



**Audit Report
Border Rivers-Gwydir
Catchment Management Authority**

April 2009



AUDIT REPORT

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List of acronyms

AIP	Annual Implementation Plan
CAP	Catchment Action Plan
CMA	Catchment Management Authority
CSO	Community Support Officer
DECC	Department of Environment and Climate Change
GPS	Global Positioning System
LMD	Land Management Database
M&E	Monitoring and Evaluation
MER	Monitoring, Evaluation and Reporting
NAP	National Action Plan for Salinity
NHT	Natural Heritage Trust
NRC	Natural Resources Commission
NRM	Natural Resource Management
NSW	New South Wales
OGWIP	On-Ground-Works Incentive Program
PAT	Project Assessment Tool
PVP	Property Vegetation Plan
TED	Training and Education Database
UNE	University of New England

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1 Introduction

The Natural Resources Commission (NRC) has a statutory role to audit whether the state's 13 Catchment Action Plans (CAP) are being implemented effectively – that is, in a way that complies with the *Standard for Quality Natural Resource Management* (the Standard) and helps achieve the state-wide targets.

The NRC has completed audits of seven of these CAPs, one of which was the Border Rivers-Gwydir CAP. Preparing for and conducting the audits involved significant research, development and innovation, as natural resource management auditing is a new and challenging field. This was of particular significance for the Border Rivers Gwydir CMA as it was the first CAP the NRC audited, meaning many of the audit processes and methodologies were tested for the first time. As a result, additional field work was conducted some time after the initial audit visit to allow the NRC to complete this audit report.

In general, we made many refinements to our audit process along the way, and are confident that future audits will be more efficient and provide a more comprehensive picture of CMAs' performance in implementing CAPs. We greatly appreciate the patience and cooperation of all the CMAs involved.

The conclusions of our audit of the implementation of the Border Rivers-Gwydir CAP, and the actions we suggest Border Rivers-Gwydir CMA take to improve this implementation are provided in full in Attachment 1. The purpose of this report is to promote greater understanding of the CMA's performance and to guide the CMA Board in continued improvement. The report explains:

- the audit conclusions and their significance
- how the NRC used the Standard in reaching the conclusions.

The NRC has also used the conclusions, along with those of other audits and additional information, to prepare a consolidated report to the NSW Government on progress in implementing CAPs to date.¹

1.1 Focus of the audit

Although a range of government agencies have a role in implementing CAPs, the NRC focused its first seven audits on the actions of the CMAs. This is because CMAs are the lead agencies responsible for implementing CAPs.

In addition, while state-wide and CMA-level monitoring and evaluation programs are being implemented, data from these programs are not yet available. As a result, our initial audits were not able to test the contribution of CMA actions against accurate measurements of landscape-scale changes in natural resource condition that help achieve the state-wide targets. Instead, the audits focused on whether the CMA's planning, project implementation and other CAP-related activities, and the business systems that guide and support these activities, are reaching the quality benchmarks set by the Standard.

¹ Natural Resources Commission (2008) *Progress report on effective implementation of Catchment Action Plans*, November 2008. NRC, Sydney. Available at www.nrc.nsw.gov.au

Our analysis of the audit results focused on four lines of inquiry:

1. Is the CMA effectively prioritising its investments to promote resilient landscapes that support the values of its communities?
2. Are the CMA's vegetation projects contributing to improved landscape function?
3. Is the CMA actively engaging its communities?
4. Is the CMA effectively using adaptive management?

For each of these questions, we assessed not only whether the CMA is doing the activity, but whether it is doing it effectively – that is, by applying the most relevant elements of the Standard and achieving the required outcomes of the Standard. The NRC believes a CMA that is doing each of these four activities in a way that reaches the quality benchmarks set by the Standard has the greatest chance of achieving multiple NRM outcomes and making the highest possible contribution towards the state-wide targets.

Finally, in considering each of the lines of inquiry, we focused on a subset of CMA projects that have the potential to contribute to multiple NRM targets across more than one biophysical theme (for example, improvements in river health, soil function and native species habitat). It was not practical to look at all CMA programs and projects given the timeframe for the audits.

The NRC visited eight project sites in the Border Rivers-Gwydir region, six of which used vegetation to address soil and land-use and biodiversity targets. Activities at these sites included revegetation (e.g. in riparian areas), preserving remnant vegetation and establishing pastures.

1.2 Summary of audit findings

To conduct the audit, the NRC identified what we would expect to find if the CMA was doing each of the four activities listed above effectively. For each line of inquiry, we identified three or four criteria we would expect the CMA to be meeting. We also identified the elements of the Standard that are most relevant and important to that line of inquiry, and the CMA behaviours and other outcomes we would expect to find if the CMA is properly applying those elements of the Standard.

We then assessed the CMA's performance against these expectations using information gained by interviewing a sample of CMA Board and staff members, landholders and other stakeholders; reviewing a range of CMA and public documents; and visiting projects.

Finally, we identified the actions the CMA should take to improve its performance in implementing the CAP in compliance with the Standard.

The sections below summarise the audit findings for the Border Rivers-Gwydir CAP, including our expectations, our assessment of the Border Rivers-Gwydir CMA's performance against these expectations, and the actions we suggest the CMA take to improve its performance. As noted above, the full audit conclusions and suggested actions for Border Rivers-Gwydir CMA and the CMA's responses are provided in Attachment 1.

1.2.1 Prioritising investments to promote resilient landscapes

If a CMA is effectively prioritising its investments to promote resilient landscapes that support the values of its communities, we would expect to find that it has a commonly understood definition of what constitutes resilient landscapes in its catchment. For example, its Board members and staff would be able to consistently explain the main natural resource assets in the catchment, and the interactions that characterise healthy landscape function. They would know the main threats to the assets and landscape function, and the environmental, economic, social and cultural value the community places on those assets and they would also agree on the options for action and how they promote resilient landscapes.

We would also expect to find that the CMA has a system for ranking investment options that uses a wide range of information about the assets and threats, and can identify the projects that will contribute to multiple NRM targets across more than one biophysical theme. This system would be transparent, consistent and repeatable. In addition, we would expect to find that the CMA has a system to ensure its short- and long-term investments are consistent with each other and with the catchment-level targets in the CAP.

Our audit of Border Rivers-Gwydir CMA's implementation of the CAP found that:

- The CAP clearly outlined a vision for the region and the CMA's operational approach that together, contain many elements that define a functional and resilient landscape for the region. The CMA Board and staff did not demonstrate a common understanding of these elements of definition, or of the CMA's role in realising the vision.
- The CMA had established a robust, transparent and repeatable procedure that assessed investment options at the project scale against established criteria. It had developed a tool for assessing proposed projects on the basis of their contribution to multiple NRM outcomes. However, the effective implementation of the procedure was weakened by the immature and fragmented nature of the CMA's business systems.
- At the time of initial audit work, as external pressure to expend its investment funding increased towards the end of the 2007/08 financial year, the CMA had changed its project-scale approval process and increased the proportion of funds it paid 'up front' (i.e., before on-ground works commenced). While this response maintained the investment focus on longer term CAP targets, it increased the amount of funding exposed to the risk of contract non-compliance and increased the risk that project-scale investments were less well-optimised to achieve those targets.
- The CMA used its project assessment procedure to ensure consistency between short and long-term investments. However, the lack of timely reporting potentially impacted on their ability to maximise this consistency.
- Since the NRC's initial audit visit, the CMA has implemented approaches that the NRC considers will give the CMA a more strategic and targeted approach to its investments. For example, it has focussed 2008-09 investment on six high-priority sub-catchments where the CMA considers it will receive the best return on its investment.

The NRC notes that the CMA has implemented further improvements to its prioritisation processes since the audit. It suggests the CMA Board continues to take a range of actions aimed at addressing the issues identified above and so continue to improve the extent to which its implementation of the CAP complies with the Standard. These actions include:

- refining the CMA's understanding of landscape function and clearly documenting this so it can be consistently communicated to the staff and the community
- applying the knowledge generated by benchmarking projects to both the CMA's prioritisation processes and day-to-day management actions occurring 'in the paddock'.

1.2.2 Delivering projects that contributed to improved landscape function

If a CMA is effectively delivering vegetation projects that contribute to improved landscape function, we would expect its Board and staff to have a common understanding of how the short-term outcomes of its projects are expected to lead to long-term improvements in natural resource condition, and that the expected long-term outcomes are documented. We would also expect to find that its projects are achieving the expected short-term outcomes, and that the CMA has a system for identifying opportunities to further leverage the experience of its project partners to add value to the initial projects.

In addition, we would expect to find that the CMA is attracting additional funding and in-kind contributions to match government investments in projects. And that it has systems in place to monitor and evaluate project outcomes over time.

The NRC's audit of Border Rivers-Gwydir CMA's implementation of the CAP found that:

- The CMA had not consistently documented the expected project outcomes. However, staff responsible for delivering projects generally understood the expected long-term outcomes of their project, as did most of the partners and landholders involved with the project.
- The CMA was successfully achieving project outputs, but weaknesses in its reporting system reduced the accuracy and usefulness of its records of project achievements.
- The CMA had attracted and valued significant additional resources to match investor funding, but the extent varied between projects and programs. The CMA had not identified and valued some less tangible contributions, such as additional technical expertise attracted through collaboration.
- The CMA had implemented systems and processes that had successfully monitored the ongoing achievements of some projects. The CMA had established a draft M&E Plan that may contribute to ongoing project-level monitoring, but was not being actively implemented at the time of the audit.
- The CMA had ongoing vacancies in key coordination positions, and this had weakened its project management and reporting performance.
- Since our initial audit visit, Border Rivers-Gwydir CMA has improved its standard project documentation, including developing a Project Management Plan, and considers this will help it improve its project communication and management.

The NRC suggests the CMA Board take a range of actions to address these issues. Key actions include:

- filling the vacant Catchment Coordinator positions as a matter of urgency, to strengthen its operational management
- continuing to develop project documentation to help communicate how projects will contribute to specific expected long-term outcomes to project partners

- improving reporting of performance information from the project level to the Board (and external stakeholders), to improve accountability and reduce administrative burdens on staff
- improving the systems that recognise, value and monitor the additional resources attracted to match CMA funding.

1.2.3 Effectively engaging its communities

If a CMA is effectively engaging its communities, we would expect it to have identified the key community groups and stakeholders it should consider in planning and undertaking its work. We'd expect its Board and staff to have a shared understanding of these groups, including their knowledge, capacity and values, and the socio-economic and cultural opportunities and threats they pose to the successful implementation of the CAP.

In addition, we would expect the CMA to be implementing an appropriate engagement strategy for each key group in its community, which is designed to build trust in the CMA, promote two-way knowledge sharing, and ultimately achieve outcomes. The CMA would also be implementing a communication strategy that promotes collaboration, sustainable behavioural change and feedback. These strategies would be based on its knowledge of the interests, capacities and values of each group, and their communication preferences.

Our audit found that:

- Border Rivers-Gwydir CMA had clearly identified key community groups and stakeholders in its Communications Plan, and had developed approaches for considering the views of these groups in planning and undertaking its work. It had also established systems to help identify other community groups and stakeholders. But the Plan and systems had not been implemented consistently, and the staff position responsible for implementation had been vacant for most of the time since the Plan was adopted.
- Some CMA engagement approaches, such as direct engagement with landholders, had been successful. However, engagement approaches for other groups in the community – such as Landcare, local government and the region's Aboriginal community – were still developing.
- The CMA's Communications Plan was intended to link to a range of engagement strategies (or 'mini-plans') and was aimed at building awareness and encouraging adoption of NRM practices. However, actual linkages between the existing engagement strategies were not clear or consistent with the Communications Plan.
- There was evidence that the CMA's communication had promoted collaboration and behavioural change. For example, it had helped establish collaboration with some local and state government agencies.

The NRC suggests the CMA Board take a range of actions to address these issues. Key actions include:

- reviewing and refining the Communications Plan (and 'mini-plans') to achieve a consistent framework for communication and engagement
- providing the resources required to implement the Communications Plan and maintain the systems that support consistent CMA-wide communication and feedback

- improving processes that encourage feedback from community groups and stakeholders that could help the CMA in planning and undertaking its work.

