

# National Action Plan for Salinity and Water Quality

## Social and Economic



Regional Natural Resource Management in Queensland

## State-level Investment Project SE04

### Final Project Report

Integrated Research, Development and Extension for  
Natural Resource Management

February 2006



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Carmel Marshall, Professor Bob Miles and Benjamin Kele

February 2006



The National Action Plan for Salinity and Water Quality (NAPSWQ) is a joint Australian and Queensland Government initiative that encourages governments and regional communities to work together to address salinity and water quality issues in priority catchments throughout Queensland. This document has been produced under the NAPSWQ using Australian and Queensland Government financial support.

### **Project team**

Carmel Marshall, Professor Bob Miles and Benjamin Kele

### **Contact details**

For further information or copies, please contact:

Carmel Marshall

Institute for Sustainable Regional Development

Central Queensland University

Telephone: (07) 4930 9053

Email: [isrd@cqu.edu.au](mailto:isrd@cqu.edu.au)

This document is also available for viewing and downloading from the regional NRM website:

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## 1. Executive Summary

Under the National Action Plan for Soil and Water Quality Regional Bodies (RBs) now have a large part of the responsibility for implementing research, development and extension (RD&E) activity in NRM required in a region. These bodies are community and stakeholder based, and are reliant on strong relationships with the traditional research and development agencies for research support. RBs are funded through the NAP and NHT programs, with the goal to ensure that sustainable management practices developed through research in NRM are taken up by landholders and land managers. Each of the RBs has developed or is developing a Regional Investment Strategy (RIS), in conjunction with other NRM stakeholders. The RISs provide the framework for delivering on the ground change, and prioritises activity.

Under the State-level Investment Projects (SIP) process, a project was developed to assist the RBs in their efforts to engage RD&E providers in collaborative approaches to the required research and development. This project, SE04, initially looked to broker partnerships between RBs and RD&E providers. However it became apparent that many of the RBs were focused on achieving certification for their investment strategies, and were not yet ready to launch into new project partnerships and initiatives. The objectives of the SE04 project were therefore adapted, with a new focus on evaluating the strengths and weaknesses, blockages and impediments of the RB and RD&E provider engagement and partnership processes. Some brokerage activity was included in the project where opportunities existed to demonstrate opportunities by example.

In order to achieve the objectives of the SE04 project, a four stage process was initiated to identify and develop collaborative opportunities and address potential blockages to achieving integrated RD&E by:

1. Evaluating collaborative RD&E models and the structure and operations of the RBs.
2. Evaluating the RISs and identifying any collaborative RD&E opportunities as well as any gaps and impediments to collaborative RD&E.
3. Undertake a self review and peer review process of the successes, failures and blockages to achieving collaborative RD&E (APEN Conference 2005); and
4. With the support of the R&D providers distil pathways forward for improved engagement and RD&E collaboration (reference panel).

This report is the synthesis of these activities, summarising the findings outlined in the two previous reports (Graham, 2005; Kele et al, 2005); discussing the major issues and recurring themes that the project identified; and providing recommendations for strategies to support the evolution of the RB system; as well as suggesting ways forward to achieve successful collaborative RD&E.

The report provides a brief background to the project, including an outline of previous NRM arrangements, the establishment of the Regional Bodies and the environment into which they were introduced. It details the scope and limitations of this project, its objectives and subsequent refocusing of the objectives to better meet the needs of stakeholders. The methods applied to fulfill the project requirements are then detailed.

A number of issues identified in this project are not new, however this is the first attempt to collate the issues to provide a suggested series of pathways to address a myriad of challenges and opportunities. This process was greatly assisted by discussions held both as part of the project process and at the APEN conference.

Funding and reporting structures were found to be issues of importance with regard to RBs efforts at collaborative RD&E. The process of adapting to the short-term funding structure is not complete, and it is suggested that some assistance is still required.

The reporting requirements that flow from the funding structure have impacted on some collaborative arrangements, with particular effects on volunteer groups. It is suggested that these groups may need additional support. For volunteer groups to continue participating in collaborative RD&E, they may need increased support from the RBs.

Access to in-kind support has been shown to be a major challenge for some RB. There is no suggestion of unwillingness of state agencies to provide support, rather their own staffing issues and workloads left little time to provide the level of support that the RBs were anticipating would be made available.

The issue of perverse subsidies is now emerging as an issue and will need to be considered. RBs suggesting that arrangements that award poor practice were counter to the efforts of RBs in implementing practices that promote catchment health and impact of collaborative RD&E.

The RBs were found to take different approaches to accessing expertise – direct employment of experts, or brokerage. The reasons for choosing one option or the other, or a mix of both, were generally found to be tied to availability. Both choices were found to have positive and negative aspects.

The lack of a recognised corporate identity was seen to inhibit RBs attempts to broker research, particularly with university research centres. While the need for a unique structure that suited the region the RB was servicing was acknowledged, the value of a corporate identity is emphasised. Limitations of the singular approach were particularly evident in efforts to try to assess collaborative RD&E progress across multiple regions and at the state level.

It became clear that there was limited understanding among the stakeholders of the roles of the various NRM organisations. This meant that the expectations that each organisation had of the others were more often than not unrealised. This was identified as a major impediment to securing collaborative RD&E. It is suggested that greater effort be applied across all stakeholders to communicating needs, priorities, goals and capabilities to potential collaborative partners.

Project management was raised as an issue, with instances given of unresolved problems that arose during collaborative projects. Elements included project objectives being changed mid-project, “good news only” reporting, and the lack of integration of projects across catchment boundaries. Researchers reported that the lack of longevity and the small size of the projects offered deterred them from participating.

The long-term uncertainty generated by the funding structure was cited as an issue for staffing stability. Limited access to in-kind support also had an impact, with consequences including staff working on issues in which they were under-skilled, and other staff being overloaded. The issue of a need for a corporate identity was again raised, with the suggestion that potential staff would find the RBs more attractive if opportunities such as internal transfers, secondments and training were available as part of a larger organisation. The lack or mismatch of skills in RBs was seen to have impeded efforts at collaboration.

Communication of existing and new information was seen to be lacking, and inhibiting the RBs’ opportunities to collaborate. In some cases, it was suggested that problems being wrestled with had been solved or partly solved elsewhere, and that

the learnings had not been communicated. A culture of communicating acquired knowledge is attractive to researchers, as part of their engagement relies on publishing and other communication opportunities.

Issues preventing successful RD&E collaboration were reportedly not all stemming from the Regional Bodies. It was found that RD&E providers were not communicating their capacity, and did not have targeted marketing mechanisms to engage in NRM collaborative work. It was suggested that a collegial approach rather than the current competitive approach may enhance opportunities for collaboration. In addition there was a perceived misalignment between state and regional priorities in the strategic planning and resource allocation process.

The recommendations stemming from this project are summarised as:

1. That consideration be given to securing longer term funding arrangements that will facilitate more effective and enduring collaborative RD&E arrangements to achieve the necessary long term NRM outcomes.

If recommendation 1 is not to be considered then:

- a. that efforts be made to ensure that the Regional Bodies are more fully conversant with the short-term funding agreement processes.
- b. that RBs be provided with examples of well-established community agencies and their processes and experiences in managing and operating under short-term funding arrangements.
2. That a process be established to resolve disparities with regard to the provision of Queensland Government support to achieve integrated RD&E to regional bodies under the NAP.
3. That RBs be assisted in determining the organisational structure that best meets their unique needs, with full consideration of
  - a. the capacity of state departments and agencies as well as other R&D providers to provide the agreed level of in-kind support and specialist expertise
  - b. the range and importance, of the state and regional priorities of NRM issues to be addressed
4. That the role and charter of the Regional Group Collective be expanded to include:
  - a. collection of data from RBs on regional, state and national priorities as part of NRM planning processes
  - b. development of transparent processes for all RBs to use when prioritising RIS activity, reducing perceptions of pet projects and providers
  - c. a co-ordinating and supporting role providing strategic leadership and policy strategy to the RBs while still allowing the RBs to operate independently
5. That additional/renewed and targeted marketing and communication activity be undertaken by all parties, to facilitate shared awareness and encourage engagement and RD&E collaboration.
6. That consideration be given to secure more effective representation of indigenous parties to improve the level of engagement and the integration of indigenous knowledge into NRM RD&E
7. That universities promote the value of post-graduate students for research projects to Regional Bodies.
8. That RBs support the community based RD&E Providers to ensure their continued operation.

9. That where possible, RBs collaborate rather than compete to attract staff and expertise.
10. That common project management protocols be developed to provide:
  - a. Clear conflict management processes;
  - b. Mechanisms for changes required during the life time of a project;
  - c. Capacity and framework for RBs to collaborate on common and/or overlapping projects
11. That RBs be assisted with their foray into extension work, using a systems approach to identify both needs and expertise
12. That RD&E providers be encouraged to provide RBs with feedback on their decisions not to engage
13. That the establishment of a corporate identity for RBs, through the Regional Groups Collective, be supported
14. That RBs establish knowledge and information sharing protocols to ensure that the knowledge and learnings generated by other RBs and the full range of external organisations are applied.
15. That RBs encourage collegiality as part of their engagement processes

These are further discussed in the discussion section of this report, with suggested pathways to take the recommendations forward.

It was found that many of the issues raised in the course of this project could be resolved or partly resolved by implementing a strong corporate body. It is suggested that the Regional Groups Collective be supported in its efforts to establish itself as this corporate body. It is also suggested that RD&E providers recognise the Collective and work with them to ensure future successful collaborative RD&E.

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## **2. Introduction**

### **2.1. Background**

The implementation of the National Action Plan (NAP) and Natural Heritage Trust (NHT) programs has been a catalyst to engender improved integration in natural resource management (NRM) activity across Australia. These programs require a regional approach, involving the establishment of Regional Bodies (RBs) to deliver integrated NRM plans and Regional Investment Strategies (RISs). RBs take a central role, with close links to local and regional stakeholders across industry, local government, community, conservation, science, landcare and indigenous groups.

