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Audit Report
Northern Rivers
Catchment Management Authority

November 2009

Commissioned by the
Natural Resources Commission



List of Acronyms

CAP	Catchment Action Plan
CMA	Catchment Management Authority
DECCW	Department of Environment and Climate Change and Water
MER	Monitoring, Evaluation and Reporting
NRC	Natural Resources Commission
NRM	Natural Resource Management
NSW	New South Wales
PDP	Project Development Process
TAP	Threat Abatement Plan
TPIP	Theme Program Implementation Plan



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Attachments

- 1 Conclusions, Suggested Actions and CMA Response
- 2 About this Audit
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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 (CAPs) are being implemented effectively – that is, in a way that complies with the *Standard for Quality Natural Resource Management* (the Standard) and will help achieve the state-wide targets.

In 2008 the NRC undertook seven of the thirteen audits. In 2009 the NRC contracted external consultants to complete the remaining six audits. The NRC contracted GHD to undertake the audit of the implementation of the CAP prepared by the Northern Rivers Catchment Management Authority (CMA).

This Audit Report to the NRC contains the conclusions of the audit of the Northern Rivers CAP and the actions the GHD audit team suggests Northern Rivers CMA Board take to improve CAP implementation. The full audit conclusions and suggested actions, and a summary of the CMA's response to the suggested actions, are included in Attachment 1 of the report.

The purpose of this report is to promote greater understanding of Northern Rivers CMA performance and to guide the CMA Board in continued improvement. The report explains:

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

The NRC will use the conclusions, along with those of other audits and additional information, to inform a consolidated report to Government on progress in implementing CAPs and performance of the regional model.

1.1 Focus of the audit

Although a range of government agencies have a role in implementing CAPs, the NRC focused its first 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, sufficient and consistent data from these programs were not available at the commencement of these audits. As a result, the NRC's 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 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.

To do this 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 lines of inquiry, the GHD audit team 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 four lines of inquiry, the audit team was required to focus on CMA projects that use vegetation to improve landscape function. It was not practical to look at all CMA programs and projects, given the timeframe for the audits. The NRC considers that focusing on vegetation-related projects was the best option, as in general these have most 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).

1.2 Summary of audit findings

To conduct the audit, the NRC identified what it would expect to find if the CMA was doing each of the four activities listed above effectively. For each line of inquiry, the NRC identified three or four criteria it would expect the CMA to be meeting. The NRC 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 it would expect to find if the CMA is properly applying those elements of the Standard.

GHD 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, GHD 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 Northern Rivers CAP, including the NRC's expectations, the auditor's assessment of the Northern Rivers CMA's performance against these expectations, and the actions the auditor suggest the CMA take to improve its performance. As noted above, the full audit conclusions and suggested actions for Northern Rivers CMA 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, the NRC 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 the assets. And they would agree on the options for action and how they promote resilient landscapes.

The NRC 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.

The audit of Northern Rivers CMA's implementation of the CAP found that:

- ▶ The CMA had a common understanding of what constitutes resilient landscapes that was expressed through a Board-approved definition. Board members and senior management clearly articulated the goal of resilience and what resilience means to the region. Operational staff had an excellent knowledge of resilience and how individual projects contributed to improved resilience.
- ▶ A strong theme across all levels of the CMA was the importance of community and stakeholder engagement in attaining the goal of resilience. The CMA had demonstrated significant engagement and stakeholder involvement in investment decisions at the program and project levels.
- ▶ Planning processes such as the theme logic tables enabled the CMA to focus operational activities on improved resilience. However, strategic and operational documentation did not consistently address key components of the definition and had not effectively identified opportunities to establish cross-theme multiple CAP targets.
- ▶ The Project Development Process systematically ranked investment options at the program and project levels. The process effectively monitored project accountability and collected information on progress towards management targets.
- ▶ At the strategic level, funding to each theme was allocated in a transparent manner. However, the processes used to aid these decisions and demonstrate the use of best available knowledge, risk management and opportunities for multiple cross-theme outcomes were not documented.
- ▶ Transparent processes were in place to link short term investments to state-wide targets and CAP management targets. The processes effectively monitored project accountability and collected information on progress towards management targets. However, the CMA did not have a mechanism to determine whether the accumulation of project outputs was contributing to Resource Condition Targets across the region.

The auditor suggests the Northern Rivers CMA Board take a range of actions to address the issues identified by the audit so as to improve the extent to which its implementation of the CAP complies with the Standard.

These actions include:

- ▶ Ensure all strategic and operational planning documentation such as the annual Investment Program and the Theme Implementation Plans explicitly documents how the goal of resilient landscapes has been carried from the CAP to on-ground works.
- ▶ Prior to approval, the Board should expressly test future Theme Implementation Plans of the CMA on their contribution to the goal of resilient landscapes.
- ▶ Review the process used for the allocation of funding at the strategic (theme) level and document how the requirements of the Standard were applied to the decisions.
- ▶ Review the process used to capture the cross theme multiple CAP targets identified by the Theme Logic Tables and document them in the Theme Program Implementation Plans.
- ▶ Develop a process that evaluates the extent to which the outputs of the CMA activities are contributing to effective achievement of Resource Condition Targets.