1.2.4 Effectively using adaptive management

If a CMA is effectively using adaptive management, we would expect it to have documented how it will apply the principles of adaptive management in its planning and business systems. We would expect its Board and staff to be able to explain how the CMA uses adaptive management to promote continuous learning at both an individual and institutional level. They would also be able to explain the key knowledge gaps and uncertainties related to the assets and threats in the catchment, and how the CMA manages these.

In addition, we would expect the CMA to use monitoring and evaluation systems that test the assumptions underlying its investments in improving landscape function and resilience, and use appropriate experts to assess the planned and actual outcomes of these investments. There would also be an organisational focus on applying new knowledge (gained from monitoring and evaluation or other sources) to increase the effectiveness of investments. Finally, we would expect the CMA to have and maintain information management systems that support its adaptive management processes.

The NRC's audit found that:

- The CMA had documented its adaptive management approach in the CAP, describing how it intends to improve the CAP over time.
- The CMA had some systems that applied adaptive management principles and approaches. However, factors such as long-term staff vacancies, lack of monitoring and evaluation data and delays in the delivery of M&E programs by government agencies were hampering its ability to adaptively learn and develop CMA programs.
- The CMA had a draft Monitoring and Evaluation (M&E) Plan that had taken several years to develop, was incomplete and impacting the CMA's ability to effectively adaptive management. The CMA had not made finalising and fully implementing the M&E Plan a high priority.
- The CMA's information management system was poorly integrated and supported only some operational decision-making with performance data. However, unlike other CMA's, it had not inherited systems from previous NRM bodies in the region, explaining the immaturity of its information management system.
- Since the initial audit visit, the CMA had continued made ongoing improvements to its information management systems.

The NRC suggests the CMA Board take a range of actions to address these issues. Key actions include:

- finalising the development of a comprehensive M&E strategy, encompassing the draft M&E Plan and incorporating performance (output) and natural resource condition data from the project to the catchment scale
- providing the resources necessary to coordinate the M&E strategy and ensure collection and reporting of monitoring and evaluation data, to enable it to better evaluate its CAP implementation performance

- developing a strategy for an integrated information management system to ensure the flow of information meets the needs of CMA decision-makers.

1.3 Structure of the report

The rest of this report explains the audit conclusions and how we used the Standard in reaching those conclusions in more detail. It is structured as follows:

- Chapter 2 describes our assessment of whether the CMA is effectively prioritising its investments to promote resilient landscapes that support the values of its communities
- Chapter 3 focuses on whether the CMA's vegetation projects are contributing to improved landscape function
- Chapter 4 discusses our assessment of whether the CMA is effectively engaging its communities, and
- Chapter 5 looks at whether the CMA is effectively using adaptive management.

The attachments provide the full audit conclusions and suggested actions, more detailed information about the audit and an overview of the context for the audit conclusions including a summary of the key features of the Border Rivers-Gwydir catchment and CMA.

2 Prioritising investments to promote resilient landscapes

The audit's first line of inquiry was to assess whether the CMA is effectively prioritising its investments to promote resilient landscapes that support the values of its communities. This line of inquiry focused on planning – the first step in the adaptive management cycle. Its aim was to assess whether the CMA has established the knowledge, understanding, systems and procedures required to undertake this step effectively, in line with the Standard.

Although the CAP itself documents the priorities in the region, the NRC recommended approval of each CAP on the basis that the CMA would continue to improve the plan's quality and potential to contribute to the state-wide targets. Therefore, the CMA cannot simply spend its funds in line with the CAP. Rather, it needs to continue to apply the Standard in implementing the CAP. This will enable it to continually refine its investment priorities as its knowledge of the landscapes and communities in its catchment improves, and its understanding of best-practice NRM evolves.

The NRC identified three criteria that we would expect a CMA to meet in order to effectively prioritise its investments in compliance with the Standard. These criteria include that the CMA has:

- a commonly understood definition of what constitutes resilient landscapes in its catchment
- a system for ranking investment options that takes account of factors such as scientific and local knowledge; socio-economic information; community and investor preferences; potential for partners to contribute matching funds or in-kind support, and potential to achieve maximum outcomes, for example, by contributing to multiple NRM targets across more than one biophysical theme
- a system that ensures that its short- and long-term investment priorities are consistent with each other, and with the catchment-level targets in the CAP.

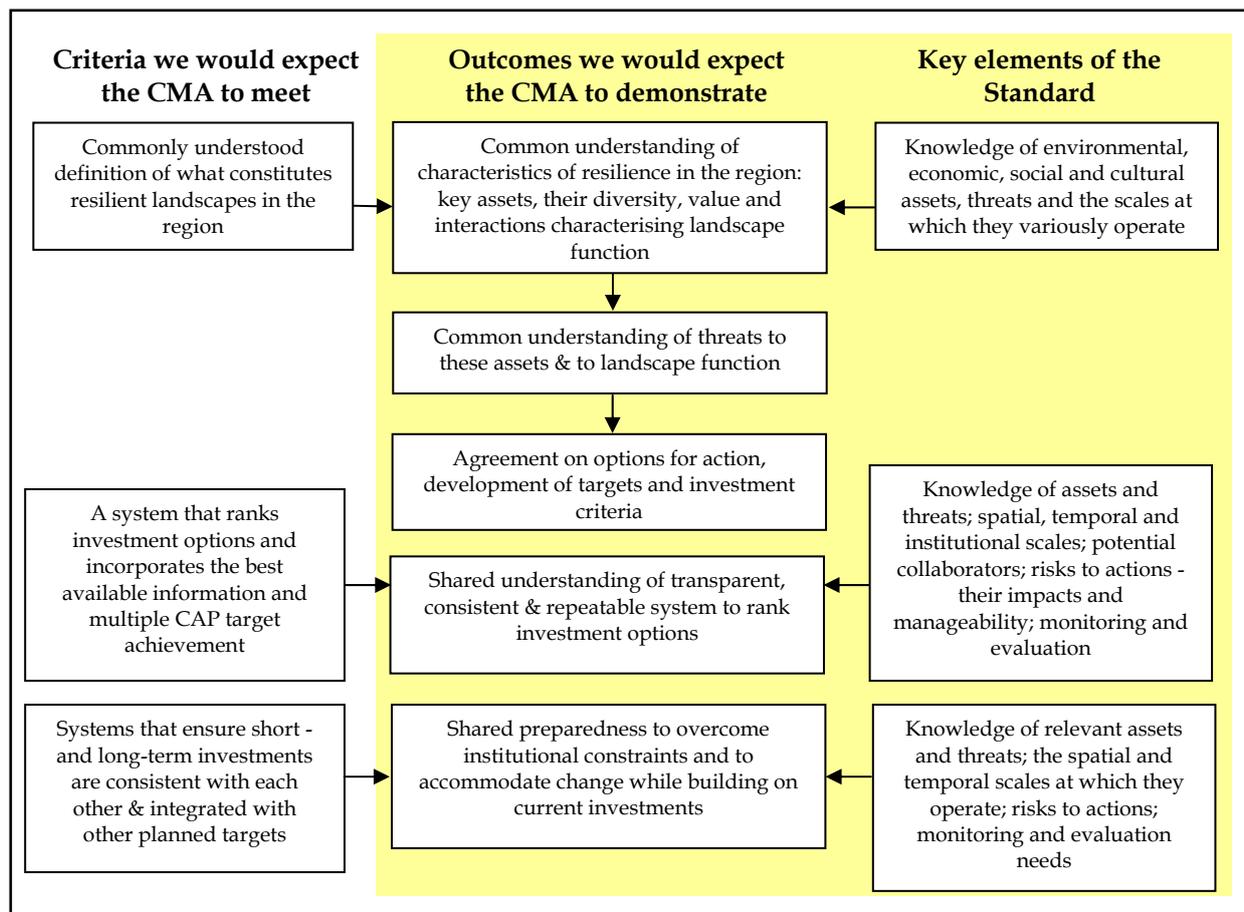
We identified the elements of the Standard that are most relevant and important for meeting these criteria. We also identified the behaviours and other outcomes we would expect the CMA to demonstrate if it is properly using these elements of the Standard, and thus meeting the criteria to a level of quality consistent with the Standard.

For example, if the CMA is meeting the first criterion (having a commonly understood definition of what constitutes resilient landscapes in its catchment) in a way that complies with the Standard, we would expect it to be collecting and using the best available knowledge on the natural resource assets and threats in its catchment, and on the economic, social and cultural values its community places on those assets. We would also expect it to be considering the scales at which the assets and threats operate, and determining the optimal scale at which to manage them to achieve multiple NRM benefits and integrated outcomes.

As a result, we would expect to find that its Board members and staff can consistently explain the main natural resource assets in the catchment, and the interactions that characterise healthy landscape function. We would also expect them to understand the main threats to the assets and landscape function, and the environmental, economic, social and cultural value the community places on the assets. In addition, they would agree on the options for action to address the threats and maintain or improve the quality of the assets, and the criteria for deciding the actions in which the CMA should invest.

Figure 2.1 provides an overview of this assessment framework. The criteria we would expect the CMA to meet are shown in the left hand column, the most relevant and important elements of the Standard for meeting these criteria are in the right hand column, and the behaviours and other outcomes we would expect the CMA to demonstrate if it is using these elements of the Standard are shown in the centre column.

Figure 2.1: The framework the NRC used to assess whether the CMA was effectively prioritising investments to promote resilient landscapes



The sections below discuss each criterion, including why it is important and what our audit of the implementation of the Border Rivers-Gwydir CAP found in relation to it.

2.1 Commonly understood definition of resilient landscapes

NSW's aspirational goal for natural resource management is resilient landscapes – that is, “landscapes that are ecologically sustainable, function effectively and support the environmental, economic, social and cultural values of our communities”. At its simplest, a CMA's role is to coordinate investment to improve NRM across its region and deliver outcomes that make the greatest possible contribution to the achievement of this goal. To do this, the CMA must have a commonly understood definition of what constitutes resilient landscapes in its catchment – its Board and staff members need a consistent understanding of what the goal means for the particular landscapes and communities in its region.

The NRC's audit found that Border Rivers-Gwydir CMA did not have a commonly understood definition of what constitutes resilient landscapes for the region. The vision clearly laid out in the Border Rivers-Gwydir CAP was "sustainable communities and industries which support the natural and cultural environment for future life". This vision, together with the CMA's operational approach also laid out in the CAP, does contain many elements that would define a functional and resilient landscape. However, the CMA Board and staff did not demonstrate a clear and common understanding of the vision or the CMA's role in realising that vision.

This lack of a shared understanding meant that individual CMA Board and staff members placed varying importance on key aspects of the landscape, and had differing perspectives on the role of the CMA and the function of the Board. This made it very difficult for the CMA to develop unity, made it harder to communicate its understanding of resilient landscapes to the community at large and potentially weakened the CMA's strategic and operational decision-making.

To address the serious lack of knowledge in its region, the CMA had commissioned a series of major assessment projects to establish baselines for native vegetation mapping, biodiversity, soils health and community attitudes. The CMA had made significant progress in establishing these baselines.

In respect to the Standard, the CMA:

- could not demonstrate a shared understanding of the characteristics of resilient landscapes in the Border Rivers-Gwydir region, and the interactions of these characteristics (*Collection and use of knowledge and Determination of scale*)
- demonstrated that it was endeavouring to acquire the knowledge needed to build an accurate picture of resilient landscapes across the region (*Collection and use of knowledge and Risk management*).

2.2 A system for ranking investment options

Our knowledge of biophysical and natural systems is incomplete and evolving. People's interactions with natural systems are also dynamic, and community values evolve over time. Because of this, CMAs need to continually seek out improvements in knowledge and adjust their focus accordingly. Their systems for ranking their investment options need to use a wide range of information – such as scientific and local information on the assets and threats in the catchment, as well as information on the values the community places on the assets, and on potential collaborators and their capacity.

In addition, CMAs have received limited government investment and have an enormous amount to achieve if we are to realise the goal of resilient landscapes. This means they need to invest these funds in ways that will make the greatest possible contribution towards as many catchment-level and state-wide targets as possible. To do this, they need a system for ranking investment options that takes account of the options' potential to contribute to multiple targets.