In the period prior to the development of NAP, Queensland NRM was already moving towards a regional approach. For example, Queensland's Department of Natural Resources, Mines and Water (NRM&W) is responsible for water resources, salinity and soils, vegetation management and the programs associated with these elements, all of which have a central and regional dimension to their management and implementation. In addition the Queensland's Environmental Protection Agency (EPA) takes responsibility for programs that involve regional planning for biodiversity protection, national parks and coastal zone planning. The Department of Local Government and Planning, under the Regional Planning Advisory Committee (RPAC), oversees issues that fall under the general framework of sustainable regional development. This is only a sample of the numerous agencies that contribute to planning, promoting and funding Queensland's economic, social and environmental development with some regional component (Zammit et al, 2004).

In recent times, regional arrangements for natural resource management in Queensland have evolved. Where previously, research, development and extension (RD&E) activity was the purview of government agencies such as NRM&W and Department of Primary Industries and Fisheries (DPI&F), responsibility for implementing RD&E programs is now partly managed through RBs. This is seen as a natural evolution from what was a largely state based delivery system to a regional partnership approach. The regional partnership approach included local government, industry, community and sector interest groups and was seen as a logical next step to secure enhanced uptake of sustainable natural resource use through a bottom up approach.

While Queensland's previous experiences with devolved NRM were valuable in establishing the RBs, as with any new approach there are a range of areas (structural and process) that will need to be matured as experience, knowledge and performance evaluation allow. The goal of this study was in part to consider how things had evolved and what was required to secure a more integrated approach and or improve the integration of RD&E across and between the RD&E providers and the NRM bodies that would facilitate sustainable land management.

Of particular note is that there is a need to recognise that the formulation of the RD&E must consider and be developed in a form that will facilitate the uptake by the land users. This document explores the recent evolution, formation function and effectiveness of the different models and approaches by RB's in Queensland and how these structures and processes could be further developed and improved to achieve more integrated RD&E. It should be noted that these various structures and processes are only evaluated in the context of how they contribute to or impede effective RD&E collaboration.

In addition the structures and processes of the R&D providers are similarly considered with the view to identifying and suggesting pathways and actions that will remove the impediments and blockages and facilitate a more integrated approach to

RD&E. The ability of RBs to seek and receive integrated support and advice on regional NRM planning matters is also central to the success of the RB in implementing its RIS and adhering with the NAP and accordingly this is explored.

Prior to the establishment of the current Regional Bodies, the responsibility for implementing RD&E programs generally rested with state agencies. As outlined in Graham (2005), previous resource use planning was conducted on two levels:

- the regional level, or government approach, where a catchment or sub-catchment plan for resource management was developed with a focus on the best outcomes for the community; and
- the property or on-the-ground level, where resource management planning was part of an enterprise business plan, using tools such as Property Management Planning (PLP) and Environmental Management Systems (EMS). The focus of this process was the best outcomes for the landholder.

It was into this landscape of competing priorities that RBs were introduced. Previously, collaboration in NRM took place between (for example):

- government agencies and landholders to produce desirable outcomes for landholders (e.g. Vegetation Management );
- landholders and industry, to provide desirable outcomes for both parties;
- government agencies and regions/communities to produce desirable outcomes for the regions/communities (e.g. funding of Landcare, Healthy Waterways)

The RBs have introduced a new focus, with 'collaboration' providing a pathway to holistic NRM, with less of a 'winners and losers' scenario, rather a best outcome for long term sustainable NRM, with benefits to all stakeholders.

A process of review into new practice and/or arrangements is standard practice in any business or industry. It aids organizations in ensuring that their processes are successful and allows early identification of gaps that have the potential to create problems, as well as providing opportunities for organizational growth.

It is now timely to review the RBs approach to collaboration in NRM RD&E and how the RD&E providers link to and support the RB to achieve regional, state and national outcomes. The focus and outcome of these collaborative approaches to RD&E is set in the context and benchmarked against the rate of uptake and adoption of the RD&E by the landholder.

While the RB set up is still relatively young, there are opportunities to identify gaps or discontinuities in the processes currently being used, to assess the successes, to pinpoint blockages and to seek solutions for approaches that are not providing the anticipated outcomes. This process of review provides the opportunity for RBs to share the knowledge they have gained in developing collaborative approaches to achieve integrated RD&E, to collaborate on common issues across regional boundaries and to seek input from the experience of others to further evolve their organizations.

## **2.2. The Project**

### **2.2.1. Scope and Limitations**

The project, *SE04 – Integrated RD&E for NRM*, was initiated to provide regions with support to enable them to establish collaborative partnerships between government, research providers and communities. Such partnerships would provide the RBs with the support and advice needed to ensure successful NRM outcomes. The original goal of the project was to broker regional research, establishing partnerships and

cultivate a culture of cross-institutional, multi-partner approaches. The intended outcome was integrated delivery of research, development and extension in the regions, supporting the implementation of National Action Plans (NAP).

### 2.2.2. Objectives

The approach applied involved achieving the following objectives:

1. identifying, developing and supporting processes that would ensure long-term collaboration and securing agreement on the role of RD&E providers in regard to regional NRM and NAP arrangements;
2. providing a policy framework that would enable government to improve integration and coordination of collaborative RD&E activity in the regions;
3. developing a framework that could support RD&E funding to allow progress of sustainable natural resource management (NRM) in the NAP regions; and
4. brokering significant regional research funding to progress NRM in the regions.

The project sought to assist the progress of effective RD&E across the array of issues and foci that underpin successful implementation of the NAP in Queensland. These issues and foci include setting up long-term arrangements in the regions, social and economic assessment, structured negotiation, and evaluation of complex NRM processes.

#### *Revised objectives*

As the project progressed, it was evident that Regional Bodies (RB) were focussed on achieving accreditation for their Regional Investment Strategies (RIS), and had limited time and energy to commit to seeking and nurturing partnerships with R&D providers. Hesitancy to engage with RBs was also detected amongst a number of R&D providers. In consultation with the program co-ordinator and State Steering committee, the project objectives were amended. The focus on brokering research was supplemented with a focus on evaluating the relative strengths and weaknesses of RB structures and RD&E provider engagement processes, to identify and analyse the blockages hindering the development of collaborative relationships between RBs and RD&E providers as well as identifying opportunities and highlighting systems and processes that were working well or were seen as catalysts to achieving integrated approaches to NRM RD&E.

### 2.2.3. Methods

The methods used to complete this project are outlined below. While the project is explained in phases, elements of the phases were undertaken concurrently.

#### *Phase 1*

An initial analysis of RD&E collaboration models was undertaken, with a view to developing a discussion paper and identifying possible structures and processes as a guide for RBs seeking to establish partnerships for collaborative RD&E. Integrated into the process of developing the discussion paper was a wide suite of investigative and consultative processes including visiting and working with members and the management of the regional bodies, the R&D providers and the land holders. Reviews of reports and other published materials were also used along with consulting and conferencing with academics nationally and internationally. A considerable body of time was also spent in evaluation of the approaches taken by other States. The final product of this phase of the project is the discussion paper, *Research, Development and Extension Collaboration Models for Natural Resource Management*.

### *Phase 2*

RD&E collaboration was investigated to determine what was working, where the blockages were occurring, and where the opportunities for enhanced collaboration existed. This was achieved by examining the structures and staffing arrangements of the various RBs, analysing the RIS development where available, and exploring RBs establishment of RD&E delivery platforms.

This phase of the project also included an element of facilitating the development of collaboration of the RD&E providers through a range of projects. In addition the effectiveness of the communication and capability and interests of the R&D providers in engaging and targeting the needs of RB's was also evaluated. The final element of this phase of the project was an investigation of the current practices of RBs in engaging RD&E providers.

### *Phase 3*

This phase of the project involved bringing together collaborators at the regional and state-wide scale to explore pathways forward and to distil ideas and changes (structural, organisation, policy and process) that would mature and develop more effective models of achieving integrated RD&E. One element of achieving this end was the establishment of a reference group at the state level. This group consisted of senior representatives of R&D organisations such as CSIRO, Qld universities, the State Agencies such as NRM&W, DPI&F, EPA and DHLG&P. The role of this reference group was:

- to review outputs and progress of the project and to contribute ideas in strategic direction;
- to identify key learnings;
- to develop organisational operational, policy and strategy responses; to address identified blockages and impediments and capitalise on opportunities; and
- to promote and/or broker opportunities for future integrated RD&E projects within and between the various RD&E providers and the NRM bodies.

At the regional level, regional collaborators were brought together via a number of avenues. Two examples include supporting the SEQWCG 'Science Needs for MATs' workshop; and co-hosting with Australasia Pacific Extension Network (APEN)) a state symposium, "Building capacity for sustainable resource management.....moving a wheelbarrow full of frogs". Papers from this symposium have been peer-reviewed and the proceedings are being published.

### *Phase 4*

The final phase of the project involved researching current regional NRM collaboration and analysing its effectiveness. This was achieved by conducting a 'gap analysis' on the RISs that were available at the time (there were a number that were not available for review due to their stage of development and public availability); investigating collaboration and partnership arrangements that have been demonstrably effective/successful; and identifying the blockages and barriers to successful RD&E collaboration.

#### *2.2.4. The report*

This report is a synthesis of the work conducted during this project. It touches on the knowledge and information generated in Phases 1 and 2, and summarises the key learnings and suggested ways forward emanating from Phases 3 and 4.

The primary aim of this report is to build on and synthesise the information provided in the earlier reports and to identify and discuss the impact of many of the more strategic and ancillary issues that are perceived to be influencing the effective partnering between the regional bodies and the RD&E providers in achieving integrated R&D. The issues can be impediments, blockages, catalysts or opportunities.