1.2.2 Delivering projects that contributed to improved landscape function

If a CMA is effectively delivering native vegetation projects that contribute to improved landscape function, the NRC 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. The NRC 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, the NRC 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 audit found that:

- ▶ Long-term project outcomes were well documented by the CMA. Operational staff demonstrated a common understanding of short and long-term goals, realistic options for action and appropriate strategies for risk management. However, the depth of stakeholder understanding of the CMA's long term goals for the region varied.
- ▶ Effective use of best available knowledge and links to long term goals was demonstrated in the documentation of projects. However, whilst the data gaps were known to project officers they were not effectively documented. The CMA applied risk management principles at the project level although it did not effectively document and regularly review project specific risk management strategies.
- ▶ The CMA's projects had successfully achieved short-term project outcomes on the ground. The use of experimental or innovative techniques on many projects demonstrated that the CMA had sought to improve the way in which natural resources are managed. However, there was no underlying systems to demonstrate that the benefits from the lessons learned would be captured for use across the whole of the CMA and more broadly.
- ▶ The CMA added value to projects through relationship building with stakeholders, through community engagement and development of long-term collaborative partnerships through projects. In addition, over 800 land holders since 2005 had signed Landholder Management Agreements and Project Vegetation Plans which will help to maintain CMA investment in the long term.
- ▶ The CMA was also successful in attracting additional monetary and in-kind resources to projects of between 30-50% of the amount invested by the CMA for the projects visited. Project templates for reporting accounted for the additional resources including monetary and in-kind contributions. However, the value of these monetary and in-kind contributions was difficult to determine and were often under recorded by the landholder.
- ▶ The CMA had a system for recording project progress and performance that generated reliable information that accurately recorded short term targets and included opportunities to record progress towards longer term objectives.
- ▶ Records of Community Support Officer (CSO) performance indicated that they had achieved the community, stakeholder and capacity building output targets. However effective capture or contributions to cross-theme targets was not achieved.



The auditor suggests the Northern Rivers CMA Board take a range of actions to address these issues including:

- ▶ Seek to better communicate the CMA's long-term goals for the region to project stakeholders.
- ▶ Review the CMA's Project Development Process to include improvements in the recording of knowledge gaps and project risk reviews and to include procedures to capture lessons learned and enable their use across the whole of the CMA and more broadly.
- ▶ Improve the recording of monetary and in-kind contributions by land holders to enable the recording of the true value of the leverage achieved by the CMA.
- ▶ Improve the recording of outcomes delivered through the CSO program, particularly in relation to the additional resources they generate and contributions to cross-theme resource condition targets.
- ▶ Review the MER framework to plan and capture records on cross-theme targets achieved by projects.

1.2.3 Effectively engaging its communities

If a CMA is effectively engaging its communities, the NRC would expect it to have identified the key community groups and stakeholders it should consider in planning and undertaking its work. The NRC would 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, the NRC 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.

The audit found that:

- ▶ A framework was in place for community engagement and it documented the CMA's key community groups and stakeholders. Through this framework, the CMA demonstrated a consistent understanding of its communities, the communities' capacity and their values. The CMA demonstrated it had implemented the Communications Plan through strategies that reflected the values of its varied communities.
- ▶ Whilst many of the actions of the Communications Plan nominated two way communications, there was opportunity to improve the Plan by formalising what the CMA wanted to learn from nominated events, how those lessons or knowledge would be captured and how they would contribute to the CMA's knowledge pool to influence future investment.
- ▶ NRM contractors such as the Community Support Officers were engaged to foster regional relationships with the community and targeted stakeholders. However the contribution made by these contractors towards Community Theme outcomes could not be clearly demonstrated by the CMA.
- ▶ The CMA demonstrated it had undertaken analysis of each stakeholder group to inform its engagement strategies. The CMA had established strong and long standing relationships with its



key partners, who respect the CMA and its role. External stakeholders recognised the significance of the long term community capacity building approach undertaken by the CMA at all levels of the organisation.

The auditor suggests the Northern Rivers CMA Board take a range of actions to address these issues including:

- ▶ Develop processes to monitor the effectiveness of its engagement strategies towards the achievement of CAP management targets for the Community Theme.
- ▶ Improve the Communications Plan by formalising what the CMA wants to learn from nominated events.
- ▶ Finalise the draft stakeholder engagement plans and incorporate formalised review mechanisms within them to ensure they remain current.

