be allowed substantive autonomy in how they decide to pursue those responsibilities.
Counter resistance	Higher-level units often resist deliberative application of the subsidiarity principle. Such resistance can often be countered through leadership (including by individuals at higher levels), patient strategic moves, demonstrating good performance, preparing for 'windows of opportunity', and establishing horizontal and vertical alliances.

### **Implications for stakeholders**

The research findings suggest that community-based approaches are capable of succeeding under the regional delivery model in motivating greater voluntary cooperation from farmers than would be possible without such approaches. However, they also highlight that success of this kind cannot be taken for granted. In particular, the findings highlight the importance of farmers coming to adopt reciprocity strategies in respect of their key relationships under the regional delivery model. It can be expected that these key relationships for farmers will be with their subregional body where one exists, or otherwise with their regional body. Nevertheless, leading farmers to follow reciprocity strategies with higher levels of authority is no easy matter given that paternalistic governance of generations of farmers has tended in many settings to entrench free-riding or opposition strategies as an ongoing norm. Only when farmers come to trust that governance structures are prepared to reciprocate their cooperation – by

valuing their input, rather than dismissing it, taking it for granted or using it against them – can they be expected to progress from free-riding and opposition to adoption of reciprocity strategies.

The eight guidelines identified above for community-based NRM should be viewed as points of departure for a system-wide process of ‘institutional diagnosis’ seeking to identify and remedy the key issues in any setting that are limiting the effectiveness of such an approach in motivating the trust and reciprocity from farmers that is needed for them to cooperate more voluntarily in adopting the kinds of conservation practices promoted to them under the regional delivery model. A process of this kind has an important contribution to make towards the ‘good science’ which policymakers continue to emphasise as integral to the regional delivery model.

## **Recommendations**

It is recommended that:

1. leaders at all levels of the regional delivery model (federal, state/territory, regional, subregional, local, etc.) apply the eight guidelines listed above as points of departure for adaptive management towards community-based governance systems capable of establishing voluntary cooperation from farmers; and
2. the conclusions drawn from the three cases studied in the present research be further validated and refined through additional case-study research covering a broader sample of the regions defined under the regional delivery model.