This report begins with a description of the context into which the RB structures were introduced. This is followed by a description of the project and the methods used to carry out the body of work. The learnings and findings are then outlined, as well as a discussion of the major issues arising from the project. In the concluding section, the recommendations are collated and suggested pathways forward are outlined.

In the proceeding sections, there is firstly a summary of the learnings and findings of the project, followed by discussion of the major issues identified, including suggested ways forward. Finally, it provides conclusions and recommendations for enhancing the success of collaborative NRM.

### **3. Learnings and findings**

#### **3.1. Introduction**

The analysis of RD&E models conducted in the first phase of the project was integral in informing the direction of enquiry in the other phases. While many of the issues facing RBs have been documented during previous NRM activity the current practices and structures and their evolution were able to be distilled and explored through consultation and engagement as well as personal observation of the effectiveness of these arrangements. Funding models, alignment of priorities, inconsistency in organisational structures, communication and marketing issues, reliable science and monitoring, and access to skills and other human resource issues were all identified as issues influencing the success or otherwise of RBs' engagement with RD&E providers. These findings were supported by the previously published research of Zammit et al, 2004; McDonald et al, 2005; Charlesworth & Bristow, 2005; Counihan et al, 2005; Oliver, 2004. In value adding to these findings and the earlier research this project is the first attempt to coalesce all of these issues into a definitive statement of what is working and what can be enhanced with regard to engagement amongst NRM stakeholders.

In addition to these issues, discussions during the course of this project revealed that the expectations of RD&E providers were often misunderstood or not well communicated to RBs, with the result that, where collaborative engagement had been initiated, providers were dissatisfied with the outcomes and were disinclined to continue with collaboration. Issues for the RD&E providers included: management and protection of intellectual property, 'preferred engagement' of what was referred to as 'funding buddies'; the relative size of the projects on offer (i.e. too small and too short a time line); the tension between what was seen as local knowledge and community science versus standard scientific expertise; limits to ongoing monitoring (e.g. reliance on volunteers resulting in the collection of data in non controlled and variable setting (time, space and scale)) leading to uncertainty of or unreliable data sets; and the problems associated with short term funding periods that did not account for the long lead times to secure interpretable trends that accommodate the natural variability associated with environmental monitoring.

In many cases, discussions held during the APEN conference and documented in the conference proceedings align with the recommendations that emanate from this project, particularly in regard to enhancing the capacity of RBs to engage with RD&E providers. However, this earlier report also includes a level of discussion of the

recommendations and some suggestions for pathways to implementing the recommendations.

### **3.2. Funding and Reporting Structures**

Any change in organisational structure brings with it a number of *knock on effects*, that impact on those within the organisation, those who worked with and for the organisation within the previous model, and those relying on the organisation to achieve outcomes. The introduction of the Regional Bodies to NRM across Australia was by no means immune to the natural impacts of change.

NRM in Queensland's regions has seen a shift from a funding model where groups were funded by and answerable to state agencies, to the current short-term funding model. Additionally, where volunteer groups, for example, were previously reporting on an annual basis to their funding body, they are now required to report quarterly in some cases.

The perception of uncertain funding and the increase in reporting requirements are aspects of the changes to NRM arrangements that have met some resistance and dismay, and are yet to evolve to a point where stakeholders are comfortable with the new arrangements. The organisational changes led to loss of the maturity of past partnerships and the need to demonstrate trust and respect through achievement. The short-term funding requirements meant that short term outputs were pursued often at the expense of the more enduring approach to collaboration.

The Australian and State Governments have an agreement to fund the various Regional Bodies through cash and in-kind support. This agreement is renegotiated at set periods depending on the specific funding program. In 2006-2007 these funding programs will be restructured and the National Heritage Trust (NHT) and the National Action Plan for Salinity and Water Quality (NAP) will deliver an integrated set of programs to support natural resource management in the regions. All funding agreements between the RBs and the State and Australian Governments will be renegotiated in the 2006/2007 financial year.

At the APEN symposium, held in Toowoomba in September 2005, the restructure of the funding agreements and associated ramifications was a major topic raised by the RB representatives in attendance. Concerns about the restructure were also raised in interviews with RB staff and the RD&E providers conducted by Dr Gavin Graham, especially those in management positions, during the course of the SE04 project.

RBs are concerned about the restructure because to date, government funding has not been committed beyond the 2006/2007 financial year. Some RB representatives expressed concern about the long-term viability of their organisations, given that they operate on three-year funding contracts. The lack of confidence for RBs to state that they will be funded in the long-term has a negative affect on staff recruitment and retention, professional development, and funding agreements with RD&E providers. These short-term funding agreements inhibit the RBs capacity to commit to long-term planning, and therefore reduce their capacity to ensure successful long-term engagement and the securing of more enduring collaborative RD&E arrangements.

While this style of funding is new to the NRM sector, these types of arrangements between the Australian and State Governments and community agencies are not unusual. For example, in services where community agencies have had a long standing role, such as assisting the homeless, triennial funding agreements have been the status quo for the past 15 years. RBs may find the process less stressful and uncertain with experience over time but a more fundamental and systemic issue is the long term nature of achieving outcomes in a natural resource management environment - due to significant inherent variability and the culture of the land users.

This approach to funding is not likely to change and the experience of some of the community service agencies is useful. Some community agencies have formed lobby groups, such as QCOSS (Queensland Council of Social Services) to represent them at short-term funding renegotiations. An examination of the long-term planning processes and human resource management structures of community agencies that have had long-term experience with short-term government funding agreements and departmental restructures may be of benefit to the RBs as they strive to adapt to this new system of funding and resourcing.

Some RBs indicated that the actual processes involved with the restructure and renegotiation of the funding agreements has not been sufficiently explained by the relevant government agencies. Whether this is a perceived or real issue, a review of the effectiveness of the communication styles and mechanisms used to inform RBs of the changes may be beneficial in ensuring that future interaction is more successful.

The short-term funding arrangement incorporates quarterly reports from the RBs to the Government funding agencies. This has had the flow-on effect of RBs requesting quarterly reports from the research providers they have engaged, and other collaborative partners. While this is a standard arrangement for most professional organisations, it has caused concern for volunteer groups such as Landcare, who have in the past worked with six month or yearly reporting requirements. Interviews conducted with volunteer based research providers identified that the increased work involved in the new reporting requirements is a major concern.

As each individual program often requires a separate quarterly report, some volunteer groups that were previously required to submit four reports per year are now required to submit twelve reports, with no additional support. Volunteer groups provide significant support to RBs, deliver community based RD&E and in return receive funding for activities, but not for staff. If RBs can provide administrative support to help comply with the quarterly reporting requirements for these groups volunteer fatigue may be decreased.

It was identified during SE04 reference panel discussions and during interviews with RB staff that the in-kind support provided by the Queensland Government was perceived as not being equally distributed across the State. There is substantial diversity between the RBs, with regard to geographic size of catchments, populations, and number of State Government staff working in relevant departments (such as NRM&W, DPI&F, and EPA). Some RB staff reported that the quantum of in-kind support in their region was limited due to the lack of State Government staff located in the area.

The Queensland Government reports on in-kind support to the Joint Steering Committee every six months, and the Chair of each RB must sign off on the annual audited statement the amount of in-kind support received. Despite these processes there appears to be a lack of information on how the in-kind support is distributed throughout the State. There are no obvious formal mechanisms or processes available for the RBs to use in answering queries or resolving conflicts about levels of in-kind support. Information detailing state-wide Queensland Government resources available under the in-kind support program is also not easily accessible to RBs. While these issues may not, in the first instance, be seen as directly relevant to achieving collaborative RD&E, they are major impediments to trust and cooperative working arrangements that are required to achieve collaborative RD&E.

The SE04 reference panel discussed the difficulties experienced by State Government regional managers in allocating staff for in-kind support roles, particularly in regions where staff already have high work loads and staff numbers are declining. In addition changes in government and departmental priorities and the

need of staff in RD&E agencies to focus on their core business impedes the engagement in multi-disciplinary, multi-agency and community related regional matters.

In addition difficulties experienced in staff recruitment to remote, rural and regional areas are well documented (Miles et al, 2004; Keniry et al, 2003), and are contributing to this problem. There are currently no procedures for providing the necessary support in instances where the Queensland Government is unable meet its in-kind support commitments under NAP. This has been identified by most RB's and is a major impediment to achieving effective working relationships. It is suggested that the Joint Steering Committee needs to be informed by the RB's when this problem occurs, and alternatives for additional support to meet the shortfall negotiated with the regional bodies.

At present the option taken by the regional bodies is to build local capacity or compromise long term outcomes by engaging the short term services of consultants. This approach also leads to a downward spiral - as the R&D agencies have fewer funds available to employ staff and engage in collaborative R&D as well as the intellectual loss of regional capacity and economic leakage from the region.

Complicating the funding issue is the feeling amongst some RBs that perverse subsidies are not supporting their efforts in promoting sustainable practices. For example, drought subsidies are seen to "reward" poor land management and grazing practices. It would be beneficial for RBs to have a recognised voice to inform future policy in regard to such matters, as they may be able to provide alternatives to the status quo. The success of market based incentives as a tool available to RB's to achieve the uptake and adoption of the R&D is also impeded by the perverse subsidies. For many regional bodies MBI are being seen as a positive opportunity to achieve NRM outcomes

#### *Recommendations*

1. That consideration be given to securing longer term funding arrangements that will facilitate more effective and enduring collaborative RD&E arrangements to achieve the necessary long term NRM outcomes.

If recommendation 1 is not to be considered then:

- a. That efforts be made to ensure that the Regional Bodies are more fully conversant with the short-term funding agreement processes.
  - b. That RBs be provided with examples of well-established community agencies and their processes and experiences in managing and operating under short-term funding arrangements.
2. That a process be established to resolve disparities with regard to the provision of Queensland Government support to achieve integrated RD&E to regional bodies under the NAP.