Our audit found that Border Rivers-Gwydir CMA had established a robust, transparent and repeatable procedure – the On-Ground-Works Incentive Program - that assessed investment options at the project scale against established criteria. It had developed a tool for assessing proposed projects on the basis of their contribution to multiple NRM outcomes. However, the

effective implementation of the procedure was weakened by the immature and fragmented nature of the CMA's business systems.

The audit found the CMA initially delivered all incentive funding through its On-Ground-Works Incentive Program (OGWIP)². The OGWIP aimed to ensure that its management actions promoted the achievement of multiple targets at the project scale. The CMA had developed the Project Assessment Tool (PAT) that incorporated criteria related to scientific knowledge and scale, and included an assessment of projects' potential to provide multiple benefits across more than one biophysical theme. It used the tool to make an initial assessment of proposed projects. The project assessment panels reviewed these assessments against a clear set of decision rules and recommended selected projects for approval.

However, the CMA found elements of the OGWIP was time-consuming and had complicated the delivery of incentive funding. For example, the program relied on detailed site investigations and lengthy negotiation process with landholders. Staff vacancies also caused delays with project assessment panels. This had led to slow take-up of investment by landholders.

As expenditure deadlines became critical at the end of the 2007-08 financial year (see section 2.3 for more detail), the CMA decided to change key aspects of the OGWIP. For example, it replaced site inspections with a desk-top planning and negotiation approach using SPOT satellite imagery.

Since the NRC's initial audit visit, the CMA has implemented approaches that the NRC considers will give the CMA a more strategic and targeted approach to its investments. For example, using the best available information it has spatially identified six high-priority sub-catchments to focus on areas where the CMA consider it will receive the best return on its investment.

In respect to the Standard, the CMA:

- could not demonstrate that mechanisms and analysis were in place to ensure its investment decisions were consistently informed by best available knowledge, landscape function and resilience, but had now put in place an approach that should address these issues (*Collection and use of knowledge* and *Determination of scale*).

2.3 Systems that ensure consistent short- and long-term investments

The time lapse between changes to the management of natural resources and the improvement in the function of natural systems can be significant. In the interim much can change, and CMAs need to accommodate this change without losing focus on the long-term objectives of their region's CAP. To this end, CMAs need systems to help them adaptively manage towards long-term targets as they learn what works and what doesn't, and as the environmental, economic, social and cultural landscapes around them change.

The audit was primarily focused on the CMA's systems that considered investment at the property scale. The NRC's audit found that Border Rivers-Gwydir CMA relied on the OGWIP to ensure consistency between projects and long-term investments.

² Up until the 2006/07 period. At the time of the audit 50% of incentives were delivered through the OGWIP.

In early 2008, the CMA had significant funding approved under National Heritage Trust investment strategies. It was required to commit and expend this funding before the end of the 2007-08 financial year, or risk having the funding withdrawn. The CMA considered a number of options for dealing with this short-term imperative, through its Audit and Risk Committee. The CMA adopted an approach that, in addition to changing aspects of the approval process (mentioned above), also increased the proportion of funding provided 'up-front' (i.e., before on-ground works were started).

This increase in up-front funding exposed a higher proportion of its investment to the risk of contract non-compliance. The CMA had considered and attempted to lower the risk, for example it considered the previous performance of project partners in its assessment process. However, it was not clear that it was monitoring these risks in a consistent manner across its projects.

In addition to this increased risk, progress towards its long-term targets was potentially less optimal when the CMA replaced detailed site inspections in its OGWIP with a desk-top approach.

The audit also found weak or late reporting of performance information (critical to effective adaptive management) had impacted the CMA's ability to maximise consistency between short and long-term targets. This was particularly the case where projects were sub-contracted (such as through Landcare groups) and where the CMA's Program Managers provided less direction or were less actively involved in projects.

In respect to the Standard, the CMA:

- could demonstrate that current investments were aligned with the CAP's long-term goals (*Determination of scale and Collection and use of knowledge*)
- could not demonstrate that robust systems were in place to monitor and track alignment in a consistent manner (*Risk management and Monitoring and evaluation*).

Box 2.1: Investing at the property scale to achieve regional outcomes

CMA's need to ensure that their property-scale investments will contribute to the long-term targets in their region's CAP.

The Border Rivers-Gwydir CAP was developed by integrating former Blueprints and upgrading the knowledge used in them. This process resulted in a set of long-term catchment targets for community, biodiversity and native vegetation, soil and land use and water. These targets were then translated into shorter term strategies for investment (such as Annual Implementation Plans). This approach maintained linkages between the priorities established in consultation with the community during preparation of the Blueprints and the strategies approved by the CMA Board.

The CMA's On-Ground Works Incentives Program (OGWIP) was the CMA's primary mechanism to deliver projects in the period 2003-07. It aimed to provide cost effective and 'genuine' improvements at the landscape scale. As such, large scale projects that delivered multiple benefits at the property scale were favoured over smaller site-specific activities. The OGWIP sets out procedures to deliver projects from landholders registering initial interest, through to MER requirements.

In the initial site inspection, the CMA uses the Project Assessment Tool (PAT) to consider potential multiple potential benefits – across biodiversity, land resource, water quality and salinity - and to calculate an Environmental Benefits Score (EBS). In many cases, opportunities to promote multiple benefits at a larger scale are identified (above and beyond the initial proposal). A project proposal is developed in close consultation between the CMA case officer and the landholder.

Using an expert panel approach, the CMA uses the EBS, together with the landholders proposed price, to calculate a cost/benefit ratio. Then it uses this ratio, along with other criteria, to assess project proposals for potential investment. If a project is selected, a management agreement is developed and the project implemented with close support from the CMA.

In a good example of how the initial site inspections worked, a CMA officer and an interested project partner motivated a group of landholders to work together in a small river catchment to tackle riverbank erosion. The works largely included replanting native vegetation in riparian zones, building on previous Landcare work. The works promoted a more resilient landscape beyond the property scale.

In another example, CMA staff used initial site inspections on adjoining properties to engage other landholders in the area to maximise the landscape benefits of the investments. Works ranged from standard management practices – such as riparian fencing to restrict stock access – to more innovative works – such as constructing swales to slow water movement and retain it in the landscape.

In each of these cases, the activities focussed on changing farm management practices to build resilience at a property scale, and then expanding the activities to other properties to achieve larger scale impacts within sub-catchments.



Contour banks are strategically placed within a property to 'pond' surface water, promote vegetation growth, increase ground cover and reduce potential erosion. This activity can make the property more resilient to external shock such as drought. A more resilient property can allow a landholder more production options, for example, in response to fluctuating commodity prices. This activity will also promote the achievement of the soil and land-use, water, community and vegetation targets in region's CAP

3 Delivering projects that contribute to improved landscape function

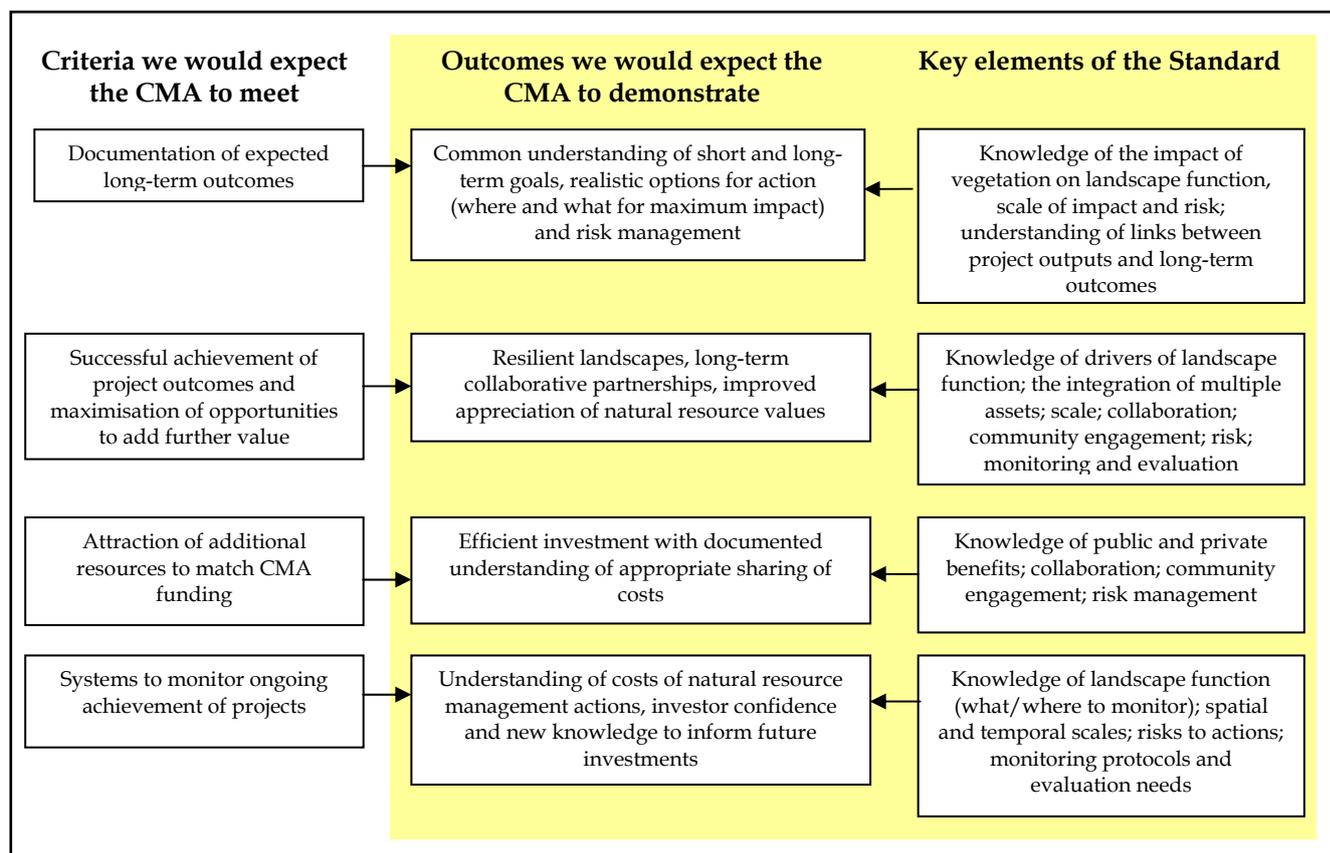
The audit's second line of inquiry assessed whether the CMA's vegetation projects are contributing to improved landscape function. CMAs should promote short-term improvements in the management of natural resources in their catchments that will contribute to long-term improvements in natural resource condition. To understand whether they are pursuing this aim in a way that meets the quality benchmarks set by the Standard, we assessed whether they were meeting four criteria. These were that the CMA:

- documents the expected long-term outcomes of projects it invests in
- is successfully achieving short-term project outcomes, and maximising further opportunities to add value
- is attracting additional resources to match its funding in projects
- has a system to monitor achievement of ongoing project outcomes.

As for all lines of inquiry, we also identified the elements of the Standard that are most relevant to meeting these criteria effectively, and the behaviours and other outcomes we would expect to see if the CMA is using those elements of the Standard. These are shown in Figure 3.1.

The sections below discuss each criterion, including why it is important and what our audit of the implementation of the Border Rivers-Gwydir CAP found in relation to it.

Figure 3.1: The framework the NRC used to assess whether the CMA was effectively delivering projects that contribute to improved landscape function



3.1 Documentation of expected long-term outcomes

Natural resource management is a long-term process, and it can take many years to achieve intended improvements in landscape function. In addition, our knowledge of natural systems and best practice in managing them continues to evolve, so natural resource managers need to continually adapt their actions to take account of new knowledge. The documentation of projects' expected long-term outcomes is important to help ensure projects stay on track over time. For example, it can help landholders and CMA field staff in continually managing towards those outcomes in the longer term as circumstances change.

The NRC's audit found that Border Rivers-Gwydir CMA had not consistently documented the expected project outcomes. CMA staff and stakeholders generally understood the expected long-term outcomes of the projects the CMA funded, and how particular programs of work targeted the CAP's expected long-term outcomes. However, the depth of staff's understanding varied between project areas, depending on their experience and training.