1.2.4 Effectively using adaptive management

If a CMA is effectively using adaptive management, the NRC would expect it to have documented how it will apply the principles of adaptive management in its planning and business systems. The NRC 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, the NRC 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. And there would be an organisational focus on applying new knowledge (gained from monitoring and evaluation or other sources) to increase the effectiveness of investments. Finally, the NRC would expect the CMA to have and maintain an information management system that supports its adaptive management processes.

The audit found that:

- ▶ A consistent understanding of adaptive management was not demonstrated across the CMA. Continual improvement initiatives were occurring at strategic, organisational and project levels however the CMA did not systematically capture and promote the lessons learned.
- ▶ Strategic documents did not adequately address adaptive management. Although Program Theme Implementation Plans broadly addressed the elements of adaptive management, they did not systematically document knowledge gaps or actions to address program-specific risks. The CMA had also identified risks to CAP implementation. However, it was not evident how the CMA monitored to ensure that the actions to control the risks were implemented and effective.
- ▶ A Monitoring, Evaluation and Reporting (MER) Framework had been established. Procedures for *project monitoring* had been developed and were effectively implemented. However, these procedures did not facilitate structured learning. MER procedures had not been developed for *Program delivery and monitoring program outcomes*.
- ▶ At a strategic level the CMA did not have an explicit information management system that supported adaptive management. However, the CMA's Program Delivery Process, MER Framework,



knowledge management process and risk management register may, if integrated, support adaptive management.

- ▶ Information at the CMA is inherently managed by the CMA's staff and organisational structure, however the CMA did not have a documented process to identify and document knowledge and knowledge gaps.

The auditor suggests the Northern Rivers CMA Board take a range of actions to address these issues including:

- ▶ Develop a Board statement (i.e. CMA Adaptive Management Statement) that demonstrates commitment to adaptive management at all levels of the organisation.
- ▶ Support the CMA's Risk Management Register with effective knowledge management processes and MER framework.
- ▶ Implement a number of activities in the context of the CMA's Adaptive Management Statement including:
 - Review the CMA's Project Development Process;
 - Develop procedures for the *program delivery and monitoring program outcomes* component of the MER;
 - Develop a knowledge management process to document best available knowledge and its sources, knowledge gaps and the risk gaps present to CAP implementation; and
 - Integrate the CMA's information and business management systems to establish a framework for adaptive management.

1.3 Structure of the report

The rest of this report explains the audit conclusions and how the audit team used the Standard in reaching those conclusions in more detail. It is structured around each of the four lines of inquiry as follows:

- ▶ Chapter 2 describes the audit team's 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 the audit team's assessment of whether the CMA is effectively engaging its communities.
- ▶ Chapter 5 looks at whether the CMA is effectively using adaptive management.

The attachments provide the full audit conclusions, 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 Northern Rivers region and CMA. As noted above, a summary of the CMA's response to suggested actions has been provided in Attachment 1 of the final report.



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 had 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 region improves, and its understanding of best-practice NRM evolves.

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

- ▶ a commonly understood definition of what constituted resilient landscapes in its region
- ▶ a system for ranking investment options that took 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 ensured that its short- and long-term investment priorities were consistent with each other, and with the catchment-level targets in the CAP.