### **3.3. Governance and Organisational Structure**

The introduction of a new body to oversee activities previously managed elsewhere has been a complex and difficult task for many. The change process has taken time to bed down and many RBs have indicated that they have struggled to achieve this outcome and are at varying stages of development and growth.

By the very nature of introducing something new, there is a period of adaptation for the environment into which the new entity finds itself, and for the new entity. In the case of the Regional Bodies, governance and organisational structures are still evolving. RBs have by necessity implemented organisational structures that meet

the needs of the regions that they service and this has created significant differences in structure and form. Over time, these structures are expected to undergo further refinement and change because the regions are not static – RBs will need to be able to adapt in order to continue to meet the changing regional needs. In addition, as the communities themselves grow to address the complexity of issues that they face so too will their organisational needs under the RB arrangements. The wide range of structures and processes already in place reflect the regional differences and the varying levels of maturity of the groups themselves and their relative stages of development. This variability offers a significant learning opportunity.

As indicated the introduction and subsequent early stages of evolution of the fifteen RBs in Queensland means that they each have developed unique structures and organisational policies and procedures to best cope with their perceptions and regional differences. While there are a number of similarities between RBs, the conclusions and recommendations presented here will not necessarily always directly apply to all regional bodies. While the reader must keep this in mind there are however, some general comments and generalisations that systemically apply or can be tailored to suit the specific need of the individual regional body. The more general issues and recommendations are listed below.

Regional Bodies are generally limited to two options when they need expertise – outside of partnering with R&D providers. Firstly, they can elect to directly employ their own specialists or secondly they can engage the R&D providers and/ or buy in the expertise they need.

The approach of directly employing their own specialists has a number of benefits:

1. An employee is available when the work needs to be completed (on hand).
2. The investment in the staff member's intellectual development stays with the organisation (includes the intellectual property, knowledge and the skills generated).
3. The organisation has control of the project or program of work.
4. The employee is familiar with the organisation, and gains local knowledge of the region in which they live and work. They are assumed to have 'local knowledge' that is not necessarily available to external parties.

There are a number of drawbacks to this approach:

1. It is rare to find a specialist whose 'specialisation' covers a broad range of issues, leading to the need to prioritise based on the skills available, rather than the needs of the region being serviced.
2. Outside knowledge may not be introduced – lessons learnt in similar situations elsewhere are not always able to be applied or are not readily accepted without local validation
3. Competing priorities cannot be addressed concurrently due to limited human resources.
4. 'Local knowledge' (or 'this is how we've always done it') may be given precedence over best practice or new technologies.

The second option is to 'buy in' expertise – the brokerage approach. This approach also has a number of advantages:

1. Flexibility and supports a multidisciplinary approach.
2. Facilitates access to best practice, new technology and lessons from the experience of others.
3. Competing priorities can be addressed concurrently if the resources are available and able to be readily acquired.

In taking this approach, organisations need to be prepared to:

1. Share control of projects and programs.
2. Ensure that 'local knowledge' is passed on to external parties where relevant.
3. Invest in outcomes rather than staff members.
4. Provide opportunities for sharing knowledge and skills, so that all of the skills and learnings do not leave the organisation upon completion of the project.

In the case of the RBs, it was found that the choice of approach depends on their unique situation. Some RBs have often found it difficult to source expertise either from the traditional R&D providers (State Agencies, CSIRO, and universities), and have taken the brokerage approach by necessity. Others have opted to create positions for research specialists within their own organisation due to their inability to partner effectively with the traditional R&D providers – generally being the state agencies. For example the Fitzroy Basin Association employs a number of specialist staff (FBA, 2005). This approach allows for good control of projects and an intimate knowledge of the availability of key staff members.

Not all of the RBs have the financial means to take this approach, while others do not believe that this is the best approach and struggle to achieve the desired partnerships required with the R&D providers for the reason elaborated on later in this report.

At times, employing specialists is not enough, and some brokerage takes place. The RBs who employed specialists stated that they were happy with their arrangements. The RBs following the brokerage model also expressed happiness with their choice of approach when interviewed. The Condamine Alliance is an example of an RB that has applied the brokerage model of contracting RD&E providers. The major factors in selecting the brokerage model were:

1. Flexibility.
2. Specialists only hired when required (economics).
3. Out-sourcing of human resource management issues associated with the contracted staff.

The approach taken by a RB is influenced by the number, nature and complexity of NRM issues that exist within a catchment, and by the support available within the region to fulfil the NRM needs. However, it is important that a high level of transparency be built in to the chosen model, to ensure that perceptions of 'pet projects' do not deter potential collaborators from entering into agreements with RBs. Many of the field staff and some management of the R&D providers felt that this amongst other factors was a deterrent in them securing RD&E partnerships with the Regional Bodies. Accordingly it is suggested that RBs be aware of and take into account the risks and exposures emanating from their chosen mode of implementing their RIS and the opportunity costs.

Discussion during the APEN conference and the SE04 reference panel meetings revealed that the specific skills and the interests of the specialists employed by the RBs may influence the on-the-ground implementation of RISs. That is, elements of RISs may be prioritised to suit the expertise, rather than expertise being sought to meet the priorities of the RISs. It is of note that in interviews with representatives from the RBs it was revealed that some researchers had used their expertise and influence to change RISs to reflect the researchers' personal interests (pet projects).

While this project did not identify any evidence to support this some RBs stated that this had happened with specialists that they directly employed. In contrast some external researchers interviewed stated that the RISs they had worked on had been

focussed on areas of scientific interest that may not have addressed the highest priorities of the RB.

In Queensland, RBs do not as yet have a corporate culture – that is each RB is a unique and independent entity and does not formally belong to a single broader organisation. In contrast, the RD&E providers, specifically state government agencies, have the benefit of belonging to a broader structure, allowing them to support each other when needed, provide for career and professional development, mentoring etc. For example, a DPI&F person in Cape York belongs to the same team as a DPI&F person working in Roma. This has a significant impact on the RBs' ability to attract and retain staff.

A significant additional point raised by regional bodies was the need for the Regional Group Collective to continue to grow to fill this need. It is of note that the strategic plan for the Regional Group Collective appears to address many of these areas of interest and opportunity.

At this juncture the RBs receive advice and guidance from the Joint Steering Committee and the NRM Advisory Group. They are represented by the Regional Groups Collective (RGC) whose role is that of a leadership body for regional NRM across the State. However, the RBs in Queensland are still separate entities. The relative strengths and weakness of this approach, while beyond the scope of this project, are worthy of consideration. For example the South Australian RB model includes oversight by a Natural Resource Management Council. Among other roles, this Council is charged to “promote community awareness of state-wide and national issues relating to natural resource management” and “facilitate arbitration of cross-boundary issues between regional NRM boards” (NHT-SA bilateral agreement, 2003). In Queensland there is no overt formal linkage at this stage between each of the RBs, nor an obvious strategy for tackling state-wide issues. Clearly the plan for the development of the Regional Groups Collective and its future direction needs to be proactively supported. The relevance to this project is that this will also have the consequential affect of improving the capacity and capability of achieving integrated RD&E.

The current individual approach from each of the RBs makes it difficult to confidently assess progress on issues of state-wide interest. Areas of improvement in this regard, suggested by research personnel, that would assist in facilitating their interest in engaging with the regional groups included developing standardised methodology and consistency in monitoring, and the application of the technologies used etc.

It was also suggested during the interview process that the hierarchy of planning processes tends to lead to conflicting and competing interests between the regional, state and national priorities. This places an added strain on the ability for the groups to negotiate and secure effective buy-in and collaboration with the R&D providers. As a consequence there is limited recognisable “tying in” of regional plans to the state and national plans and a consequent tension in resource allocation. A collaborative approach by all RBs, overseen by an overarching group such as that proposed by the Regional Group Collective whose role is purely to coordinate state-wide issues, would aid RBs in tackling such issues. The opportunity to pool resources and share expertise, including secondments, would provide greater economic value, would increase the level of knowledge sharing among RBs and RD&E providers and would be enhance the attractiveness of the organisations for potential staff.

### *Recommendations*

3. That RBs be assisted in determining the organisational structure that best meets their unique needs, with full consideration of

- a. the capacity of state departments and agencies as well as other R&D providers to provide the agreed level of in-kind support and specialist expertise
  - b. the range and importance, of the state and regional priorities of NRM issues to be addressed
4. That the role and charter of the Regional Group Collective be expanded to include:
- a. collection of data from RBs on regional, state and national priorities as part of NRM planning processes
  - b. development of transparent processes for all RBs to use when prioritising RIS activity, reducing perceptions of pet projects and providers
  - c. a co-ordinating and supporting role providing strategic leadership and policy strategy to the RBs while still allowing the RBs to operate independently

### **3.4. Roles – Regional bodies vs RD&E providers**

In any approach to collaboration, an understanding of the respective roles of potential partners by all parties is vital. Recognition of both common goals and potentially divergent priorities is needed between all parties to ensure few surprises, and avoidance of adverse outcomes. Without the clear understanding of the role of an organisation, it is unlikely that its potential for integrated RD&E collaboration will be realised.

The findings of the stakeholder interviews, reference panel meetings and the APEN conference proceedings, all served to highlight the different levels of knowledge that RBs and RD&E providers have about each others' roles, activities skill sets and capacity. While some individuals had a comprehensive understanding about the role of RBs, their reporting relationships and the different types of RD&E providers available, these were the exception rather than the rule. As a simple example of this, many researchers were not fully aware that each of the Regional Bodies is a separate organisation. Conversely many RBs were unaware of what a university can do, or the teaching requirements most university researchers have and how this can limit their availability. This lack of knowledge appears to be driven by three things

1. Lack of interest in engaging by either the Regional Body or the RD&E provider;
2. Lack of communication between parties;
3. Lack of clearly targeted marketing material on capacity, need or interest, that meets the needs of the other party – Regional Body or RD&E provider.