The CMA had considered the logical relationship between its selected activities and their expected contribution to longer term outcomes during the program or project development stage. However, it had not generally recorded this process on project files. The CMA had also used the expected contribution to long-term outcomes as a criteria for assessing individual on-ground works (using the PAT or Native Vegetation Assessment Tool³), but had not recorded this on all the files our audit team reviewed. The incompleteness of the CMA's project files creates a risk that understanding of projects' expected long-term outcomes won't be passed on to existing and future CMA staff and project participants.

Since the initial audit visit, the CMA has improved its standard project documentation, including by developing a Project Management Plan. It considers these improvements will help it improve project communication and management.

In respect to the Standard, the CMA:

- demonstrated a good understanding in the logic relationships between projects and their long-term expected outcomes (*Determination of scale*)
- could not demonstrate that it had documentation in place to ensure linkages between short and long-term outcomes could be consistently shared across the organisation (*Information management*).

3.2 Successful achievement of project outcomes

CMAs' projects need to successfully achieve short-term changes in the way natural resources are managed in their region to maintain credibility with their communities, and create confidence in their investors. However, as CMAs often engage with their communities on the community's terms (at least initially), they also need to seek opportunities to add greater value to the projects proposed by landholders or other stakeholders.

The NRC's audit found that Border Rivers-Gwydir CMA was successfully achieving most project outputs, were supported by strong logic assumptions and promoted improved resource

³ Formally known as the PVP Developer.

condition change at the project scale. However the CMA had not consistently taken up opportunities to build from those achievements.

The CMA had established direct, one-on-one relationships with landholders that are likely to be promoting project outcomes and a greater two-way understanding of NRM. Site inspections confirmed that the CMA had an accurate understanding of its projects' progress and achievements. However, while the CMA collected information on the achievement of project milestones (such as the completion of fencing or preparation of ground for revegetation), it was difficult to clearly track project performance through the CMA's record keeping and reporting databases - in general, this information was reported verbally by CMA project staff, but not recorded in all *project files*. The CMA considers that key staff vacancies had contributed to weaknesses in its records on, and reporting of project performance.

The CMA had successfully delivered performance reports to investors when requested. However, aspects of the CMA's performance reporting system that relied on verbal reporting may not be adequate to ensure accurate and meaningful records of present and future project achievements. The CMA reported performance to investors based on 'contracted outputs' for on-ground works, which may have varied from actual achievements to date. This variance was more significant where investments were made up-front. The performance reporting requirements of investors had also recently changed, increasing the risk of inconsistencies between the different bases of performance outputs reported.

While the CMA had substantially developed its business systems in the last three years, there were still weaknesses, including key staff vacancies. These weaknesses limit the CMA's ability to successfully achieve project outcomes, and the extent to which it can build from those achievements.

The CMA considers short funding cycles and NSW public sector requirements to commit and spend funds within a financial year could significantly impact achievement of CAP goals.

In respect to the Standard, the CMA:

- demonstrated it had built meaningful 'on-ground' relationships with project partners and improved their appreciation of natural resource values (*Community engagement and Collection and use of knowledge*)
- could not demonstrate it had systems in place to accurately report on and build from project achievement (*Information management*).

Box 3.1: Measuring achievements of outputs and outcomes through compliance monitoring

Monitoring achievements is an important component of natural resource management. Outcomes at the property, sub-catchment, regional and state-wide scales need to be effectively monitored to form a clear picture of the landscape and the drivers of change, learn from experience and manage adaptively and maintain accountability to investors.

Since 2005, all CMAs have been working with government agencies to develop catchment and state-wide monitoring processes. Border Rivers-Gwydir CMA is undertaking four benchmarking projects that will provide valuable data to inform its decision-making (See Box 5.1).

In addition, it has developed a 'compliance monitoring' approach to ensure that its project partners fulfil the terms of their contract with the CMA, and to measure outputs and monitor outcomes at a property scale. The CMA intends to implement the compliance monitoring approach through its incentive contracts and ongoing follow-up by project staff.

Our audit team inspected a project where the CMA was implementing this approach, in its development stage, at one particular project site. This project was the CMA's largest single investment in on-ground works, involving significant funding over a relatively large area of land. This, together with the experimental nature of the project (which involved planned carbon sequestration), accentuated the need for effective monitoring.

At the site, the CMA was working collaboratively with the landholder to rehabilitate a significant area of partly degraded grazing and cropping land to achieve a rational combination of protected natural vegetation, revegetated land, and fenced land where natural regeneration could occur. The landholder was seeking benefits in the form of carbon sequestration and sustainable timber yield, while the CMA was seeking to preserve and enhance native vegetation and improve water quality by reducing erosion. The project entailed risk to both the CMA and the landholder, and a system was established at the outset to clearly define the expected actions of both parties and to closely monitor the outcomes.

While our audit team was there, the CMA's compliance officer inspected milestone reports provided by the landholder, and verified the existence and quality of outputs and the maintenance of management actions before recommending that a progress payment be made. The landholder had established additional monitoring using GPS referenced sites for measurement of net carbon accretion and timber growth.

This compliance monitoring system provides the CMA and the landholder with an objective and transparent assessment of project outputs. Having a CMA compliance officer (who is not otherwise involved in the project) undertake the compliance inspections makes it easier for the CMA's case officer build a strong relationship with the landholder while ensuring accountability for the investor.

3.3 Attraction of additional resources

To make the most of the small amount of funding CMAs have to invest in their regions, they need to look for opportunities to attract matching funding. They also need to encourage private landholders to make ongoing in-kind contributions, as this promotes resource stewardship and can increase the likelihood of landholders remaining committed to the success of the project over time.

The audit team found that Border Rivers-Gwydir CMA was attracting additional resources to match CMA funding. However, the CMA's success in this varied between projects and programs.

The CMA estimated from its records that since its inception, it had attracted and valued additional contributions from project partners and other stakeholders that more than matched its direct investment. For example, in the period 2003-08 the CMA reported that it had invested a total of \$23.2 million, attracting an additional \$26.1 million from its project partners.

The CMA had set investment guidelines that limited the proportion of funding the CMA would provide for particular on-ground actions, and required landholders to make cash or in-kind contributions to match CMA funding. For example, with soil conservation projects, project partners are typically required to make cash contributions worth 50% to 70% of CMA funding.

The CMA recorded the value of landholders' cash and in-kind contributions in project contracts. In contracts with other partners, the in-kind contributions were less well described and therefore potentially less enforceable. Also, other less tangible contributions of landholders and other partners, such as knowledge and experience of the partner, were not clearly recognised and valued, potentially limiting the wider use of these contributions.

Some of the CMA's collaboration partners identified that weaknesses in its communication, approval processing times and feedback were a barrier to collaboration, and may therefore be limiting the contributions the CMA can attract. The CMA had not evaluated its performance in attracting additional resources, so could not be sure that it was attracting the maximum additional resources possible through collaboration.

In respect to the Standard, the CMA:

- demonstrated it had attracted additional resources to its investments (*Opportunities for collaboration*)
- demonstrated that it had mechanisms in place to identify additional resources, except for less tangible contributions, to help understand the appropriate sharing of costs (*Risk Management and Opportunities for collaboration*).

3.4 A system to track ongoing achievement of projects

Long-term projects to encourage resource stewardship need monitoring – particularly given the significant time lapses between investments and resulting improvements in resource condition, the gaps in our understanding of how to manage dynamic natural systems, and the unavoidable flux in social, economic and climatic conditions. Investors require reliable information that short-term targets have been met, and that progress towards longer term objectives is being made.

The NRC's audit found that Border Rivers-Gwydir CMA had systems and processes in places that had successfully monitored the ongoing achievements of some projects. For example, the Education and Conservation Farming Rebates Programs had systems in place for monitoring and reporting that may be suitable for wider application to all projects.

The CMA had established a draft M&E Plan and funded a *Works Inspector* position that may both contribute to ongoing project-level monitoring, but neither was being actively implemented at the time of the audit.

The audit found that on-ground works contracts typically included requirements that the collaboration partner maintain and monitor project achievements for a number of years (generally 15 years). Box 3.1 describes how the CMA was working with one partner to undertake such monitoring. However, monitoring data being collected by collaboration partners and landholders was not being collected and used by the CMA in a systematic way. Further, the CMA did not have a documented strategy for how it would resource monitoring or enforcement of these contract requirements.

In respect to the Standard, the CMA:

- could demonstrate some success in tracking progress of project achievement (*Monitoring and evaluation*)
- could not demonstrate a consistent approach to monitor and evaluate the on-going durability of its investments (*Monitoring and evaluation* and *Risk management*).

4 Community engagement

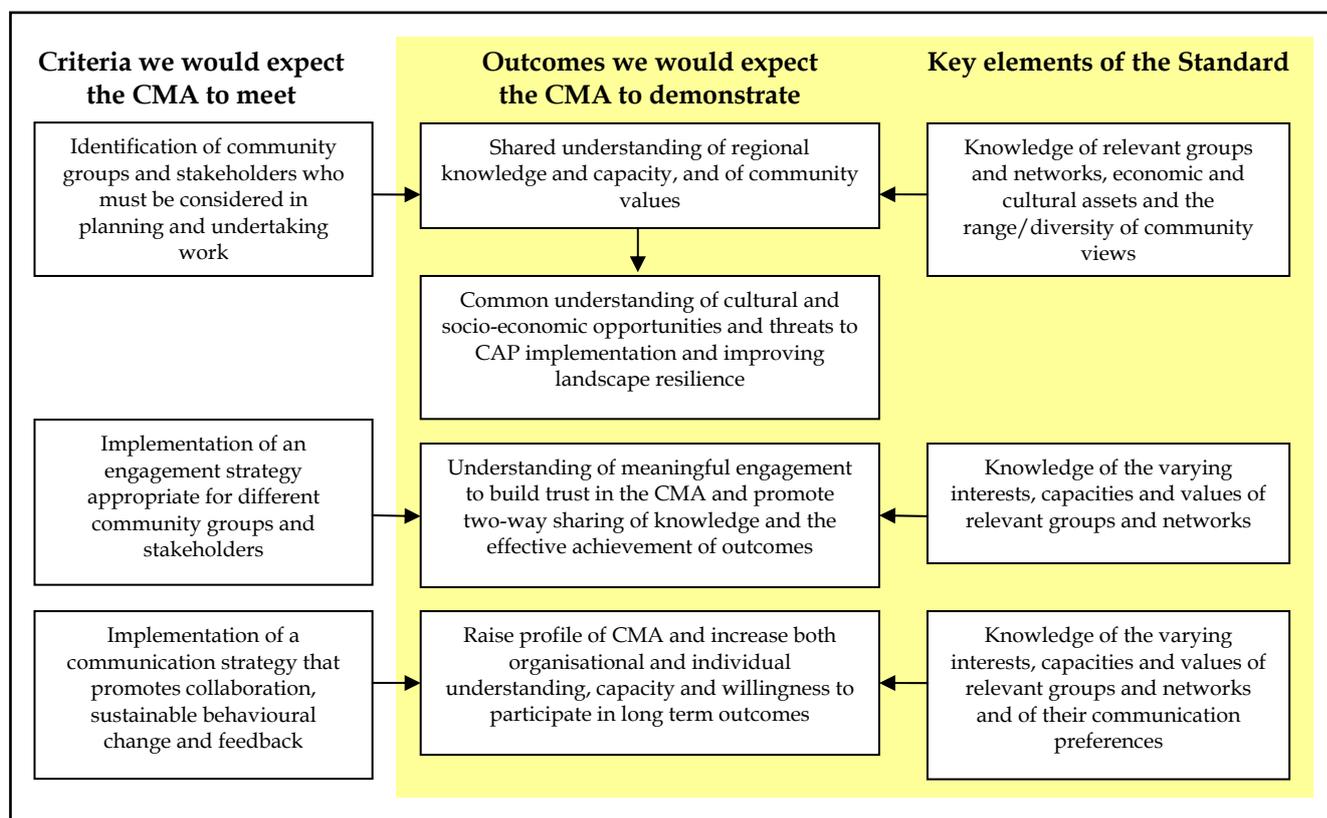
The NRC's third line of inquiry was whether the CMA is effectively engaging its communities. Given that 89 per cent of land in NSW is in private management, it is critical for CMAs to engage private landholders and other stakeholders who manage the natural resources on this land. This allows CMAs to access the local knowledge of their communities, and understand the values placed on the natural resource assets in their region. It also enables them to influence how natural resources on private land are managed, and to maximise the effectiveness of government investment in NRM by establishing collaborative partnerships with landholders and other stakeholders, and strengthening the capacity of their communities.