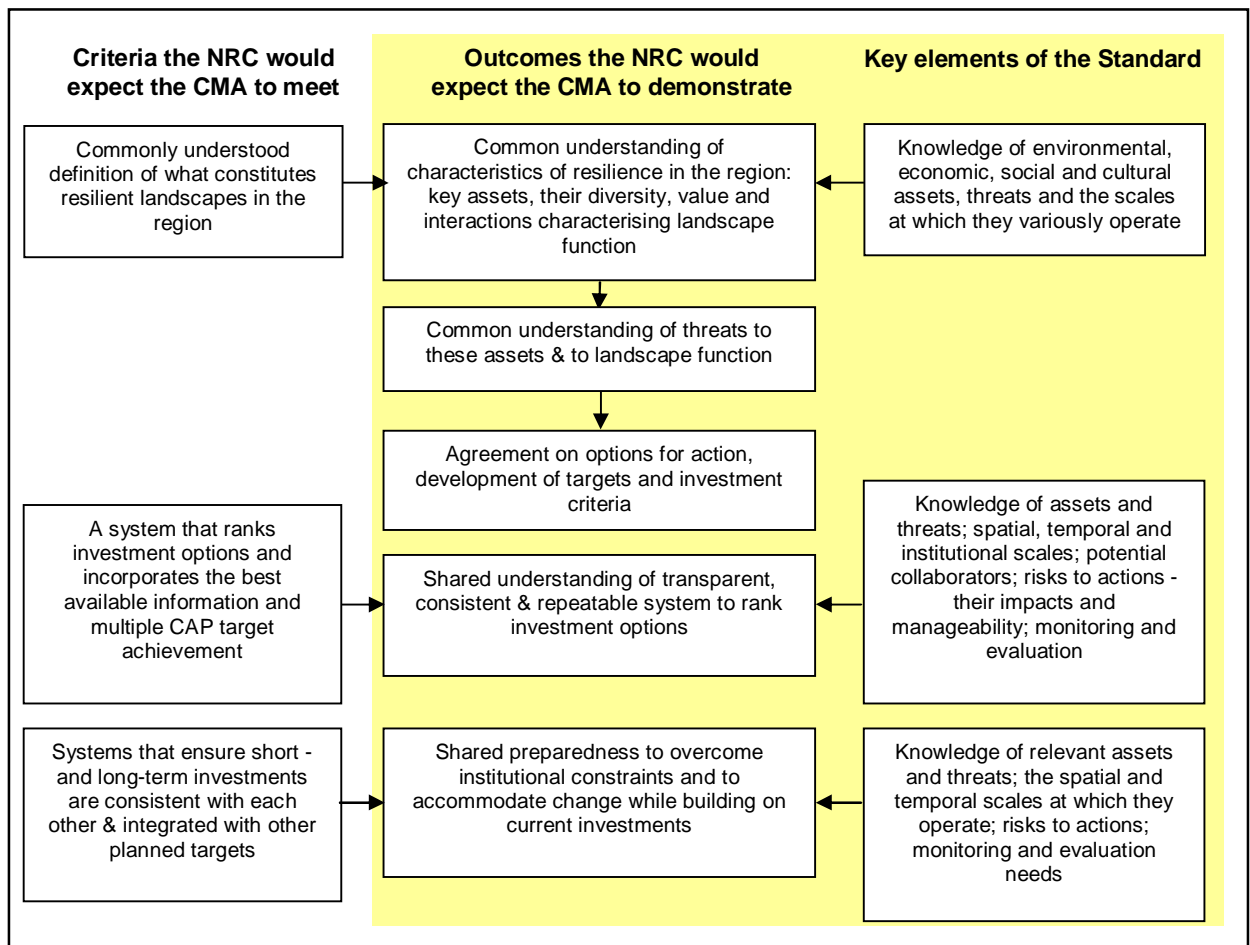
The NRC identified the elements of the Standard that are most relevant and important for meeting these criteria. The NRC also identified the behaviours and other outcomes we would expect the CMA to demonstrate if it is properly using these elements of the Standard, and thus meeting the criteria to a 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 region) in a way that complies with the Standard the NRC would expect it to be collecting and using the best available knowledge on the natural resource assets and threats in its region, and on the economic, social and cultural values its community places on those assets. The NRC 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, the NRC would expect to find that its Board members and staff can consistently explain the main natural resource assets in the region, and the interactions that characterise healthy landscape function. The NRC 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 the NRC 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 auditor 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 the audit of the implementation of the Northern Rivers 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”.¹ 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

¹ NRC (2008) *Healthy landscapes and communities*. NRC, Sydney. Available at www.nrc.nsw.gov.au.



constitutes resilient landscapes in its region – its Board and staff members need a consistent understanding of what the goal means for the particular landscapes and communities in its region.

The audit found that the CMA had a common understanding of what constitutes resilient landscapes which was expressed through a Board-approved definition (dated 17 May 2009). The definition also bridged the gap in the CMA's strategic and operational documentation as these documents did not expressly acknowledge the concept.

Whilst the definition was established only three months prior to the audit it was aligned with the CMA Vision and Mission Statement, which have guided the CMA since the establishment of its CAP. This link reinforced the CMA's strategic direction and facilitated a common understanding of resilience across all levels of the organisation. The CMA had also fostered a common understanding of resilience across the organisation and with stakeholders by publishing Board approved policy statements on topical issues such as climate change and water diversions from rivers.

The key components of the definition were embedded into the CMA CAP at a high level and could be broadly followed through to the CAP themes. Components of resilient landscapes were addressed in the Investment Program for 2008/09. However, the program did not effectively address components such as productive ecosystems, consideration of cultural heritage and adaptive management.

The audit found that the planning processes of the Theme Logic Tables (Outcome Achievement Logic and Outcome Linkage Tables) provided an excellent platform for the analysis and integration of resilient landscapes in Theme programs. The Theme Logic Tables mapped out regional assets, threats, community engagement outcomes, management action outcomes and resource condition outcomes. The tables also demonstrated linkages across themes. However, operational documents such as the Theme Program Implementation Plans (TPIP) did not consistently address key components of the resilient landscapes definition. With the exception of the Biodiversity TPIP, the plans reviewed did not expressly acknowledge the resilience approach. For example, key components of resilient landscape were not addressed by the Soil TPIP.

The audit found that across all levels of the CMA, there was strong and consistent understanding of the importance of community and stakeholder engagement in attaining the goal of resilient landscapes. Board members and senior management clearly articulated the goal of resilient landscapes at a high level and demonstrated a common understanding of what resilience means to the Northern Rivers region. The General Manager emphasised the importance of continuing to develop a strong NRM industry in the region as a major platform for the achievement of resilient landscapes.