This leads to a situation where some parties are reluctant to engage due to a lack of understanding and awareness of the respective interests and role etc. In some instances as early attempts to engage have not been productive, the affected parties (both groups) do then not persist or try again.

Interviews and discussion during the course of this project revealed a need for more detailed information about the circumstances of landholders. Land managers take decisions about NRM issues, based on their sometimes limited resources (economic and human). This can hinder the implementation of recommended changes in practice (Graham, 2005). Unless this issue is addressed, lack of detailed information about landholder capacity and gaps in their needs will continue to hinder successful outcomes in collaborative efforts to facilitate on-the-ground change.

Another gap identified was the limited success in some areas of incorporating indigenous knowledge and culture into RB activity. It was noted that in a number of RBs, while there were arrangements in place for indigenous representation, the

positions were unfilled. In other cases, it was suggested that appointments to such positions were made without sensitivity to the needs or opinions of the groups the appointee was appointed to represent (Kele et al, 2005). RB geographic boundaries do not coincide with indigenous peoples' geographic boundaries, and indigenous culture is such that a representative of one particular group cannot automatically speak for all indigenous groups in the region. In some cases this may mean that valuable indigenous knowledge is not being utilised.

#### *Recommendations*

5. That additional/renewed and targeted marketing and communication activity be undertaken by all parties, to facilitate shared awareness and encourage engagement and RD&E collaboration.
6. That consideration be given to secure more effective representation of indigenous parties to improve the level of engagement and the integration of indigenous knowledge into NRM RD&E

### **3.5. Brokerage and marketing**

As alluded to above marketing is a vital component of any organisation's business practices. Regional Bodies and RD&E providers must now accept that they need sound marketing, communication and information strategies targeting one another. This approach is needed not only to secure a shared awareness but also to secure and sustain the necessary long term partnerships associated with NRM RD&E.

Developing good relationships and enduring partnerships with experts will be critical to the success of the Regional Bodies. It will have the added benefit that, in times of urgency or crisis, an organisation is more likely to be able to access the required expertise to avert potential disasters, or simply to make it through a trying period. Care needs to be taken, though, that the use of personal networks does not override the need to secure the best expertise available. There needs to be a balance between nurturing good working relationships and ensuring the best outcomes for the organisation.

Most RBs have well established local networks of RD&E providers. The effectiveness of these networks was questioned by some researchers who were interviewed, as they felt that 'funding buddy' relationships had been formed, making it difficult for 'outsiders' to access the market. It was also reported that the local network is not always sufficient when specialist knowledge is required.

One of the identified impediments to collaborative RD&E was the size or time lines of the projects. When the projects are small and the time lines short, brokering projects to RD&E providers as single, short-term consultancies was less likely to attract high level expertise than a larger, longer-term project

Many Regional Bodies worked predominately with one university or one Government Department. To some extent this can be explained by the location of the particular provider; however with the increasing focus of most RD&E providers on commercial activity and self funding through research activity, a more competitive environment exists with many researchers now travelling extensively to obtain RD&E contracts. This represents a golden opportunity for Regional Bodies to capitalise on and secure quality researchers and collaborative multidisciplinary approaches to their RD&E needs. However in order for this to be achieved the Regional Bodies will need to be far more proactive in the RD&E market place and structure their activities to be far more attractive to the RD&E providers. This similarly applies to the RD&E providers in marketing their availability, interests, capability and RD&E capacity. Regional Bodies that do not proactively market and engage, limiting their collaboration to a

small number of RD&E providers, may not be achieving the best outcomes available, or the best value for their investment.

All RBs reported that they had government departments as RD&E providers. As previously outlined, some RBs reported difficulties in negotiating 'in-kind' arrangements with State Government departments. Other RBs reported difficulties in getting Australian Government agencies, for example CSIRO, interested in engaging.

State Government agency staff commented that RBs sometimes seemed unaware that the Departments had to make legislative requirements their top priority. It was also apparent from the interviews that the Regional Directors/Managers of some Government agencies were more proactive in engaging in research contracts with RBs than others. This variability led to some confusion and eventual disinterest by Regional Bodies and tended to create a 'lets do it ourselves' culture.

Under the recent reforms instigated by the Australian Government, (Our Universities: Backing Australia's Future, 2003) universities have been encouraged to enter more into commercial research arrangements. While the take-up of these reforms varies from university to university, and within universities all RBs reported having entered into some form of research contract with universities. Interviews and the examination of the available RIS contracts showed that most RBs had good working relationships with 'sections' of university but very few had cross-disciplinary contracts. This may be due to lack of knowledge of the resources available at the university.

A small marketing experiment was conducted during the course of the project with a number of Regional Bodies. In the study all the relevant Departments and Research Centres of a University were asked to collate information on their interests, capability and expertise in the area of Natural Resource Management. In total five departments and four research centres were identified, involving more than 100 staff and post-graduate students, over five Queensland locations. The information collected was mailed to the collaborating RBs with a request for their feedback on the usefulness of the information and the format in which it was presented. The feedback indicated that the information (a) was not targeted enough; (b) was not formatted to provide ease of understanding of what was available (i.e. "too wordy"); and (c) would be more 'attractive' if it attempted to align with the needs of the RBs, which are generally freely available on the RBs websites.

This experiment highlighted that universities do not have any targeted marketing program or identified need to specifically promote their NRM research interests to Regional Bodies. Staff from most Queensland universities (James Cook University, University of Queensland, and Queensland University of Technology Central Queensland University etc ) were contacted and reported that their universities, to the best of their knowledge, also had no integrated, cross-disciplinary targeted marketing strategy to promote NRM research to Regional Bodies.

In addition to the marketing experiment, a level of brokerage activity also took place during the course of this project. Collaborative projects conducted over the period of the project included:

- *Social and economic priority action plan activity 1.2*, Burnett Mary Regional Group collaborating with Institute for Sustainable Regional Development (ISRD) at CQU, 2004
- *Regional natural resource management planning review*, funded by NRM&E. This project was managed by USQ and was completed prior to the start date of the SE04 project. Collaborative partners were USQ, Griffith University, CSIRO and ISRD.
- *AgSIP AG13 – Resource economic support for accelerated land use change*. The project managed by the Centre for Environmental Management (CEM) at CQU. Collaborators are DPI&F, ISRD and CEM (current).

- *Social and economic impact assessment of the Central Queensland strategy for sustainability.* Collaborators were FBA, ISRD and CEM. The project was managed by CEM and completed in 2005.
- *Development of environmental services instruments to improve water quality in Sandy Creek, south of Mackay.* Collaborative partners are Mackay Whitsunday Natural Resource Management Group (MWNRMG), ISRD and CEM. The project was managed by CEM. This project was funded through the ISRD's Contestable Funding initiative and was completed in 2004.
- *Establishing 'communities of practice' for land managers through a collaborative learning environment to implement Environmental Management Systems (EMS) training using Information & Communication Technologies (ICT).* Collaborative partners are DPI&F, ISRD and the Division of Teaching and Learning Services (DTLS) at CQU. The project was managed by DTLS, and was funded through the ISRD's Contestable Funding initiative. The project was completed in 2004.
- *SE05 – Partnership incentives for planning and participating to achieve sustainable land systems.* The ISRD and CEM have been engaged by the Burnett Mary Regional Group (BMRG). This project began in 2005 and is ongoing.
- *Implementing environmental service instruments to improve water quality in targeted catchments of the Mackay and Whitsunday region.* MWNRM have engaged with DPI&F, ISRD and CEM for this project. The project began in 2005 and is ongoing.
- *Practical adaptations to climate change in natural resource management: literature review.* This was part of an integrated project under the Greenhouse Action in Regional Australia Strategic R&D Investment Plan, involving Sinclair Knight Merz, Queensland Murray Darling Committee, North Central Catchment Management Authority (Victoria), Desert Channels Queensland, Fitzroy Basin Association, DPI&F, South East Queensland Western Catchments Group, Glenelg-Hopkins Catchment Management Authority (Victoria). The FBA engaged the ISRD to complete the literature review, which was completed in 2005.
- *Livingstone Shire Council integrated water reuse management strategy.* The Livingstone Shire Council has collaborated with CQU's Faculty of Science, Engineering and Health and Plant Sciences Group as well as the ISRD on this project. The project began in 2005 and is ongoing.

The use of post-graduate students for research was seen as an opportunity and was discussed at length at the Reference Panel meetings. Post-graduate students are seen as an economically viable form of research that could meet the needs of much longer term project activity of the Regional Bodies and would assist in developing the trust and supportive relationships needed to secure good quality RD&E outcomes in NRM. It was acknowledged that appropriate supervision is required to ensure the quality of work carried by research students however this was seen as a readily and easy to overcome component. Accordingly it was suggested that the number of post-graduate students undertaking research for RBs could be increased. Collaboration among the RBs to market the opportunities to potential postgraduate students (e.g. scholarships and stipends) is one suggested approach to this issue.

RBs reported that private organisations (consultants) marketed their services well and that very few problems had been encountered, such as the previously mentioned problem with programs being turned into 'pet projects'. Interviews with RD&E providers and RBs revealed that the use of private organisations by RBs for research appears to be increasing.

It is of note however that while some of those interviewed (other RD&E providers, RBs, Government staff, and community members) held the perception that the private organisations will produce the results that RBs want, some felt that their engagement led to a long term loss of regional/local capability and that the monitoring programs used are not based on robust and rigorous science that would allow for any time series or real trend analysis. No specific examples were put forward by those interviewed; however the perception was seen to be wide-spread. This does not necessarily imply that private RD&E organisations should not be used to meet the needs of RBs. Rather, it may be necessary to ensure that common techniques and monitoring regimes are applied, regardless of the RD&E provider carrying out the work. Queensland's Regional Bodies may need to collaborate with expert researchers in the relevant fields to develop a set of standard regimes.