To assess this line of inquiry, we looked for evidence that the CMA:

- has identified the community groups and stakeholders it must consider in planning and undertaking its work
- is implementing engagement strategies appropriate for different community groups and stakeholders
- is implementing a communications strategy that promotes collaboration, sustainable behaviour change and feedback.

Each of these criteria is shown on Figure 4.1, along with the key elements of the Standard for meeting it effectively, and the CMA behaviour and other outcomes we would expect to see if the CMA was using those elements of the Standard.

Figure 4.1: The framework the NRC used to assess whether the CMA was effectively engaging its communities



The sections below discuss each criterion in more detail, including why it is important and what our audit found in relation to it.

4.1 Identification and analysis of community groups and stakeholders

A CMA's logical first step in engaging the community is to identify the key community groups and other stakeholders it must consider in planning and undertaking its work. To be effective, it also needs to understand these groups – for example, what they know about the natural resource assets and threats in the region, what is important to them, and to what extent they have the capacity to participate in NRM designed to improve landscape function. In addition, it needs to understand how these groups might present opportunities or pose threats to its ability to effectively implement the CAP and meet the catchment-level targets in the CAP. Developing and maintaining this kind of understanding requires systematic research and analysis.

The NRC's audit found that Border Rivers-Gwydir CMA had established a Communication Plan and procedures to help it identify community groups and stakeholders. The CMA had commissioned a Community Benchmark project that should help it continue to improve its Communication Plan.

While a plan was in place, it was not clear that the CMA was applying it across all engagement with its community. Also, the CMA's inability to recruit staff to lead communication and engagement had meant that many aspects of the Communication Plan had not been implemented.

The CMA had procedures in place to identify project-specific stakeholders through project planning, and prompted CMA-funded Landcare staff to identify key stakeholders. However, at the time of the audit, these procedures were not being implemented consistently.

The CMA had identified that Landcare was important to the landholders in the community and had developed ways in which it could take account of the views of Landcare networks in undertaking its work. The CMA's relationship with Landcare seemed to be improving and this was helping it increase its visibility in the community.

In respect to the Standard, the CMA:

- demonstrated a fundamental understanding of its community and the capacity of community groups to deliver NRM outcomes and the potential costs and benefits of any such collaboration (*Collection and use of knowledge*)
- demonstrated that it had collected knowledge to drive continual improvement (*Collection and use of knowledge*).

4.2 Appropriate engagement strategies for different community groups and stakeholders

Most regions of NSW include a variety of communities, community groups and other stakeholders which the CMA should consider in planning and undertaking its work. These groups have different knowledge and capacity for NRM, and value the region's natural resources in different ways. For example, they might include rural communities, farmers and graziers, urban communities, Landcare groups, mining companies, tourism operators, local councils, relevant government agencies and other government institutions.

To effectively engage these diverse groups, a CMA needs to use its understanding of each group to develop an appropriate strategy for productive engagement. This requires strategic thinking, risk management and processes to identify and fill knowledge gaps.

The audit found that Border Rivers-Gwydir CMA had developed and implemented some successful program and project-specific strategies, such as using established reference groups. Other engagement actions had not been working well but seemed to be improving.

The CMA's *Communication Plan* indicated it was linked to a range of engagement strategies – or 'mini-plans' (such as the Board Stakeholder Engagement Strategy and Education and Extension Strategy). However, the actual linkages between the 'mini-plans' were not evident in their implementation, and were not consistent with the Communication Plan.

The CMA's strategy for engaging the region's Aboriginal community was developing. For example, the CMA Board had established an Aboriginal Reference and Advisory Group that should enable the CMA to better reflect the Aboriginal community's values within its definition of landscape resilience, and may also attract additional (public) funding for CMA projects.

The CMA had found that direct approaches and personal contact were effective ways to engage individual landholders. The success of direct approaches to date may have been due to the CMA's staff having a good understanding of the community's views of the CMA and the programs it implements.

There were still some negative community perceptions about the CMA's role in implementing the state's native vegetation regulation, which is unpopular in the Border Rivers-Gwydir region. Under the *Native Vegetation Act 2003*, the CMA is the consent authority for native vegetation clearing approvals in the region. It assesses landholders' clearing applications using the Native Vegetation Assessment Tool (NVAT). If approval is granted, it develops a Property Vegetation Plan (PVP) for the landholder's property. It can also develop PVPs (using the NVAT) to engage stakeholders and deliver incentive funding. However, given the negative community views about the native vegetation regulation, it has decided not to use this engagement approach.

The CMA had identified project-specific stakeholders during the conceptual development of some projects (and recorded these in the project concept documentation), and during the implementation of projects. The CMA had had some success in using this work to improve engagement. For example, its progressive identification of appropriate potential participants in the Farm Management Systems Program had led to good uptake of the program and engagement with landholders.

The CMA appeared to be improving engagement with Landcare, and by extension the broader community. By engaging through Landcare networks, the CMA seemed to be improving engagement with those landholders who would not have dealt directly with it (some due to the negative perception of its role in native vegetation regulation explained above). The CMA had joined with Northern Rivers CMA to co-fund Community Support Officer (CSO) positions in Landcare networks and was using these staff to improve relationships.

Overall, the CMA's engagement with the better organised community groups seemed to be achieving improved results. However, some stakeholders expressed frustration with the CMA's administrative systems and this had deterred them from pursuing further collaboration with the CMA.

In respect to the Standard, the CMA:

- demonstrated that it was developing engagement networks with a range of relevant and interested community groups and individuals (*Collection and use of knowledge and Community engagement*).

Box 4.1: Engaging the community through property planning

CMA's need to engage their communities in order to promote attitudinal change and encourage the adoption of changed management practices. Each region's community includes numerous groups with a diverse range of interests, and each CMA is responsible for identifying the key groups and developing and implementing effective engagement strategies that will ensure the achievement of catchment and state-wide targets in its region.

A key approach Border Rivers-Gwydir CMA has used to improve natural resources in the region is to engage its community through property planning in a sub-catchment context. The CMA's Farm Management System Project (FMS) allocated \$1.6 million over 5 years to engage landholders and promote property planning.

The CMA undertook strategic analysis to ensure the FMS targeted sub-catchments where there were serious environmental issues and a poor record of landholder engagement. Key factors considered included the:

- condition of the sub-catchment and the extent to which the condition could be improved through application of improved farm management
- location of communities where there was a record of poor farmer engagement with the CMA
- willingness of key community leaders to participate in the program and use their properties for demonstration purposes
- identification of sufficient landholders willing to participate and adopt changed management practices.

The CMA undertook property planning in collaboration with the landholder and external contractors through a six-day training workshop. The CMA also developed tailored workshops for the region's Aboriginal communities. The CMA had key components of the workshop peer reviewed, and they are being incorporated into agricultural courses conducted at a local university.

The initial target was to train 300 farmers, representing management of approximately 500,000 ha. However, the demand was higher than estimated and, at the time of the audit, 550 farmers had undertaken FMS training.

In response to the training, increasing numbers of farmers were choosing to implement changed management practices at their own cost, independent of incentive funding. This suggests the project has been successful in assisting to convert awareness of improved management into adoption and is contributing to changes in community perceptions.

4.3 Communication promoting collaboration, behavioural change and feedback

CMAs are also required to lead their diverse communities in understanding natural resource management. To do this, they need sophisticated approaches to communicating their messages, and for hearing and responding to the messages sent by communities. To capture the attention of diverse stakeholders such as Aboriginal communities, landholders, industry sectors, and urban and environmental organisations, their communication strategies need to reflect the varied values of their communities. This broad focus also helps to attract the widest possible funding and support across the region.

The NRC's audit found that Border Rivers-Gwydir CMA was communicating well with some groups in the community and there was evidence that this communication was promoting collaboration and behavioural change.

The CMA had a wide range of approaches for communicating with community groups but these were not driven by its Communications Plan, nor did they appear to be strategically focused.

Some landholders and external stakeholders indicated that feedback from the CMA was insufficient or too late. This may be due to a lack of CMA-wide systems that provide ongoing communication, such as downstream feedback to encourage an iterative approach to project implementation 'in the paddock'.

The CMA's systems for communicating with local councils and state government agencies did not appear to be promoting collaboration. Stakeholder feedback indicated that a potential collaboration project had been hampered by a lack of communication from the CMA regarding delays to the project.

In respect to the Standard, the CMA:

- demonstrated it had developed communication networks and tools with community groups to increase both individual and organisational capacity and the communities' willingness to participate in long-term outcomes (*Collection and use of knowledge and Community engagement*)
- could not demonstrate that it was implementing an explicit approach or strategy to increase the communities' ability to contribute to the CMA's long-term goals (*Collection and use of knowledge and Community engagement*).

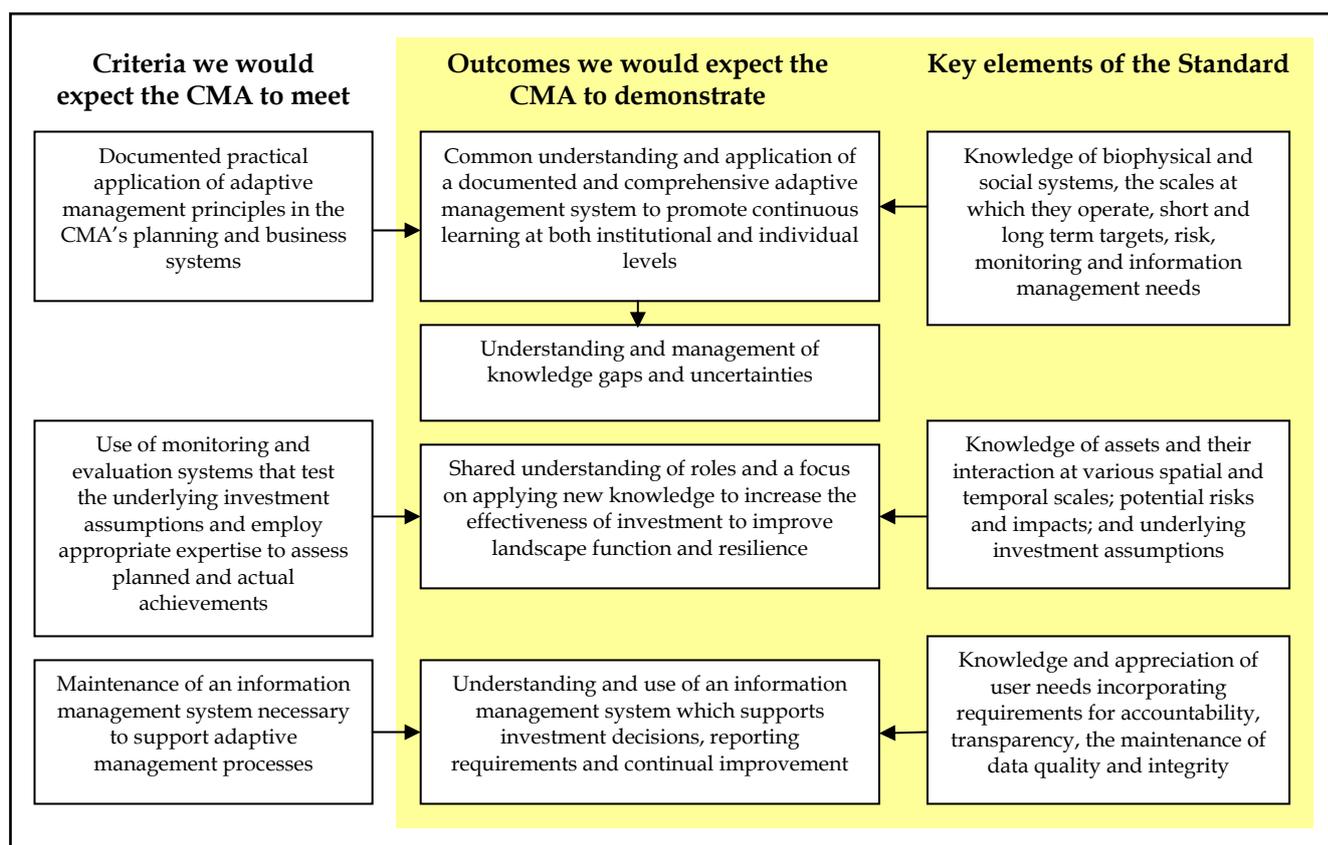
5 Effectively using adaptive management

In the fourth line of inquiry, the NRC assessed whether the CMA was effectively using adaptive management. It looked at whether the CMA:

- had documented the practical application of adaptive management principles to its planning and business systems
- had monitoring and evaluation systems that test its underlying investment assumptions and use appropriate experts to assess planned and actual achievements
- maintained information management systems necessary to support the adaptive management process.