Operational staff including program managers and project officers had an excellent understanding of resilience concepts such as building community NRM capacity, describing the natural resources of the region and their threats in an institutional, historical and current context. They understood how their processes of mapping through Theme Logic Tables, the CMA's Project Development Processes, and individual projects contributed to improve NRM towards resilience.

Stakeholders understanding of resilience varied. However, all stakeholders were able to clearly articulate the synergy between their organisational project objectives and the CMA's desired project outcomes.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:



- ▶ Demonstrated a common knowledge across the CMA of environmental, economic, social and cultural assets, threats and the scales at which they operate (*Collection and use of knowledge and Determination of scale*).
- ▶ Could not demonstrate how the analysis of resilient landscapes through the Theme Logic Tables was integrated into the TPIPs (*Collection and use of knowledge*).

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 region, 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.

The audit found that at the strategic level, funding to each theme was allocated in a transparent manner on the basis of the principles maintaining capacity in the community, the CMA's capacity to deliver and equity. However, the extent to which the use of best available knowledge, risk management or targeting multiple cross-theme outcomes were considered in the Board's decision process had not been documented in the Investment Program 08/09.

At the operational level, the CMA's Project Development Process systematically ranked investment options within programs and projects. The CMA's investment decisions at this level were supported by documented CMA processes and prioritisation tools. The CMA process involved the establishment of theme teams and engagement of stakeholders and expert panels to ensure best available knowledge was applied to decision processes. Prioritisation selection criterion was used and recommendations were made to the Board on a prioritised basis to accommodate for uncertainties in the level of funding. A project would receive points in the selection criteria if it achieved multiple targets. However, the process did not actively pursue multiple targets.

At the strategic and operational levels, the CMA demonstrated significant engagement and stakeholder involvement in investment decisions through participation in intergovernmental working groups, Board engagement of stakeholders and tendering to external delivery contractors.

The CMA system for ranking investment options does not take account of the options' potential to contribute to multiple targets. Whilst the Theme Logic Tables identified links between themes, it was not evident how those links created opportunity to develop projects that meet multiple targets. The Theme Program Implementation Plans did not adequately capture these opportunities to establish cross-theme multiple CAP targets. This was recognised by the Board as an opportunity for improvement as part of an internal review of its Community Program.



Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated the use of best available knowledge of environmental, economic, social and cultural assets, threats and the scales at which they operate to rank investment option at the operational level. The process was transparent, consistent and repeatable. (*Collection and use of knowledge and Determination of scale*).
- ▶ Demonstrated transparent, consistent and repeatable prioritisation process at the strategic level. However, the use of best available knowledge, risk management and targeting multiple cross-theme outcomes was not apparent (*Collection and use of knowledge and Determination of scale*).
- ▶ Could not demonstrate a system for ranking investment options that takes account of the options' potential to contribute to multiple cross-theme CAP targets. (*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 do this, 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 found that the CMA had a transparent process that linked short term and long term investment. The CMA's Project Development Process provided a solid base to guide CMA activities to contributing to the achievement of State Wide Targets and CAP management targets. The CMA had developed Theme Logic Tables, selected projects on the basis of their planned contribution to management targets and maintained continuity to projects that span over a number of funding cycles. The case study of the **Bitou Bush Threatened Abatement Plan (TAP) in Box 2.1** provides an example of where the CMA coordinated long term investment over a number of funding cycles to help them adaptively manage towards long-term targets.

The CMA had established contractor accountability by developing Service Provider contracts with built-in feed back loops that link project payments to progress reports and final reports. Contractors were required to explicitly report on the status of project outputs, which were directly linked to CAP management targets.

Whilst there was a robust planning process and logic trail from the management targets to the selection of project and delivery of investments, there was no mechanism used by the CMA to reflect on whether the accumulation of outputs was contributing towards the Resource Condition Targets across the region.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated knowledge of relevant assets and threats and consideration the spatial and temporal scales at which they operate in the processes used to support the integration of short term and long term investment priorities (*Collection and use of knowledge and Determination of scale*).
- ▶ Demonstrated effective processes to monitor and evaluate CMA activities at the operational level however had not developed processes to monitor achievement of the Resource Condition Targets (*Monitoring and Evaluation*).



- ▶ Demonstrated a transparent, consistent and repeatable process to link short term investment to CAP management targets (*Collection and use of knowledge*).

Box 2.1: Coordinating Investments over the long term to Promote Resilient Landscapes – Case Study: Bitou Threatened Abatement Plan

A good example of the way the CMA had coordinated its investments over multiple funding cycles to help it adaptively manage towards long-term targets was the **Bitou TAP Project**. This project treated and controlled heavy infestations of bitou bush across a range of sites, north from Ballina. The project operated at a scale covering the coastline of the Ballina Shire Council and used innovative techniques, such as aerial spraying and aerial broadcasting of treated native seed, to achieve outcomes over wide areas. The project was also linked to several other programs, such as the 4WD education and rehabilitation project, to help produce multiple outcomes from the investment.