Conversely, one RD&E worker who was questioned stated that they preferred to work for private organisations as the management of projects was professional and the organisations were willing to enter into long-term funding contracts. This particular researcher refused to work with RBs due to previously unresolved conflicts, predominately concerning project management issues. The researcher considered all RBs to be the 'same' organisation; their bad experience with one engendered an unwillingness to work with the other fourteen. As indicated earlier many of the researchers interviewed did not know how the RBs were structured and what relationships they had with each other. The RD&E provider community may need better information on the roles and the reporting structures of the RBs.

Community RD&E providers, such as Landcare and Remnant Vegetation Groups, are used extensively by all RBs. These groups are seen as essential in promoting and taking up extension activities within the regions. During the course of the project, it was noted that there is debate about the value of 'hard' science compared to the value of 'community/social' science, with proponents of each providing comment on the merits of the other. Most RBs appear to have found a balance between the two that suits their regional requirements. The interviews conducted with representatives of the community groups found volunteer fatigue to be an issue, with some groups losing members or shutting down. This continual turnover of staff and the lack of continuity was seen as a major impediment to the establishment of relationships that worked with the R&D providers. Mechanisms to support these groups need to be investigated by RBs if they are to continue their operations.

There are many issues pointing to the need for a collaborative marketing and brokerage approach. RBs are necessarily competing with each other for staff, for RD&E expertise and for in-kind support from state agencies. This is partly due to their singularity and partly due to the dearth of available skills. If RBs were encouraged to collaborate and share skills and expertise, some of the difficulty experienced in attracting expertise may be alleviated. RD&E providers in particular are more likely to respond to requests for larger projects, even if these are dispersed across a number of smaller organisations.

#### *Recommendations*

7. That universities promote the value of post-graduate students for research projects to Regional Bodies.
8. That RBs support the community based RD&E Providers to ensure their continued operation.
9. That where possible, RBs collaborate rather than compete to attract staff and expertise.

Also refer to Recommendation 5.

### **3.6. Project management**

The style and approach to project management is very much dependent on an organisation's particular needs, and can be the key to achieving desired outcomes and enduring collaboration with the RD&E provider. In the case of the RBs, project management can be complex depending on the stakeholders involved.

The interviews conducted as part of this project revealed a number of instances of unresolved adverse outcomes in relation to projects undertaken by RD&E providers partnering with regional bodies. While it is difficult to find substantive evidence of these cases it would appear that the provision of a process of review, including a mechanism for providing feedback on the project management and an avenue for resolving any conflicts, may help to reduce the negative opinions generated by such incidences.

It was apparent from these interviews that some researchers who had poor experiences with RBs were left with a negative view of RBs in general, and within their community of researchers were inclined to share their experience with their peers. While conflicts cannot always be avoided, if no attempt is made to resolve the underlying issues, the fall out from the residual bad feelings can have a large impact. In this case, the fall out can include unwillingness by researchers or RD&E providers to collaborate with RBs.

As part of the project management process, there needs to be a negotiated mechanism and agreement in changing the scope of a project. There were a number of instances cited during the interview process where team members working on a project were of the opinion that the specialist researcher had changed the scope of the project to focus on their niche area. RBs need to ensure that their project management only allows changes to a project that are negotiated with the agreement of all parties involved.

Another element that was consistently raised during the progress of this project was the need for integration of projects across boundaries. For example, where one catchment had an established regimen for eliminating a particular pest or weed, the neighbouring catchment may be a reservoir of the undesirable plant or pest, with the chance of reinfection of the cleaned area high. Communication and collaboration in RD&E across regional and catchment boundaries between neighbouring RBs could ensure the better alignment of such activities, increasing the likelihood of success.

In addition to meeting the need for neighbouring RBs to jointly address overlapping issues, alignment of activities may provide RBs with an avenue to attract RD&E providers that may not otherwise be receptive of a request for partnership or collaboration at a local catchment or regional level. As indicated earlier one of the common responses from RD&E providers and individual researchers was that the size of the projects that RBs were looking to implement was too small to make it worth their while. If RBs collaborated to call for expressions of interest or tender services of common interest across catchment boundaries, they could offer a more attractive project package that may stimulate the interest of providers.

RBs may also find that the cost of managing projects, in both money and staff time, may be reduced if they collaborate with other RBs. While this is not possible in all instances, there are a number of catchment issues that are not unique to individual catchments, providing the opportunity for RBs to work together to attract staff and expertise to meet their needs. This has the added benefit of consistent monitoring and approach across a broad area.

Researchers will also find this more attractive as they would have an enhanced opportunity to publish findings from the project due to the scale of the work. The lack of opportunity to share knowledge via journals, conferences etc due to inconsistent

methodology and the small size of the sample was one of the issues raised by researchers as making working with RBs unattractive.

During the closing stages of this project, progress was being made in cross-catchment and state-wide collaboration. This progress is to be commended, and could be further enhanced with the support of the Regional Groups Collective.

In addition to the size of projects, researchers found the lack of long-term engagement unattractive. Short term consultancies limit the researchers' opportunities to add something to their field of endeavour. It also provided few opportunities to engage with the community and provide the community with the means to manage the issue into the future. While short-term consultancies will achieve outcomes in the short-term, and this is sometimes vital, there is value in ensuring a level of capacity building is part of a longer-term project, to ensure the health of the catchment in the long-term.

Extension work is a key element of the business of Regional Bodies, with this role having previously been carried out by state agencies such as NRM&W and DPI&F. While the Regional Bodies have good pockets of expertise, they lack the state-wide configuration and coordination of available expertise and resources. A state-wide or area-wide systems approach by the Regional Bodies could be applied, to assess the expertise available and to help to apply it to areas of need.

#### *Recommendations*

10. That common project management protocols be developed to provide:
  - a. Clear conflict management processes;
  - b. Mechanisms for changes required during the life time of a project;
  - c. Capacity and framework for RBs to collaborate on common and/or overlapping projects
11. That RBs be assisted with their foray into extension work, using a systems approach to identify both needs and expertise

### **3.7. Human resource management**

Most organisations will readily acknowledge that their most valued asset is the human resources that make up their team. Even the smallest of organisations needs a balance of skills that meets both their needs and the needs of the community/client base that they are servicing. Organisations that are seen to have limited access to necessary skills may appear unattractive to other organisations that would otherwise seek to work with them.

One of the major concerns articulated by RBs in relation to the current funding model was that it inhibited their ability to provide staff with long-term stability. This problem is exacerbated by the general skill and profession shortage, with poaching and head hunting a persistent problem. Where state agencies have been unable to fulfil their in-kind support obligations, under-trained and under-skilled staff within the regional bodies were being called upon to fulfil roles that were sometimes beyond their capabilities. In other instances, RB staff that possessed the relevant skills were reportedly being overloaded. While these situations were reported in interviews, no further evidence of this was found. However, it was felt that this was an important issue and, as it was reported, needed to be raised for consideration.

The evident lack of skills in an RB places it in a situation that can reduce its attractiveness to potential collaborators or partners. A lack of experienced staff can result in a lack of professionalism in attempts to engage partners, with the result that RD&E providers will not engage. This can be exacerbated when RBs don't take

advantage of the full range of skills that they do have. In some cases, if the amalgam of skills already within the RB is not communicated to potential partners or collaborators, interested organisations may be disinclined to become involved.

RD&E organisations are also struggling with staffing issues. In many instances the RD&E providers are having difficulty in attracting and retaining NRM research staff. If they have difficulty attracting and retaining staff, they may be resistant to collaboration purely because they don't have staff with time to commit to a project. It is important that RBs are clear on the reason that RD&E organisations are unwilling to participate. In some instances, broader collaboration may resolve the issue – for example, researchers at an RD&E organisation may not have the time to conduct a project themselves, but they may be available to co-supervise postgraduate research students or other early researchers to complete the work. If the project is directly related to the RD&E organisation's core business, this kind of arrangement may be attractive to them.

As previously stated, RBs currently compete with each other for staff RD&E expertise and state government in-kind support. An RB may invest in a staff member, providing training and professional development, only to see them "head hunted" by another organisation, and not always another RB. A collaborative organisation of RBs may assist in responding to this issue, with RBs sharing expertise, collaborating to market their human resource needs and even providing opportunities for staff to move around among the other RBs. There is currently a lack of consistency in the RBs approach to marketing the opportunities that their organisations provide. Career opportunities with RBs as satellite organisations of a larger entity may be more attractive than the opportunities available within a single RB.

#### *Recommendations*

12. That RD&E providers be encouraged to provide RBs with feedback on their decisions not to engage
13. That the establishment of a corporate identity for RBs, through the Regional Groups Collective, be supported

Also refer to Recommendation 5.

### **3.8. Knowledge and information management mechanisms**

A vital part of collaborative research is the sharing and distribution of the knowledge generated. There appears to be a gap in the understanding of existing information and in the distribution of answers and knowledge that the RBs have attained. A problem that has been solved in one RB may still be being wrestled with in another. RBs may be attempting to find a solution that has been solved, or partly solved, and the required knowledge may be available in journals and other publications. It is important that RBs develop at a minimum a close relationship with experts in relevant fields, and at best a collaborative partnership with these experts. It is the nature of a specialist researcher to share their knowledge and word of their success; it is vital that RBs tap into this. This may be as simple as ad hoc communication with a local RD&E provider such as DPI&F, EPA or a university/research centre.

Most of these organisations have newsletters, e-bulletins and websites that provide details of their work, and RBs need to take advantage of these. At the moment, there appears to be limited information exchange, and consequently a lack of opportunities for RBs to take up the lessons from other RBs and other organisations experiences.