Each criterion is shown on Figure 5.1, together with the elements of the Standard that are most relevant to meeting it effectively, and the CMA behaviour and other outcomes we would expect to see if the CMA is using these elements of the Standard.

Figure 5.1: The framework the NRC used to assess whether the CMA was effectively using adaptive management



The sections below discuss each criterion in more detail, including why it is important and what our audit found in relation to it.

5.1 Adaptive management principles in planning and business systems

Adaptive management is 'learning by doing'. It is a structured, iterative process of decision-making that is intended to gradually reduce uncertainty and improve performance through monitoring, evaluation and response. It adds transparency and accountability to decision-making and the allocation of resources, while providing a framework for learning and ongoing improvement.

At a practical level, it is important that CMAs document, within their planning and business systems, how staff can apply adaptive management principles. This will help ensure their staff and collaborators can readily apply those principles in the many, diverse circumstances in which they work.

The NRC's audit found that Border Rivers-Gwydir CMA had documented its adaptive management approach in the CAP. It describes how it intends to improve the CAP over time. The CMA had some systems that applied adaptive management principles and approaches. However, factors such as long-term staff vacancies and the lack of monitoring and evaluation data were hampering its ability to adaptively learn and develop CMA programs.

The CMA had established a formal internal audit system, and internal audit reports provided a suitable feedback loop to the Board to allow adaptive management of operational risks. The scope of the Finance and Audit Sub Committee of the Board extended to strategic risks, and the CMA's response to changed external funding risk (amending its investment priorities) demonstrated adaptive management. However, the CMA had suspended its internal audit function when several Board positions became vacant as it considered it could not make binding decisions without an appropriate quorum.

The CMA had not been able to bring to bear the best-available information in a structured way when setting its NRM priorities, largely because it has insufficient M&E information. Its efforts to establish an operating M&E system had not yet been successful.

In its operations, the CMA used the Standard for program and project design but this did not extend to all projects. Awareness of adaptive management principles varied across CMA staff, and was generally stronger among staff with significant NRM experience. It was not apparent that the CMA had provided training to staff in adaptive management. The CMA indicated that vacancies in key operational staff positions had hampered it in building and sharing knowledge.

The CMA had established some performance reporting systems. These were not consistent across programs, and included verbal reporting processes. This weakened their usefulness for adaptive learning. In addition, some CMA staff and Board members did not seem to clearly understand how the information from the systems was used to adaptively manage CMA activities.

In respect to the Standard, the CMA:

- could not demonstrate a clear and consistent vision in how adaptive management will drive continual improvement in the organisation to meet internal and external needs (all components of the Standard).

5.2 Monitoring and evaluation system

To effectively apply adaptive management principles, CMAs' programs need to be designed and delivered in ways that facilitate structured learning. For example, investment programs need to record what changes to defined indicators are expected to result from the management actions within the program. Only then can CMAs undertake quantitative monitoring of these actions, and evaluate how successful they were in producing the expected changes.

It is not enough for a CMA to monitor and evaluate whether its projects have delivered the expected outputs (e.g., that the expected quantity of native grasses were planted, or that the expected kilometres of fencing was installed). It also needs to test whether or not the assumptions about how each management action would lead to changes in landscape function were correct and so resulted in these changes (e.g., whether fencing and revegetation of a riparian zone resulted in improved water quality and riverine ecosystem health). In addition, the CMA needs to use experts with appropriate skills and knowledge in assessing its planned and actual results. This will allow it to apply new knowledge – gained from the monitoring and evaluation process and other sources – to increase the effectiveness of ongoing and future projects in improving landscape function and resilience.

The NRC's audit found that Border Rivers-Gwydir CMA had a draft Monitoring and Evaluation (M&E) Plan that had taken several years to develop, was incomplete and impacting the CMA's ability to apply sound adaptive management. The CMA had not made finalising and fully implementing the M&E Plan a high priority.

The CMA had several projects underway that were designed to fill significant gaps in baseline knowledge about the natural resources and community attitudes in the region. On-ground activities were generally selected because they were based on sound science.

The Board and staff recognised the inadequacy of the CMA's current M&E systems and performance and had begun to address some issues. For example, it had contracted with other agencies to develop benchmarks and baselines in the areas of biodiversity, soils, riverine health and community attitudes at the sub-region scale. However, the CMA indicated that it had experienced difficulty in recruiting M&E staff, and had been further hampered by delays in the delivery of M&E programs by government agencies.

The CMA's Education Program was an example of strong records management that enabled reporting on outputs and monitoring of outcomes. CMA staff in other projects did not always understand how project outputs and site monitoring linked to expected outcomes and the draft M&E Plan.

In respect to the Standard, the CMA:

- could not demonstrate that it had a consistent approach to monitoring and evaluating its investments (*Monitoring and evaluation* and *Risk management*).

5.3 Information management systems that support adaptive management

CMAs need relatively sophisticated information management systems to support adaptive management. For example, these systems need to keep track of the changes in landscape function expected as a result of the management actions within a project, and provide ready access to this and other necessary information when the project is being evaluated and decisions on improving its effectiveness are being made. These systems also need to keep track of new knowledge that is derived from the monitoring and evaluation process and other sources, so this can be used in making decisions.

The NRC's audit found that Border Rivers-Gwydir CMA's information management system was poorly integrated and supported only some operational decision-making with performance data. Financial management and reporting to investors was meeting users needs, but this did not support other adaptive management processes such as feedback loops within the CMA and with project partners.

When CMAs were established they had to develop and implement the information systems necessary to support their business. Unlike some other CMAs, Border Rivers-Gwydir inherited no information base so had to develop and implement a range of new systems. These include SAP and the NVAT (which are supported by government agencies) and several systems it developed in-house. At the time of the NRC's initial audit work, the CMA had begun to design a Master Database, a new component of its information management system (See Box 5.1).

The audit team found that the quality of records management varied across projects, and information management was generally poor. It appeared that this was due to inadequate technical skills, staff turnover and vacancies, reliance on verbal reporting and a combination of electronic and hard copy record systems.

Since the initial audit visit, the CMA had made ongoing improvements to its information management systems. This included progress in developing the Master Database and implementing document management software (Objective). There was also evidence of more effective records management on newer programs, such as through Project Management Plans.

In respect to the Standard, the CMA:

- demonstrated it had implemented information management that met some of the needs of the CMA and external parties (*Monitoring and evaluation*)
- could not demonstrate that it had a plan in place to integrate its information systems to better support investment decisions and promote continual improvement (*Information management, Monitoring and evaluation and Risk management*).

Box 5.1: Information Management – Building an information system

Where some CMAs inherited staff, systems, information and infrastructure from former entities and agencies, others had to build their systems from the ground up.

Border Rivers-Gwydir CMA was among the latter. When it was established, it found that it had little quality data to draw on in building its understanding of the region and few information management systems to underpin its decision making.

To address this situation, it has collaborated with government agencies and external parties to undertake a series of benchmarking projects and develop and implement a range of information management systems.

Benchmarking projects now underway include the:

- Benchmark Community Attitudes and Awareness Study with the Bureau of Rural Sciences, to assess current community attitudes and support ongoing community engagement
- Developing Essential Resources in Salinity, Soil and Sustainable Land Use project with the DECC, to collate existing information relating to soils across the region and generate new data to support informed decision making
- Monitoring and Evaluation Project with the DECC, to design a monitoring program and generate baseline data to underpin performance monitoring in the areas of terrestrial biodiversity, soil condition and riverine condition
- Mapping of High Conservation Value (HCV) Vegetation and Areas for Re-establishment project with the DECC, to enable the CMA to better target investment, map riparian vegetation and prioritise the re-establishment of native vegetation across the catchment.

CMAs need relatively sophisticated information management systems to track of the changes in landscape function expected as a result of the management actions within a project, and provide ready access to this and other necessary information when the project is being evaluated and decisions on improving its effectiveness are being made. These systems also need to manage new knowledge that is derived from a range of sources including the data acquisition projects.

The Border Rivers-Gwydir CMA has developed some systems in-house and acquired others through agency agreements in its endeavour to build a comprehensive information management system. The systems it has developed includes:

- The Project Assessment Tool (PAT), which is a decision support tool. It is designed to provide transparency and accountability, and attempts to balance a large number of factors considered during the project assessment stage. These factors included an assessment of multiple benefits across themes, elements of property planning, a catchment focus and a broad range of vegetation, land use and management scenarios.
- The Master Database, which maintains the record of all contracted project activities and links commitments to the financial management records maintained in the financial management system (SAP). The database was developed in Microsoft Access and has enable the CMA to effectively manage its commitments and avoid the problems faced by some other CMAs during the 2007/08 period of maximum expenditure.
- The Training and Education Database (TED), which was developed to maintain an effective record of participants undertaking training and attending seminars and information days, and to record feedback provided on course evaluation forms.

Attachment 1 Conclusions, suggested actions and CMA response

This Section provides a table summarising conclusions of our audit of the implementation of the Border Rivers-Gwydir CAP, the actions we suggested the CMA take to improve this implementation and a summary of Border Rivers-Gwydir CMA's response to these suggested actions. The NRC expects the CMA Board to monitor the completion of these actions and may review these activities in future audit work.