The CMA worked in partnership with the Ballina Shire Council and the project was integrated with several individual projects undertaken by the council in the locality in accordance with plans that extend across multiple years to attain long term goals.

The CMA investment targeted bitou bush control and dunal vegetation rehabilitation. The Ballina Shire Council invested in 4WD access track rehabilitation, the construction of designated 4WD access tracks using an innovative construction technique and in education and awareness of the benefits of improving 4WD management of the dune system. It also undertook revegetation activities including significant community involvement (such as large planting events targeting important ‘environmental days’ – e.g. National Tree Day).

Construction techniques and methodologies evolved over the funding cycles and the lessons learned have informed related projects undertaken by other Coastal Local Government agencies.

The project was guided by the Department of Environment and Climate Change and Water’s (DECCW) state wide target for bitou control and was an active component of achieving the state wide targets.

The project was highly successful in treating bitou bush across the chosen treatment sites. A management/treatment plan was developed for each site, then funding allocated to works to achieve the outcomes promoted in the plans. These works improved biodiversity in highly sensitive environments which increased their ability to respond to and/or recover from natural events (e.g. recent storm damage) and changing conditions (e.g. sea level rise and storm surge). The result was improved ‘natural resilience’ in these systems.

Additionally, the program allowed ‘high value’ vegetation, such as Themeda Grasslands on Coastal headlands and dunal vegetation, to re-establish in areas previously dominated by bitou. This greatly increased the biodiversity value of these locations.



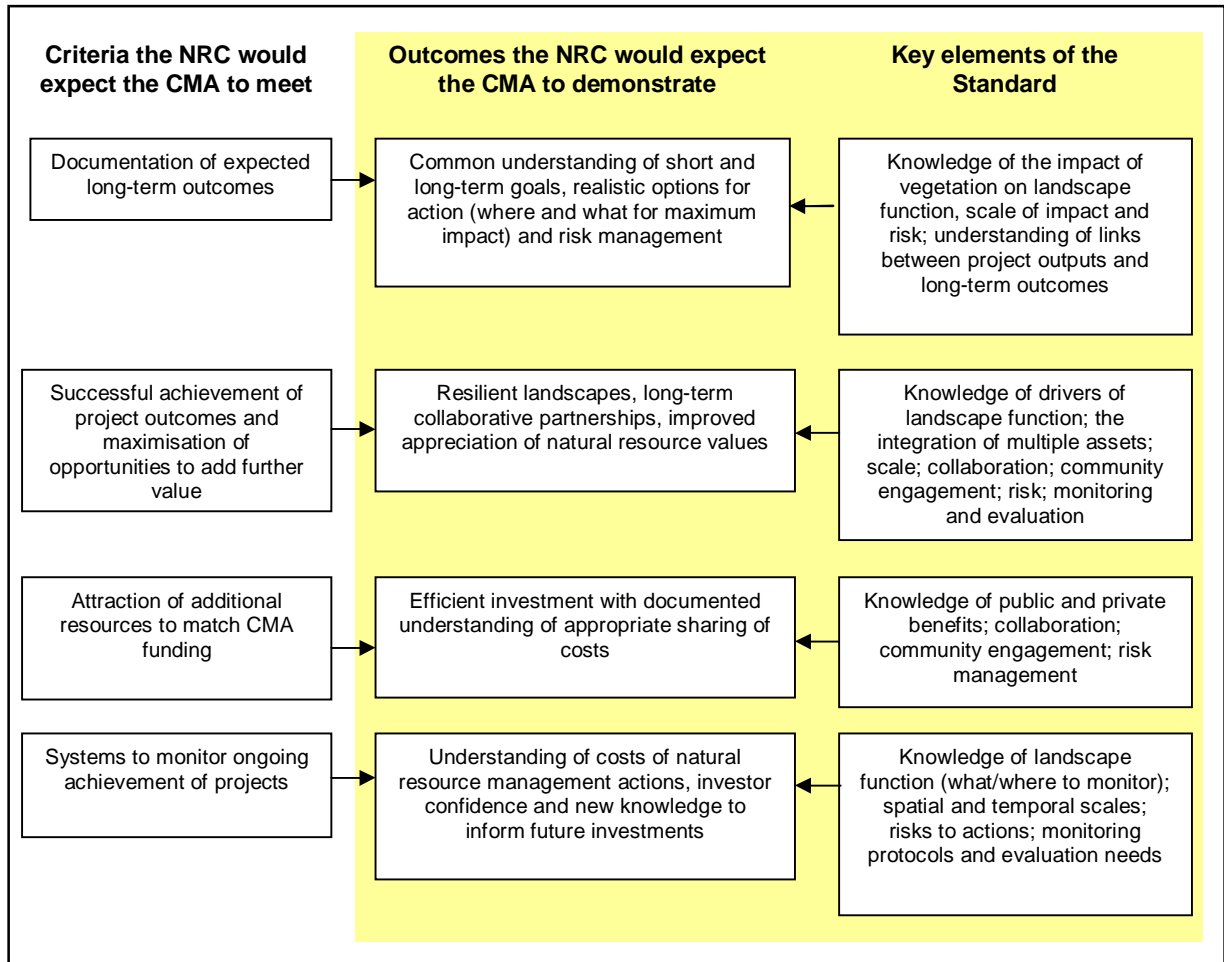
3. Delivering projects that contribute to improved landscape function

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 regions 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, the audit team assessed whether they were meeting four criteria. These were that the CMA:

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

As for all lines of inquiry, the NRC 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.