Lack of communication may be inhibiting RBs opportunities to engage with each other and with RD&E providers. A number of RBs need to revisit their marketing strategies, and work to ensure that RD&E providers can readily identify the benefit to

them of engaging with the RB. This may mean that RBs need to work together to engage with RD&E providers, or it may mean they need to engage some expertise to assist them with their marketing.

#### *Recommendations*

14. That RBs establish knowledge and information sharing protocols to ensure that the knowledge and learnings generated by other RBs and the full range of external organisations are applied.

### **3.9. External blockages**

Difficulties in collaboration are not necessarily one sided issues. Where an organisation is working to ensure that it minimises its limitations, whether brought about by geography, funding, structure etc, it cannot always overcome external issues.

So, while the RBs efforts towards engaging with RD&E providers are exhibiting gaps, the RD&E providers themselves are inhibiting their prospects for engagement. An RB is unlikely to approach an RD&E provider that does not overtly communicate that it has expertise in NRM. Private organisations do this very well, but state agencies and university research centres, with their background in funded service provision rather than a business approach, have yet to embrace a direct style of marketing.

There is a need for bodies such as the Joint Steering Committee or the Regional Groups Collective to approach potential collaborators with a suggestion that they collate, in a user-friendly style, a summary of the areas of expertise that exist within their organisation that may be attractive to RBs.

In particular, university research centres, who previously relied on government funding for research dollars, have yet to adapt to the need to market their wares. It was apparent from the small marketing experiment conducted during the course of this project that the universities are not necessarily aware that they are missing opportunities due to a gap in their marketing strategy.

While RBs appear to be competing with each other to secure staff and expertise, the same is true of RD&E providers and other NRM groups. The landscape is populated by competing groups, where collegiality is more likely to produce successful outcomes. There is a need to ensure that successful collaborations are widely communicated, to encourage potential partners to engage on equal terms rather than competing.

#### *Recommendations*

15. That RBs encourage collegiality as part of their engagement processes  
Also refer to Recommendation 5.

## **4. Discussion**

This project, along with the small group discussions that took place at the APEN conference in Toowoomba (conference proceedings released online) (APEN, 2005), has provided a range of ideas for enhancing the activities of RBs and assisting their drive to meet their goals. The uniqueness of each of the RBs means that not all of the recommendations contained in this report will apply to all of the RBs, nor all of the RD&E providers. It is suggested that each of the RBs seek assistance from state agencies and RD&E providers in identifying the areas of enhancement that may benefit their operations. This section will provide some discussion of the benefits of and pathways towards implementing the recommendations.

### *Individuality versus collegiality*

One resounding theme throughout the project was the need for the RBs to work together more effectively. While the individuality of each RB is a reflection of the unique needs of the region they are servicing, the nature of a small operation is that it cannot always attract the attention of larger operations – in this case, the attention of RD&E providers. The example of the South Australian operation was cited earlier, as a model that allows the RBs to work as one corporate entity to work towards common goals.

In addition to the need for RBs to collaborate rather than compete, there is a need to link into other relevant bodies and frameworks. This project has revealed that Regional Growth Management Frameworks (RGMFs) and organisations associated with them are being under-utilised by RBs. Closer linkages between RISs and RGMFs, and alignment where possible, would provide benefit to both the RBs and other regional development groups.

While RBs need to be autonomous in their style of operation, dependant on the regions' needs and access to expertise, they also need the strengths afforded an acknowledged identity. For example, when an issue is common to all or some of the RBs, there is more likely to be a positive response from RD&E providers to a large scale request for engagement to address the issue. On the other hand, many RD&E providers cannot see the value in taking on short-term small projects. Additionally, a package of small projects managed through a common point is more attractive to RD&E providers than numerous small projects, with duplicated costs and activities.

There are further benefits to being able to identify with a corporation – the APEN conference identified a reluctance to share data as there is no clear vision of where the information goes and how it will be used. In the previous evolution, with NRM managed by state agencies, sharing data and information from an extension officer was recognised as working with the DPI&F for example. The DPI&F had a presence and a reputation with stakeholders and within the community. While the RBs have a presence within their own communities, the lessons from one RB may not be recognised as valid to stakeholders in another RB, simply because the stakeholders don't know where the information is coming from. The development of a corporate identity would help to overcome this weakness.

Reflecting on the evolution of NRM, and the shift from a state government managed agenda to the current situation, will establishing a corporate identity simply duplicate the previous management of NRM issues? If that is the case, where is the evolution? While the establishment of a corporate identity will enhance RB activity, it is important to retain the uniqueness of the individual RBs grass roots approach, supporting the need to operate in response to the needs of these regions, rather than imposing an operating model that does not meet their needs.

One of the RBs major assets is its capacity to adapt to suit the needs of the region it is servicing. Paradoxically, this is also the element of the RB system that appears to most inhibit collaboration. An overarching framework supported by a recognisable corporate identity needs to both retain the RBs' uniqueness and individuality, and enhance opportunities for successful collaboration.

This need will best be met through continued support of the Regional Group Collective. The RGC has the opportunity to provide an overarching framework that will enhance RBs success in collaborative RD&E by:

- Ensuring the alignment of national, state, regional and sub-regional priorities;
- Providing guidelines to ensure methodologies and monitoring processes are conducted in a manner that allows long-term, cross catchment analysis;

- Providing opportunities for RBs to collaborate on common issues, reducing the individual economic and human resource commitments required to enable a single RB to meet goals;
- Increasing the opportunities for RD&E providers to collaborate with RBs by providing substantive and long-term project activity;
- Providing RB staff with professional development opportunities such as internal transfers and secondments, and other benefits that come from being part of a large organisation.

### *Project management*

The success of any collaboration can rest with the management of the activities involved. In the case of the RBs' forays into collaborative RD&E, there were a number of project management issues raised, including 'lack of professionalism', 'unresolved conflicts' and reports of objectives being altered mid-project. All of these issues could be addressed through the establishment of a standard protocol for management of projects.

This protocol would include mechanisms for handling any changes that need to be made during the life of a project. For example, during the course of this project, there was a need to refocus the objectives (see section 2.2.2 of this report). This was handled via discussion with all collaborating parties, including the funding body. The protocol would also include a clear process for conflict resolution.

It is suggested that the RGC seek the support of government agencies and RD&E providers with experience in these issues to develop a common project management protocol. This will ensure that cross-catchment and state-wide issues can be more easily managed, and will facilitate long-term monitoring and analysis despite changes to staffing and organisational structures within individual RBs.

### *Strengths & weaknesses of short-term funding model*

Resistance to the use of the short-term funding mode was identified within most of the RBs. This needs to be addressed, as it is unlikely to change in the near future. It would be of value to the RBs to approach other organisations that have longer term experience in working with the short-term funding model, and to take up the lessons from these groups that apply to the RBs unique situation.

### *Informal capacity – the volunteer sector*

RBs need to overtly communicate the resources and wealth of skills that exist within their RB. This is linked to the need for RBs, RD&E providers and landholders to understand each others roles and capacities. In the case of the RBs, it would be of benefit of them to ensure that RD&E providers are particularly aware of the human resources and local knowledge available to them via collaboration with the RBS.

One of the strengths of the RBs is their capacity to attract local knowledge in the form of the volunteers who work with them to achieve on-the-ground successes.

Conversely, one of the issues with inviting external organisations to fulfil projects is that they lack local knowledge. A framework to recognise the capacity and knowledge of those in the volunteer sector could be instrumental in encouraging these groups to collaborate. Providing training for volunteers in monitoring and data gathering processes should not be seen as an implication that the volunteers are doing a poor job – rather, it is about providing researchers with confidence in the results that the volunteers are providing, because ultimately it is a researcher's responsibility to ensure the integrity of the data that he or she uses.

The volunteer sector in general is experiencing a level of fatigue in regional areas, especially where the same pool of volunteers is consistently tapped (ACOSS, 2005). Additional support mechanisms could be instrumental in ensuring that this valuable resource in the NRM sector is sustained into the future. For example, overt recognition of the skills that volunteers develop may ignite interest in potential new volunteers. Partnerships with TAFE and universities to 'certify' levels of skill is one avenue worth exploring. One example of this, albeit in a non-volunteer sector, was the establishment of certification within Queensland's public sector purchasing officers (Queensland Purchasing, website viewed December 2005). Working with secondary schools to engender interest (value to the RB) and provide co-curricular and extra-curricular activities (value to the schools) is another suggested area to explore.

#### *In-kind support*

The current processes for allocating in-kind support were not perceived to be equitable, or in some cases even available. This is a major concern, as the RISs are developed based on the assumption that the in-kind support offered as part of the relevant funding agreement will be available.

A system of referral and negotiation may need to be established to redress situations where state agencies cannot fulfil their in-kind support obligations. State agencies, with their history of progress in NRM issues, may be in a position to recommend alternative sources of expertise when they are unable to fulfil the request themselves. A more realistic assessment of the quantum of support an agency can offer, given their level of staffing and current workloads, needs to be clearly articulated to RBs to allow them to make arrangements to fill any gaps.

#### *Identification of needs and expertise – a systems approach*

Much has already been said about the need for RBs to work together, to collaborate with other organisations, to align their priorities with the priorities of potential partners etc. This would be best achieved using a systems approach to identify regional needs, expertise and other support mechanisms.

The different approaches to addressing issues and the differences in structure among the RBs have already been mentioned in this report. It must be stressed that the structures and approaches by each of the RBs all have strengths, and all have weaknesses. However, it is the differences rather than the strengths and weaknesses that limit opportunities to access expertise and sell opportunities. In order to engage with RD&E providers more successfully, it would be worthwhile for RBs to explore their similarities and look for opportunities to take a common approach to engagement. This will not require sacrificing the individual needs of each RB, nor will it mean that each RB will need to operate to an identical model. However, it may mean that RBs will need to adjust some of their on-the-ground strategies such as monitoring to ensure reliable long-term assessment of progress and decline are possible.

