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COLLABORATION BETWEEN RURAL INDUSTRY RESEARCH AND DEVELOPMENT CORPORATIONS IN AUSTRALIA

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INTRODUCTION

The principles of governance are being re-considered and influence the way agriculture and natural resources are governed in Australia (Kelly 2005; Keogh, Chant & Frazer 2006). Collaboration with rural communities is widely promoted as government has moved towards devolving decision making processes in natural resource management to local and regional communities (Kelly, Cuthill, Brown, Ross & Byrne 2006; Kelly, Brown, Cuthill, Byrne & Ross 2007). The role of individuals, communities and organisations in decision-making in the western world is changing profoundly in both policy and practice (Rose 1996; 1999).

In Australia, rural Research and Development Corporations (RDCs) have traditionally been involved in government policy development as it relates to their industry's research and development. In recent years, the ability of RDCs to work collaboratively, both with government agencies and other RDCs' has been questioned. Various reviews (Rural Industries & Food Policy Reference Group 2005; Commonwealth of Australia 2007; Keogh, Chant & Frazer 2006; SELN 2006) encourage the RDCs to change the way they operate and to work towards better collaboration both internally and externally.

This paper argues that better collaboration requires a detailed understanding of (1) the different knowledge systems of individuals and organisations, government and community, and (2) the integration of these respective forms of knowledge into agricultural and natural systems governance. A general assumption this paper challenges is that science is the key knowledge required for policy development and Earth systems governance. This paper questions that assumption drawing broadly from recent research commissioned by a group of RDCs.

THE RESEARCH AND DEVELOPMENT CORPORATIONS PROJECT

A group of RDCs commissioned research to examine how to improve collaboration between RDCs and national policy makers to improve land management in Australia. The overarching goal was:

"to engage with national policy makers and inform the development of emerging policies and institutional arrangements regarding capacity building and extension in rural industries and natural resource management" (Project brief in Kelly *et al.* 2006).

This project aimed to encourage both *collaboration between*, and *learning about* collaboration. To achieve collaboration and learning, active participation of key actors was needed, and the research design was based on participatory action learning framework (adapted from Aslin & Brown 2002). This involved an iterative process where information was collected, then discussed, reviewed and refined by project participants. Four questions were asked in sequence (1) What should be? (2) What is? (3) What could be? (4) What can be?.

COLLBORATION AND KNOWLEDGE CULTURES

This paper is based on the assumption that building networks and collaboration is necessary to solve 'wicked' ⁽¹⁾ or complex problems (Brown 2001; Brown 2007; Mwangi 2008). The emphasis on collaboration between agencies is less common than collaboration with communities. Yet the research

¹ Wicked problems are very uncertain & can only be addressed by increasing interaction & cooperation between multiple stakeholders; building networks for collective actions; including local knowledge in decision-making (Mwangi 2008)

literature consistently reports that stronger collaboration and cooperation between agencies could enhance capacity building, minimise duplication and develop consistency (Coutts, Roberts, Frost & Coutts, 2005:65). Whelan and Oliver (2005) suggest that successful engagement between government and citizens is at least partly dependent on the ability of agencies and spheres of government to engage successfully with each other.

Effective collaboration requires the integration of different knowledge cultures (Brown 2007) into the decision-making process. The various players involved in decision-making (as individuals, community, specialists, government and integrators) have been shown to work from distinct knowledge cultures (Figure 1). Each sector has its own form of knowledge content, sources of truth, sources of ignorance and forms of language (Brown 2001; Brown 2007).

Knowledge culture	Structure	Source of truth	Sources of ignorance
INDIVIDUAL KNOWLEDGE		Memory	Subjective
Lived experience, identity	(·:·::)	Learning style	Limited
		Five senses	Vague
LOCAL KNOWLEDGE		Stories	Gossip
shared experience of people and		Events	Anecdote
place	Sand Sand	Symbols	Inaccurate
SPECIALISED KNOWLEDGE		Inquiry	Jargon
Mono, multi & trans-		Measurements	Irrelevant
disciplinarily, the professions	4 1	Observations	Narrow
ORGANISATIONAL		Agendas	Deals
KNOWLEDGE		Alliances	Mates
Administration, government, industry, strategic thinking	\bigcirc	Networks	Corruption
		Synthesis	Airy-fairy
HOLISITIC KNOWLEDGE		Focus	Impossible
Essence, core of a system		Creative leap	Impractical

Figure 1 Knowledge cultures of western decision-making (Brown 2001)

Within each of these knowledge cultures are different ways of understanding the world help determine what is seen as truth for that particular group. As Brown (2001) suggests, one of the sources of truth for local communities is stories, whereby people share their experiences of people and places. Yet, local stories are often not considered 'valid' knowledge within the western society knowledges.