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



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

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 audit found that the CMA had documented long-term project outcomes including linking the project to the relevant State NRM, catchment and management targets. For all projects visited operational staff demonstrated a common understanding of short and long-term goals, realistic options for action (where and what for maximum impact) and risk management. Stakeholder understanding of the longer term



goals varied and the CMA may be missing opportunities to promote their NRM achievements to a broader network.

The audit found that the Bitou TAP Project (as described in Box 2.1) and Orara River Health Project (as described Box 5.1) were good examples of the CMA documenting progress towards expected long-term outcomes to help ensure the project stays on track over time. Both projects had used innovative techniques to achieve their objectives and actively monitored the results of project activities. The effectiveness of selected actions was assessed and the project inputs adjusted, where required, to better achieve and maintain focus on long term outcomes. These projects demonstrated effective use of best available knowledge in the documentation of projects and links to long term goals.

Both these projects extended over multiple funding cycles and demonstrated the CMA's capacity to undertake projects at the correct scale for the issue. The projects contributed to regional and state-wide targets, the CMA adapted future investments by learning and building on previous projects. The CMA also applied good risk management principles through the determination of scale, undertaking internal and external review of its activities to assess their effectiveness. The CMA had also established short and long term monitoring regimes to monitor long term outcomes. However, it had not effectively documented and regularly reviewed project specific risk management strategies.

The CMA staff also recognised that the CMA had significant knowledge gaps particularly with baseline vegetation distribution and environmental condition that has constrained their ability to identify key natural resource assets, and set short and long term goals. The CMA has done substantial work with partners to bridge these gaps. However, a systematic process to identify gaps and an action plan to close them has not been developed. This is discussed further under Line of Inquiry 4.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated effective use of best available knowledge in the documentation of projects and links to long term goals and recognised significant gaps in baseline environmental information (*Collection and use of knowledge*).
- ▶ Demonstrate good determination of scale at a project level. (*Determination of scale*).
- ▶ Could not demonstrate consideration and management of all identifiable projects risks and impacts although it did apply a pragmatic approach to project risk management (*Risk 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 audit found that the CMA's projects successfully achieved short-term project outcomes on the ground. All project sites visited had significantly changed the environmental conditions of the investment locations in a relatively short time frame. For example, the vegetation/biodiversity projects inspected demonstrated effective management of threats from weeds or human impacts. Also, the Orara River project had re-established the channel bed threatened by erosion allowing banks and the creek bed to stabilise and naturally revegetate.



The use of experimental techniques on the Orara River, Bitou TAP and the Vegetation Incentive projects, for example, demonstrated that the CMA had sought to improve the way in which natural resources were managed. The effectiveness of the trialled techniques allowed project actions to be adapted to maximise benefits from available resources and achieve improved NRM outcomes over the long term. This knowledge was also used in determining future funding opportunities. For example the CMA reinvested in the Vegetation Incentive Project due to the cost-effectiveness of results achieved using the 'splatter gun' technique. The Case Study of the Vegetation Incentive Project in **Box 3.1** provides an example of innovation facilitated by the CMA and how lessons learnt were used to guide future investment.

Whilst these were excellent examples of continual improvement at a project level, there was no underlying systems to demonstrate that the benefits from the lessons learned were maximised across the whole of the CMA or more broadly. This is discussed further in Line of Inquiry 4.

The CMA added greater value to projects through relationship building with stakeholders and through community engagement. The landholders interviewed demonstrate a strong sense of ownership over the project and its objectives. The CMA project officers achieved this by establishing close working relationships with the landholders in a combined role of mentor, educator and manager. However, the audit found the CMA had not accurately recorded these extra consultations and were usually undervaluing landholder contributions.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Could demonstrate a good understanding of available approaches for managing threats and enhancing natural values, being mindful of multiple assets (*Collection and Use of Knowledge*).
- ▶ Could demonstrate its commitment to undertaking research to maximise the benefits of its investment and record adaptations made and their impacts on decisions (*Collection and Use of Knowledge*).
- ▶ Could demonstrate strong long term relationships/partnerships with a broad range of stakeholders within the NRM industry (*Community engagement*).