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
Line of inquiry 1 - Prioritising investments to promote resilient landscapes		
<p><i>Criterion 1.1: Commonly understood definition of resilient landscapes</i></p> <ul style="list-style-type: none"> ▪ The CAP clearly outlined a vision for the region and the CMA's operational approach that together, contain many elements that define a functional and resilient landscape for the region. The CMA Board and staff did not demonstrate a common understanding of these elements of definition, or of the CMA's role in realising the vision. 	<p>The NRC suggests that the CMA take the following action:</p> <ol style="list-style-type: none"> 1. Refine the CMA's understanding of resilient landscapes and clearly document this so that it can be consistently communicated to the staff and the community. 	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA has advised that it has put in place a process to review its current strategic plan.</p> <p>As part of the CAP review process, the BR-G CMA will further develop our understanding of what constitutes a resilient landscape in the BR-G CMA catchment.</p> <p>Border Rivers-Gwydir CMA will complete this action by June 2010.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 1.2: A system for ranking investment options</p> <ul style="list-style-type: none"> ▪ The CMA had established a robust, transparent and repeatable procedure that assessed investment options at the project scale against established criteria. It had developed a tool for assessing proposed projects on the basis of their contribution to multiple NRM outcomes. However, the effective implementation of the procedure was weakened by the immature and fragmented nature of the CMA's business systems. ▪ At the time of the initial audit work, the CMA had four major projects underway to fill significant gaps in baseline knowledge about the natural resources in the region. These projects covered biodiversity, soils, riparian vegetation and community attitudes. ▪ Since the NRC's initial audit visit, the CMA has implemented approaches that the NRC considers will give the CMA a more strategic and targeted approach to its investments. 	<p>The NRC suggests that the CMA take the following action:</p> <ol style="list-style-type: none"> 2. Review the CAP to include this refined understanding of resilient landscapes and apply advancements made in asset identification and spatial prioritisation. 	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will use information, knowledge and understanding gained from recently acquired baseline and benchmark data to inform the CAP review process and future investment prioritisation.</p> <p>Border Rivers-Gwydir CMA will complete this action by June 2010.</p>
	<ol style="list-style-type: none"> 3. Consider publicising the priority sub catchment mapping as an addendum to the CAP until the planned CAP review is completed. 	<p>The Border Rivers-Gwydir CMA agrees with the intent of the NRC's suggested action.</p> <p>The CMA will publicise its priority sub-catchment mapping in a format considered appropriate to the target audience.</p> <p>Border Rivers-Gwydir CMA will complete this action by July 2009.</p>
	<ol style="list-style-type: none"> 4. Apply the knowledge flowing from benchmarking projects to the prioritisation process and day to day natural resource management by field staff. 	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA has advised that it has applied recently acquired baseline and benchmark data in its prioritisation process for 2009-10 investment.</p> <p>Border Rivers-Gwydir CMA will complete this action by December 2009. The CMA notes knowledge transfer is a continual action.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 1.3: A system that ensures consistent short-and long-term investment priorities</p> <ul style="list-style-type: none"> ▪ The CMA used its project assessment procedure to ensure consistency between short and long-term investments. However, the lack of timely reporting potentially impacted on their ability to maximise this consistency. 	<p>The NRC suggests that the CMA take the following action:</p> <ol style="list-style-type: none"> 5. Improve reporting of performance information from project level to Board (and externally), to improve short-term prioritisation decisions. 	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will improve its formal progress reporting to the board (on a priority sub-catchment program basis) by introducing formal quarterly reporting.</p> <p>Border Rivers-Gwydir CMA will complete this action by September 2009.</p>
Line of inquiry 2 - Delivering projects that contribute to improved landscape function		
<p>Criterion 2.1: Documentation of expected long-term outcomes</p> <ul style="list-style-type: none"> ▪ The CMA had not consistently documented the expected project outcomes. However, staff responsible for delivering projects generally understood the expected long-term outcomes of their project, as did most of the partners and landholders involved with the project. ▪ Since our initial audit visit, Border Rivers-Gwydir CMA has improved its standard project documentation, including developing a Project Management Plan, and considers this will help it improve its project communication and management. 	<p>The NRC suggests that the CMA take the following action:</p> <ol style="list-style-type: none"> 6. Continue to develop project documentation to help communicate with project partners how projects contribute to specific expected long-term project outcomes. 	<p>The Border Rivers-Gwydir CMA agrees with the intent of the NRC's suggested action.</p> <p>The CMA will investigate options for improving the communication of expected long-term outcomes from projects contracted to individual landholders and third-parties.</p> <p>Border Rivers-Gwydir CMA will complete this action by July 2009.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 2.2 : Successful achievement of project outcomes</p> <ul style="list-style-type: none"> ▪ The CMA was successfully achieving project outputs, but weaknesses in its reporting system reduced the accuracy and usefulness of its records of project achievements. ▪ Ongoing vacancies in key coordination positions had weakened reporting processes and enhanced the need for strong reporting systems. 	<p>The NRC suggests that the CMA take the following action:</p> <p>7. Improve reporting of performance information from project level to Board (and externally), to improve accountability and better identify opportunities to build further from project achievements.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will continue to develop its Master Database and install IMPS (in SAP) to promote the automation of project output reporting to the Board and other external bodies.</p> <p>Border Rivers-Gwydir CMA will complete this action by July 2009.</p>
	<p>8. Urgently fill the vacant coordination positions (e.g. <i>Catchment Coordinators</i>) to strengthen operational management.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will continue to attempt to fill the positions.</p> <p>The CMA notes it has been attempting to recruit these positions for the last 3 years.</p> <p>Border Rivers-Gwydir CMA will complete this action by September 2009.</p>
<p>Criterion 2.3: Attraction of additional resources</p> <ul style="list-style-type: none"> ▪ The CMA had attracted significant additional resources to match investor funding, but the extent varied between projects and programs. ▪ The CMA had not identified and valued some less tangible contributions, such as additional technical expertise attracted through collaboration. 	<p>The NRC suggests that the CMA take the following action:</p> <p>9. Improve CMA systems that recognise, value and monitor the additional resources attracted to match CMA funding.</p>	<p>The Border Rivers-Gwydir CMA agrees with the intent of the NRC's suggested action.</p> <p>The CMA notes that it has attempted to avoid any artificial inflation of their leverage value. CMA systems only record and account for tangible, measurable in-kind contributions from partners.</p> <p>The CMA recognises that its systems could be expanded to record and account for other types on in-kind contributions such as on-going monitoring and evaluation.</p> <p>Border Rivers-Gwydir CMA will complete this action by July 2009.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 2.4: A system to track ongoing achievement of projects</p> <ul style="list-style-type: none"> ▪ The CMA had implemented systems and processes that had successfully monitored the ongoing achievements of some projects. ▪ The CMA had established a draft M&E Plan that may contribute to ongoing project-level monitoring, but was being actively implemented at the time of the audit. 	<p>The NRC suggests that the CMA take the following action:</p> <p>10. Complete the development of a comprehensive M&E Strategy incorporating all project level data and ongoing project monitoring.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will finalise the M&E Strategy.</p> <p>Border Rivers-Gwydir CMA will complete this action by September 2009.</p>
Line of inquiry 3 - Effectively engaging its community		
<p>Criterion 3.1: Identification and analysis of community groups and stakeholders</p> <ul style="list-style-type: none"> ▪ Border Rivers-Gwydir CMA had clearly identified key community groups and stakeholders in its Communications Plan, and had developed approaches for considering the views of these groups in planning and undertaking its work. It had also established systems to help identify other community groups and stakeholders. ▪ However, the Communications Plan and systems had not been implemented consistently, and the staff position responsible for implementation had been vacant for most of the time since the Plan was adopted. 	<p>The NRC suggests that the CMA take the following action:</p> <p>11. Review the Communications Plan to incorporate new knowledge.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will review and update the Communications Plan.</p> <p>Border Rivers-Gwydir CMA will complete this action by October 2009.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 3.2: Appropriate engagement strategies for different community groups and stakeholders</p> <ul style="list-style-type: none"> ▪ Some CMA engagement approaches, such as direct engagement with landholders, had been successful. However, engagement approaches for other groups in the community – such as Landcare, local government and the region’s Aboriginal community – were still developing. ▪ The CMA’s Communications Plan was intended to link to a range of engagement strategies (or ‘mini-plans’) and was aimed at building awareness and encouraging adoption of NRM practices. However, actual linkages between the existing engagement strategies were not clear or consistent with the Communications Plan. 	<p>The NRC suggests that the CMA take the following action:</p> <p>12. Review and refine the Communications Plan as a consistent framework and establish clear linkages to the various targeted strategies that fit within it.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC’s suggested action.</p> <p>The CMA will review and update the Communications Plan.</p> <p>Border Rivers-Gwydir CMA will complete this action by October 2009.</p>
	<p>13. Review and refine the mini plans to ensure they are consistent with the Communications Plan.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC’s suggested action.</p> <p>The CMA will review and update the Communications Plan.</p> <p>Border Rivers-Gwydir CMA will complete this action by October 2009.</p>
<p>Criterion 3.3: Communication promoting collaboration, behavioural change and feedback</p> <ul style="list-style-type: none"> ▪ There was evidence that the CMA’s communication had promoted collaboration and behavioural change. For example, it had helped establish collaboration with some local and state government agencies. ▪ Some landholders and external stakeholders indicated that feedback from the CMA was insufficient or too late. 	<p>The NRC suggests that the CMA take the following action:</p> <p>14. Resource the implementation of the Communications Plan to maintain the systems that support consistent CMA-wide communication and feedback.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC’s suggested action.</p> <p>Border Rivers-Gwydir CMA will complete this action by July 2009.</p> <p>The CMA has advised that they have recently advertised for a Communications Officer.</p>
	<p>15. Improve processes that encourage feedback from community groups and stakeholders that could help the CMA to plan and undertake work.</p>	<p>The Border Rivers-Gwydir CMA agrees with the NRC’s suggested action.</p> <p>The CMA will address this issue when it reviews the Communications Plan.</p> <p>Border Rivers-Gwydir CMA will complete this action by October 2009.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
Line of inquiry 4 - Effectively using adaptive management		
<p>Criterion 4.1: Adaptive management principles in planning and business systems</p> <ul style="list-style-type: none"> ▪ The CMA had documented its adaptive management approach in the CAP, describing how it intends to improve the CAP over time. ▪ The CMA had some systems that applied adaptive management principles and approaches. However, factors such as long-term staff vacancies and the lack of monitoring and evaluation data were hampering its ability to adaptively learn and develop CMA programs. 	<p>The NRC suggests that the CMA take the following actions:</p> <p>16. Resume the development and implementation of internal audit processes and prepare an Internal Audit Plan for 2009/10.</p>	<p>The Border Rivers-Gwydir CMA agrees with the intent of the NRC's suggested action.</p> <p>The CMA notes it has an Internal Audit Policy (and associated procedures) and a process for incorporating feedback on business systems and operating procedures.</p> <p>The CMA has completed this action.</p>
<p>Criterion 4.2 :Monitoring and evaluation system</p> <ul style="list-style-type: none"> ▪ The CMA had a draft Monitoring and Evaluation (M&E) Plan that had taken several years to develop, was incomplete and impacting the CMA's ability to effectively adaptive management. The CMA had not made finalising and fully implementing the M&E Plan a high priority. ▪ The CMA has had difficulty in recruiting staff for the M&E Officer position, and was also hampered by delays in M&E support promised by government agencies. 	<p>17. Conduct training for Board and staff in how to apply adaptive learning principles and approaches.</p>	<p>The Border Rivers-Gwydir CMA agrees with the intent of the NRC's suggested action.</p> <p>Border Rivers-Gwydir CMA will complete this action by June 2010.</p>
	<p>The NRC suggests that the CMA take the following actions:</p> <p>18. Complete the development of a comprehensive M&E Strategy incorporating performance (output) and natural resource condition data from the project to the catchment scale.</p>	<p>Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA will finalise the M&E Strategy.</p> <p>Border Rivers-Gwydir CMA will complete this action by September 2009.</p>
	<p>19. Resource the coordination of the M&E Strategy to ensure collection, evaluation and reporting of data, to better improve CAP implementation performance.</p>	<p>Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>Border Rivers-Gwydir CMA will complete this action by September 2009.</p>

CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p>Criterion 4.3: Information management system that supports adaptive management</p> <ul style="list-style-type: none"> ▪ The CMA's information management system was poorly integrated and supported only some operational decision-making with performance data. However, unlike other CMA's, it had not inherited systems from previous NRM bodies in the region, explaining the immaturity of its information management system. ▪ Since the initial audit visit, the CMA had continued made ongoing improvements to its information management systems. 	<p>The NRC suggests that the CMA take the following actions:</p> <p>20. Develop a strategy to integrate the information management systems to ensure the flow of information meets the needs of CMA decision makers.</p>	<p>Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>Border Rivers-Gwydir CMA will complete this action by August 2009.</p> <p>The CMA notes that, along with other CMAs, it has been constrained by weaknesses in the capacity of financial management and reporting systems provided by third parties.</p>
	<p>21. Prepare a plan for the implementation of the Land Management Database (LMD) to ensure effective integration with existing systems.</p>	<p>Border Rivers-Gwydir CMA agrees with the NRC's suggested action.</p> <p>The CMA has advised that it has engaged an external contactor to commence implementing the Land Management Database.</p>

Attachment 2 About this audit

Audit mandate The NRC is required to undertake audits of the effectiveness of the implementation of (CAPs) in achieving compliance with those state-wide standards and targets as it considers appropriate.⁴

The NSW Government has adopted an aspirational goal to achieve resilient landscapes that support the values of its communities.⁵ It intends to achieve this by encouraging natural resource managers, such as each Catchment Management Authority (CMA), to make high quality decisions, focused through a coherent set of targets.⁶ The NSW State Plan⁷ establishes the state-wide targets for natural resource management (NRM).

CMAs have developed Catchment Action Plans (CAPs) that express how each specific region can contribute to the aspirational goal and the State-wide targets. The Border Rivers-Gwydir *Catchment Action Plan*⁸ identifies the key natural resource issues (or themes) that need to be managed in the region, including biodiversity, aquatic health, soil and estuarine health. Within each of these themes, the CMA has identified:

- resource condition targets, for longer-term improvements in resource condition that will contribute to achievement of the state-wide targets
- management targets, which identify shorter-term investment priorities, such as specific sub-catchments or particular types of projects, that will contribute to achievement of the resource condition targets.