The use of a systems approach to identify needs and match them with capacity will have the additional benefit of reducing perceptions of 'pet project' activity. The systems approach will require a level of transparency and a clear, collaboratively developed suite of priorities, ensuring objectivity in facilitation of projects and programs. This approach will also expand the RBs networks of RD&E providers.

#### *Short-term success versus long-term engagement*

While it is important that RBs can demonstrate success in their endeavours in the short-term, it is important that this does not take precedence over meeting long-term

goals. For example, shooting feral pigs is a quick and visible short-term strategy, but does not provide a long-term solution. Reducing grazing pressure may not have visible, instant success, but it is more likely to provide long-term success.

RBs need to weigh up the value of short-term, visible success against long-term engagement. In the example given previously, being seen to cull feral pigs provides instant recognition that the RB is “doing something”. A strategy to ensure that feral pigs are eliminated, or at least reduced to manageable levels, may not have the visible impact, and may not provide instant results, but may have more value in the long-term. RBs need to consider these issues in deciding where to invest their dollars.

#### *Communicating and clarifying roles*

One of the recurring themes in this project has revolved around communication – communication of needs, communication of goals and priorities, communication of assets and resources, and communication of roles and expectations. RBs currently state their goals and priorities via their RIS. RD&E providers state their areas of interest via their mission statement, strategic plan or similar corporate publication, as do state and national government agencies. Despite this, there appears to be a lack of knowledge and understanding among NRM stakeholders of the roles of each of the various groups. If these stakeholders are serious about future collaboration, they need to open mutual avenues of communication to ensure that a high degree of understanding is developed about their needs, priorities and expectations.

This could be achieved through processes as simple as discussion and other informal communication, or by more targeted marketing effort. This effort is required on the part of both the RBs and the RD&E providers. Materials outlining needs and capacity, conference and workshop participation, guest speakers and other formal activity between the groups would all serve to increase understanding. Such activities will also result in expanded networks for the RBs and will increase the opportunities for successful integrated activity.

#### *Postgraduate/early researcher*

While the untapped resource of postgraduate research students was only raised occasionally during the course of this project, the opportunity that the suggestion represents is significant. If RBs were in a position to offer a body of work that could provide the foundation of a Masters or PhD student's research, they may find that identifying supervisory expertise easier than finding experts to directly address the issues. It is suggested that RBs, government agencies and universities collaborate to trial this approach. The Queensland RBs as a group could seek the aid of relevant experts to identify areas of common priority, and with the assistance of universities establish scholarship/stipend arrangements to attract research students. It may be worthwhile approaching CRCs and other R&D bodies that have successfully taken this approach for input to the process.

#### *Trumpeting the successes and sharing the knowledge*

It became apparent during the course of this project that there are many success stories to report. However, this only became apparent after an amount of investigation. There are many newsletters, websites, infozines etc that currently share information within select groups, however a broader level of exposure would be valuable. A mechanism is needed to highlight and communicate the success stories at a more public level. A corporate identity would provide a starting point, with a corporate publication (newsletter, magazine etc) filling this gap.

RBs, RD&E providers including volunteers, and landholders need to be prepared to share the knowledge that they are generating. Intellectual property rights need to be addressed as part of the project management process, and mechanisms need to be established that ensure the knowledge being generated is also being adequately and widely communicated. Universities and research centres are particularly experienced with these mechanisms, and it is recommended that the RGC seek their advice and support in establishing suitable avenues to ensure that their learnings and findings are appropriately distributed.

*If at first you don't succeed....*

Lessons should be taken from unsuccessful attempts at engagement. RBs need to actively seek information from RD&E providers on their reasons for not agreeing to engage. RD&E providers should be prepared to provide this information. In some cases, alternative agreements may be possible, but while the engagement process is abandoned at the point where the provider says, "Sorry, we can't," there is no opportunity to move forward.

More information may provide a solution. For example, if the timing is wrong, is there room to change the schedule? If the issue is a lack of human resources to gather data, can the RB source the human resources elsewhere? Is the RD&E provider in a position to oversee the project, supervise a postgraduate student or guide an early researcher, even if they don't have the time to fully participate themselves?

RBs also need to know if they are asking too much for too little in return, or if the lack of continuity (i.e. short term projects) is what is inhibiting RD&E engagement. Without this kind of feedback, RBs cannot expect to improve their engagement processes.

## **5. Conclusions and recommendations**

The project SE04 Integrated RD&E for regional NRM has identified a number of impediments to collaborative RD&E, and along with this a number of opportunities.

The project has revealed that the current short term funding arrangement under which the Regional Bodies operate has impeded collaborative RD&E in NRM at the regional level because:

- It does not provide opportunities for long-term project activity, and therefore does not support the RBs development of long-term relationships with RD&E providers. RD&E providers are reluctant to participate in short-term consultancy based projects, because there is little return for them.
- The reporting requirements attached to the funding structure have impacted on the volunteer sector of RD&E providers, in that there has been an increase in the frequency of required reporting. This impacts on collaborative RD&E by reducing the capacity of volunteers to complete the on-the-ground requirements of projects. Volunteer groups' enthusiasm to collaborate is reduced, and the need for administrative support is increase.
- Staffing stability within RBs is impacted by the funding structure, with uncertainty in the longevity of the roles. This is one of the reasons RBs have difficulty attracting and retaining staff and building the longer term relationships required to achieve integrated RD&E partnerships. Uncertain staffing makes an RB unattractive as a potential partner, hindering attempts at collaborative RD&E.

Suggested resolutions to the funding structure issue include:

- Where possible, RBs should collaborate to engage RD&E providers on cross-catchment and state-wide issues. This process would be aided by more firmly establishing the Regional Groups Collective as a recognised corporate body and the point of entry to NRM in the regions. This would make collaboration in NRM RD&E more attractive to potential partners.
- Recognition of the value of the work carried out by volunteer organisations in RD&E, and additional support for these groups' continued growth and participation is suggested. It is important that other RD&E providers develop an understanding of the value of this work, and a willingness to engage alongside them in collaborative RD&E.
- The Regional Groups Collective has an important role to play in stabilising staffing in the RBs. A corporate body that can provide professional development and advancement opportunities would be attractive to potential staff. RBs that can demonstrate a stable working team will be more attractive to potential collaborative partners.

The project also revealed that the differences in governance and organisational structures among the RBs have an adverse impact on opportunities for collaboration:

- The individual approaches of each RB, dependent on their organisational structure, mean that cross-catchment and state-wide issues are not handled in a uniform manner. The result of this is a number of small, short-term projects that are facilitated to try to resolve a number of similar issues, which are not conducive to developing long-term, collaborative partnerships.
- As previously stated, RBs are less attractive to potential staff, due to limited professional development and advancement opportunities. The lack of a "whole of organisation" framework limits the career opportunities to within a single RB. The flow on from staffing issues is the previously mentioned unattractiveness to potential collaborators.
- On-the-ground implementation is reportedly "influenced" by the resident expertise, leading to perceptions that RISs are meeting priorities of individuals rather than the priorities of the catchment. Whether accurate or not, these types of perceptions are damaging for an organising trying to encourage collaboration.
- There are conflicts between national, state, regional and sub-regional priorities, and a lack of alignment of regional plans with state and national plans. This results in conflicting priorities among potential collaborators.

Suggested resolutions for these issues once again centre on the growth and positioning of the Regional Groups Collective. If the management of state-wide and cross-catchment issues rests with a corporate body, the RBs are then required to work in concert to implement on-the-ground practices. RD&E providers are more willing to collaborate when they can be confident of consistent methodologies and monitoring programs, which can be achieved in collaborative RD&E in NRM if the RBs work as a single entity.

Additionally, the corporate body could ensure transparent negotiations between RBs and specialist, eliminating the perception of individual priorities rather than catchment priorities populating the RISs. Alignment of RB priorities with national and state plans could be achieved on a whole-of-organisation basis, rather than each of the RBs need to do this on an individual basis. All of these suggestions would minimise the impediments that governance and organisational structure are creating in current attempts at collaborative RD&E in NRM.

The issues surrounding the roles of the various NRM stakeholders, in particular how they communicate and market their needs and capabilities to each other, revealed a number of impediments and opportunities:

- There appeared to be a lack of understanding among stakeholders regarding the roles of the various organisations. This led to unrealised expectations in some cases, while in others it ensured that opportunities for collaboration were not taken up.
- There was little evidence of direct marketing of needs or capacities either from RBs to RD&E providers, or from RD&E providers to RBs.

These issues can be resolved using targeted marketing. In the case of the RD&E providers, there is a need for a targeted strategy that gives clear information on the services RBs can access. The RBs need a coordinated marketing approach, and it is suggested that this take place via the Regional Groups Collective, allowing potential partners to see the range of opportunities collaborative partnerships in NRM RD&E can offer.

Project management issues were raised that were not conducive to long-term collaboration. RD&E providers cited some shortcomings in the RBs approach to project management. Others reported that objectives were changed mid-project. Another issue was the non-uniform approach to monitoring across catchments which limited the broad and long-term validity of the monitoring programs. All of these issues resulted in a less than positive experience in regard to collaborative RD&E. To ensure that these issues are resolved, it is suggested that a project management protocol be developed that ensures consistency in approach and transparency in activity. This professional approach will enhance the attractiveness of collaborating with RBs from the RD&E providers' perspective.

There appeared to be a lack of mechanisms to ensure that knowledge and information was shared among the RBs and the wider research community. RD&E providers like to be able to publish and otherwise distribute the knowledge that they generate, and the use of mechanisms such as conferences, workshops, journals and other communication tools is suggested. Once again, the Regional Groups Collective has an important role to play in providing some of these opportunities, all of which will make collaborating with the RBs a more attractive proposition for RD&E providers

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