In agriculture and natural resource management systems, specialised scientific knowledge has pride of place, which to some extent has tended to exclude other knowledge cultures. This current status distorts decision making by marginalising other "truths" or knowledge cultures (Rabinow and Rose 2003). While each sector draws on all the knowledge cultures, but they tend to acknowledge only their own. This leads to the perception of conflicts of interest when it is collaboration that is required.

Clearly, a better understanding of what is seen as knowledge and how to integrate these various knowledge cultures for collaboration is required for organisations involved in agriculture and natural resource management to effectively achieve their institutional goals. Once players from each of the knowledge cultures (Brown 2001) are involved in constructing policy, the question becomes how to ensure that the collective contribution from the full range of knowledge cultures is effective.

RESULTS: WHAT WE FOUND OUT ABOUT COLLABORATION AND POWER

An analysis of five years of research commissioned by the RDCs confirmed that some collaboration between RDCs does occur for specific projects. Most collaboration was between like-minded organisations at the grass-roots level, such as in Grain and Graze (Kelly *et al.* 2007).

Limited collaboration occurs at the policy or strategic level between RDCs themselves, and between RDCs and government agencies (Kelly *et al.* 2006). The potential for developing long-term collaboration at the strategic level between RDCs and government policy makers are rare, because of the barriers to collaboration (Table 1). This suggests they have failed to understand the nature of overlapping networks and the importance of finding ways to integrate the different knowledge cultures now required to develop policy.

Institutional arrangements

- Weak institutional links between training/extension/education service providers, different levels of government, government and industry, community and government agencies, and different scales of network mean that fragmentation is more likely than constructive collaboration;
- Lack of clarity in roles and responsibilities of the diverse agencies involved in rural industries natural resource management consistently undermines potential collaborative ventures;
- Lack of consistency in definitions & data collection restricts comparative research & evaluation;
- Lack of appropriate time allocated to building effective collaboration.
- Lack of clear policy directions & lack of agreed national framework.

Communication and human resources

- A general lack of knowledge about & experience of collaboration;
- Very strong, yet different, cultures within the RDCs
- High transaction costs are perceived by potential collaborators to be barriers to collaboration;
- A lack of shared understanding of the terms & processes of collaboration: e.g. collaboration itself, partnerships, alliances, synthesis, integration, community development, strategic planning.

Financial resources

- Lack of calculation of financial costs; cost/benefits of collaboration. Appropriate allocations for staff time, organisational premises, travel, & electronic communication need to be added to budgets. Removal of overlaps, efficiencies of scale & cooperation will offset these costs.
- Lack of attribution of benefit from the project cannot be causally related to any one organisation. The increased benefit in terms of the clients seems to be disregarded.

Table 1 Barriers to collaboration for RDCs (from data collected)

Tensions and distrust exist between RDCs. Most RDCs focus on agricultural production while some have a natural resource management focus (e.g. Land and Water Australia). As one workshop participant said: *Potential core partners don't have a shared vision; so collaboration is difficult* (RDC Workshop participant, November 2007).

Many RDCs focus solely of their own industry, thus having a "silo" mentality and disregarding the broader rural communities within which their industries exist, and any issues such as rural social decline which are common across all industries. These differing interests and ways of understanding the world need to be seen as complementary and bought closer together to facilitate efficient and effective outcomes for sustainable land management, as was expressed by one participant.

Collective thinking among the five knowledge cultures that are relevant to decision-making within RDCs is essential for collaboration. The relationships and power dynamics between individuals within these knowledge cultures were found to be critical in achieving effective collaboration between RDCs.

The five key strategies were found to improve the current effort to collaborate for capacity building:

- 1 Sharing a common language;
- 2 Linking a diversity of models and activities;
- 3 Enhancing collaborative teamwork, including appropriate skills for managing change;
- 4 Re-orienting institutional arrangements to include integrative structures; and
- 5 Developing a collective knowledge synthesis (Kelly *et al.* 2007).

THE FUTURE

This paper highlights the need to understand that different knowledge cultures need to be integrated for effective collaboration between rural RDCs in Australia. The science-policy interface often assumes that only one type of knowledge is required, specialist knowledge. This paper argues that the policy community of the 21st Century needs to be much broader than this, and that various knowledges need to be integrated in a holistic manner. Individuals inherently find this difficult, as they are asked to question their own values and assumptions about the way knowledge is created.

Conflict seems inevitable when integrating different knowledge culture with the various assumptions and values implicit in the different ways of creating knowledge. How we manage this conflict, how we allow it to emerge and not be pushed away, how we use the energy created by conflict to find innovative and different solutions to land management is being explored in the next stage of this research.

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