Audit objective This audit assessed the effectiveness of Border Rivers-Gwydir CMA in promoting resilient landscapes that support the values of its communities, within the scope of the CAP.

Border Rivers-Gwydir CMA is now implementing the CAP, through a mix of programs and projects that simultaneously contribute to more than one management target, and more than one resource condition target. Many of these integrated programs and projects use vegetation to enhance landscape function, to lead to the aspirational goal of resilience.

Lines of inquiry In order to assess the effectiveness of CMA work, the NRC sought to answer the following questions:

1. Is the CMA effectively prioritising its investments to promote resilient landscapes that support the values of its communities?
2. Are the CMA's vegetation projects contributing to improved landscape function?
3. Is the CMA effectively engaging its communities?

⁴ *Natural Resources Commission Act 2003, Section 13 (c)*

⁵ As recommended by the NRC in *Recommendations – State-wide standard and targets, September 2005*.

⁶ *Ibid.*

⁷ See Priority E4 in, NSW Government (2006) *A new direction for NSW, NSW Government State Plan*, November 2006

⁸ Border Rivers-Gwydir Catchment Management Authority, 2007

4. Is the CMA effectively using adaptive management?

The NRC identified that these four key aspects of CMA work should strongly influence effectiveness in achieving resilient landscapes and promote maximum improvement for Border Rivers-Gwydir CMA at this stage in their development.

The NRC structured its analysis of audit evidence to be able to report on these lines of inquiry.

Audit criteria To help report on each line of inquiry, the NRC used the criteria identified below in Table 1, the audit plan summary.

These criteria address:

- expected documentation of the particular key aspect of CMA work
- expected implementation of plans and decisions
- expected evaluation and reporting of the performance of the CMA work.

The criteria were derived from the elements of each line of inquiry, and from the general criteria of the Standard and state-wide targets.

The NSW Government adopted the *Standard for Quality Natural Resource Management* (the Standard), which identifies seven components that are commonly used to reach high quality natural resource decisions. CMAs must comply with the Standard⁹, using it as a quality assurance standard for all planning and implementation decisions.

Audit scope As a sample of the entire range of NRM investments, the audit report was focused on CMA programs and projects that use vegetation to improve landscape function.

The NRC considered this to be the appropriate focus as vegetation remains a key tool for CMAs to use to achieve integrated NRM outcomes. This is due to a number of factors, including the lack of certainty in the management framework for other aspects of NRM such as water.

As most NRM programs and projects contribute to more than one NRM target, the NRC expects audited projects to also contribute to other targeted outcomes, such as river health and threatened species. The NRC audit sought to audit the effectiveness of these contributions as they arise.

Audit methodology To plan and conduct this audit, the NRC audit team followed the methodologies set out in the *Framework for Auditing the Implementation of Catchment Action Plans*, NRC 2007.

Acknowledgements The NRC gratefully acknowledges the cooperation and assistance provided by the Border Rivers-Gwydir CMA and landholders in the Border Rivers-Gwydir region. In particular we wish to thank the Chair, Mr Bob Crouch, General Manager, Lisa Roberts, and other CMA Board members and staff who participated in interviews, provided information and accompanied the audit team on site inspections across the region.

⁹ Section 20 (c), *Catchment Management Authorities Act, 2003*

Table 1. Audit plan summary

Line of Inquiry 1	Is the CMA effectively prioritising its investments to promote resilient landscapes that support the values of its communities?
This line of inquiry was tested against the following criteria:	
Criterion 1.1	The CMA has a commonly understood definition of what constitutes resilient landscapes in their region.
Criterion 1.2	The CMA has a system that ranks investment options, which incorporates factors including scientific and local knowledge, socio-economic information, community and investor preferences, leverage of investment and multiple CAP target achievement.
Criterion 1.3	The CMA has a system that ensures short and long term investment priorities are consistent with each other and integrated with other planned NRM targets.
Line of Inquiry 2	Are the CMA's vegetation projects contributing to improved landscape function?
This line of inquiry was tested against the following criteria:	
Criterion 2.1	The CMA has documented expected long-term project outcomes.
Criterion 2.2	The CMA is successfully achieving project outcomes, and maximising opportunities to add further value.
Criterion 2.3	The projects are attracting additional resources to match CMA funding.
Criterion 2.4	The CMA has a system to monitor ongoing achievements of projects.
Line of Inquiry 3	Is the CMA effectively engaging its communities?
This line of inquiry was tested against the following criteria:	
Criterion 3.1	The CMA has identified community groups and stakeholders it must consider in planning and undertaking work.
Criterion 3.2	The CMA is implementing an engagement strategy appropriate for different community groups and stakeholders.
Criterion 3.3	The CMA is implementing a communication strategy that promotes collaboration, sustainable behavioural change and feedback.
Line of Inquiry 4	Is the CMA effectively using adaptive management?
This line of inquiry was tested against the following criteria:	
Criterion 4.1	The CMA has documented the practical application of adaptive management principles in its planning and business systems.
Criterion 4.2	The CMA has monitoring and evaluation systems that test underlying investment assumptions and employ appropriate expertise to assess planned and actual achievement.
Criterion 4.3	The CMA maintains an information management system necessary to support adaptive management processes.

Attachment 3 The CMA and its region

CMAs have a challenging task to encourage communities across their particular regions to improve how they manage natural resources on private land for the benefit of the landholders, the broader community and future generations.

This section provides context for the audit by summarising key features of the Border Rivers-Gwydir region and the Border Rivers-Gwydir CMA. This context is important in considering both the way in which a CMA's effectiveness should be assessed and the options for improving that effectiveness.

The region at a glance

The Border Rivers-Gwydir region covers approximately 50,000 square kilometres of north-west New South Wales. The region is located within the Murray-Darling Basin, and is bounded by the Queensland border in the north, the Western catchment in the west, the Great Dividing Range in the east and the Namoi catchment in the south.

The region is made up of two major sub-catchments: the Border Rivers, which includes the 542 kilometre Macintyre River, and the 436 kilometre Gwydir River. There are approximately 200 other watercourses in the region.

The Border Rivers-Gwydir region has a temperate to sub-tropical climate, with a considerable gradient from east (cooler and wetter) to west (hotter and drier). It contains distinct landform types of tablelands, slopes and plains, and four bioregions - New England tablelands, Brigalow Belt South, Nandewar and Darling Riverine plains.

The vegetation varies from high altitude areas of the eastern catchment boundary, consisting of patches of extensively forested areas to the graduation west of more open forest, shrub lands and grassy plains.

Grazing is the principal agricultural enterprise on the tablelands, with a shift to cropping on the slopes. Further west to the plains there is an increasing use of irrigation, which has led to an intensification of farming enterprises.

The region has a population of approximately 50,000 people located in 11 Local Government areas. The main centres include Inverell, Moree, Tenterfield, Glen Innes, Goondiwindi, Uralla, Mungindi, Collarenebri, North Star, Wialda, Bingara and Bundarra. The overall population is declining with an increasing percentage in the upper age brackets.

There are nine Aboriginal nations and communities in the catchment, namely the Anaiwan, Banbain, Gamilaroi, Gambuwal, Gidabal, Guyambal, Ngoorabul, Yogumbal and Wirayarai.

The CMA at a glance

At the time of the audit, the Board consisted of Bob Crouch (Chair) and four Board members.

The Board is supported by a General Manager, three senior managers and approximately 17 permanent and 29 temporary (contract) staff positions. The CMA maintains offices in Inverell (principal office) and Moree with two staff retained in Armidale.

Unlike some other CMAs Border Rivers-Gwydir did not inherit systems, infrastructure or an information base from former catchment management entities but rather had to build a completely new organisation.

At inception the CMA developed a CAP (including its targets) by combining and updating the Catchment Blueprints of the former Border Rivers and Gwydir Catchments. NRM issues have been grouped into the four themes of Community, Biodiversity and Native Vegetation, Soils and Land Use and Water.

In implementing the Border Rivers-Gwydir CAP the CMA distributed \$17.4 million¹⁰ in grant funding during 2007/08 to undertake on-ground works or training to improve natural resource management.

Figure A3.1 provides a map illustrating some of the key characteristics of the region and sites visited by the NRC in its audit.

¹⁰ Border Rivers-Gwydir Annual Report 2007-2008

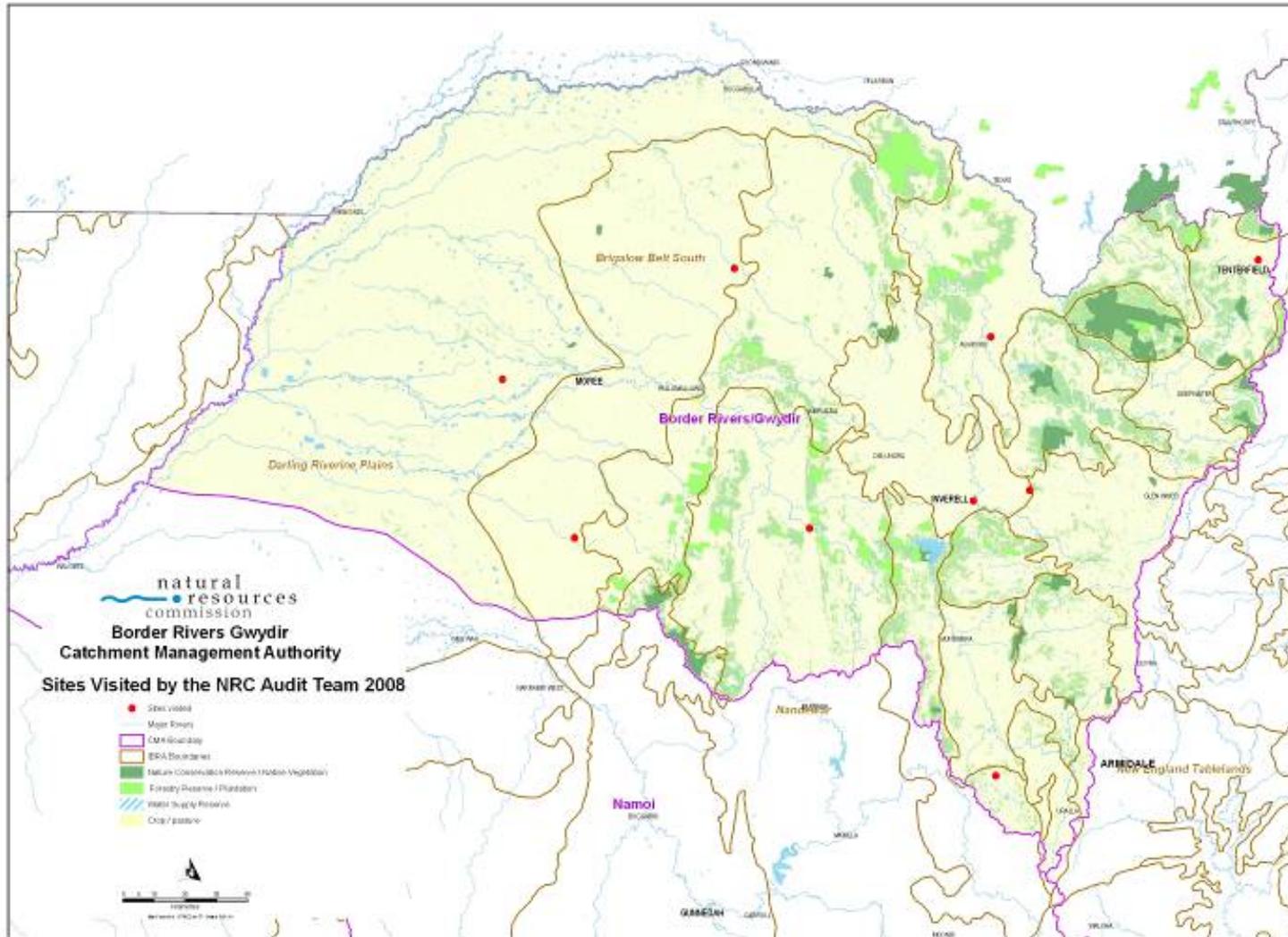


Figure A3.1: Border Rivers-Gwydir region and sites visited by the NRC