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 found that the CMA was successful in attracting additional resources (monetary and in-kind investment) to projects reportedly between approximately 30-50% of the amount invested by the CMA for the projects visited. At the project level the CMA system of project templates (Project Applications/Plan, Progress Reports and Annual Reports and Final Reports) account for the additional resources including monetary and in-kind contributions. The audit found that the values of landholder in-kind contributions were generally underestimated. This may mean that the CMA is not fully aware of or able to document and promote the additional investment/resources they are leveraging through their projects.

The CMA Community Support Officer (CSO) program had also been successful in leveraging additional resources (both monetary and in-kind) in a variety of ways. Reporting of performance by the CSO interviewed indicated that his contract had achieved the community stakeholder and capacity building



output targets. However, this reporting did not effectively capture, in a way that could inform future planning, the actual 'on the ground' project outputs from these additional resources.

The CMA was also successful in attracting in-kind contributions from land holders over the long term as demonstrated by over 800 Landholder Management Agreements and Project Vegetation Plans signed across the region since 2005. Landholder contributions have varied over time in these agreements however the 2009 Biodiversity Incentive Program requires a minimum 50:50 landholder contribution (cash or in-kind).

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated the use of knowledge and relationships with land holders and project partners to attract additional resources to the CMA's investments, over both the short and long term (*Opportunities for collaboration*).
- ▶ Could not demonstrate a process to consistently analyse the cost and benefits of possible collaboration for all projects due to the underestimation of in-kind contributions, and also the difficulties on capturing on-the-ground benefits for CSO projects (*Collection and use of knowledge, and Opportunities for collaboration*).



Box 3.1: Projects that Contribute to Improved Landscape Function – Case Study: Vegetation Incentives/Bush Recovery, (Property west of Kyogle)

The use of experimental techniques at the **Vegetation Incentives Project** on the property visited west of Kyogle demonstrated that the CMA had sought to improve the way in which natural resources were managed and capture project learning and outcomes.

This project focussed on the treatment/control of lantana to reduce the impacts of 'die back' caused by the Bell miner. Studies by organisations such as DECCW and Southern Cross University established a clear link between 'dieback' from Bell miners and the presence of lantana dominated understoreys. Studies had indicated that a dominant understorey of lantana allows the Bell miner to out-compete other species, thereby allowing psyllids (insect responsible for causing dieback) to thrive. Initial results indicated the focus on treating lantana had increased the natural competitors of the psyllids and, therefore, reduced the impacts of dieback. The treatment technique is now being promoted more widely throughout the NRM industry.

The CMA project invested in the use of new technology (using new chemical application equipment known as the 'splatter gun') to treat lantana, thereby changing the environmental conditions that suit the Bell miner. This approach enabled the lantana to be treated at a cost of approximately \$200 per ha.

The project included significant in-kind contribution from the land holders, particularly in terms of maintenance and monitoring, to enhance the long term outcomes from the CMA investment. The project had, at the time of audit, treated over 110 ha of lantana with a further 160 ha to be treated in the current funding cycle. The CMA achieved an outcome of 270 ha of vegetation being placed under a PVP.

As the treatment of lantana progressed, the presence of Bell miners reduced and the condition of vegetation rapidly improved. This enabled other species to recolonise these areas and increase biodiversity values. The project was an excellent example of identifying the 'key limiting factor', treating it effectively and generating multiple environmental outcomes. In fact, the project was so successful the landowners were, at the time of audit, hosting 'field days', supported by the CMA, to educate government offices and community members in the use and benefits of the technique.

The project achieved multiple NRM outcomes, particularly in relation to improved biodiversity and vegetation condition, community engagement and landscape 'resilience'.

Photo below: Lantana understorey treated with 'splatter gun'.



Photo below: Understorey regenerating after treatment





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 progress towards longer term objectives is being made.

The audit found that the CMA had a system for recording project progress and performance. It included measurable outputs against project tasks and was structured in a way that allowed the CMA to collate project outputs and assess the achievements against program targets and CAP themes. The reporting system also included opportunities for recording recommendations to inform future investment and allowed for the capture of examples of innovation. The extent to which this process supported adaptive management is discussed in Line of Inquiry 4.

Reliable information that short-term targets had been met was being collected using the CMA's Monitoring Evaluation and Reporting (MER) Framework through the project reporting templates. The standard templates allowed consistent information to be collected and accumulated to assess progress at the program level. However, there is opportunity to improve the capture of information monitoring progress towards longer term program outcomes. This is discussed in more detail under Line of Inquiry 4.

The CMA's reporting system had ensured that outputs are a focus thereby giving the CMA the information they need to understand the full costs associated with NRM actions. The detailed reporting completed for projects such as the Bitou TAP and Sommerville projects had allowed the CMA to better understand the potential outcomes from their investments.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated effective processes to monitor short term outputs (*Monitoring and Evaluation*).
- ▶ Could not demonstrate a process to monitor longer term program outcomes (*Monitoring and Evaluation*).



4. Community engagement

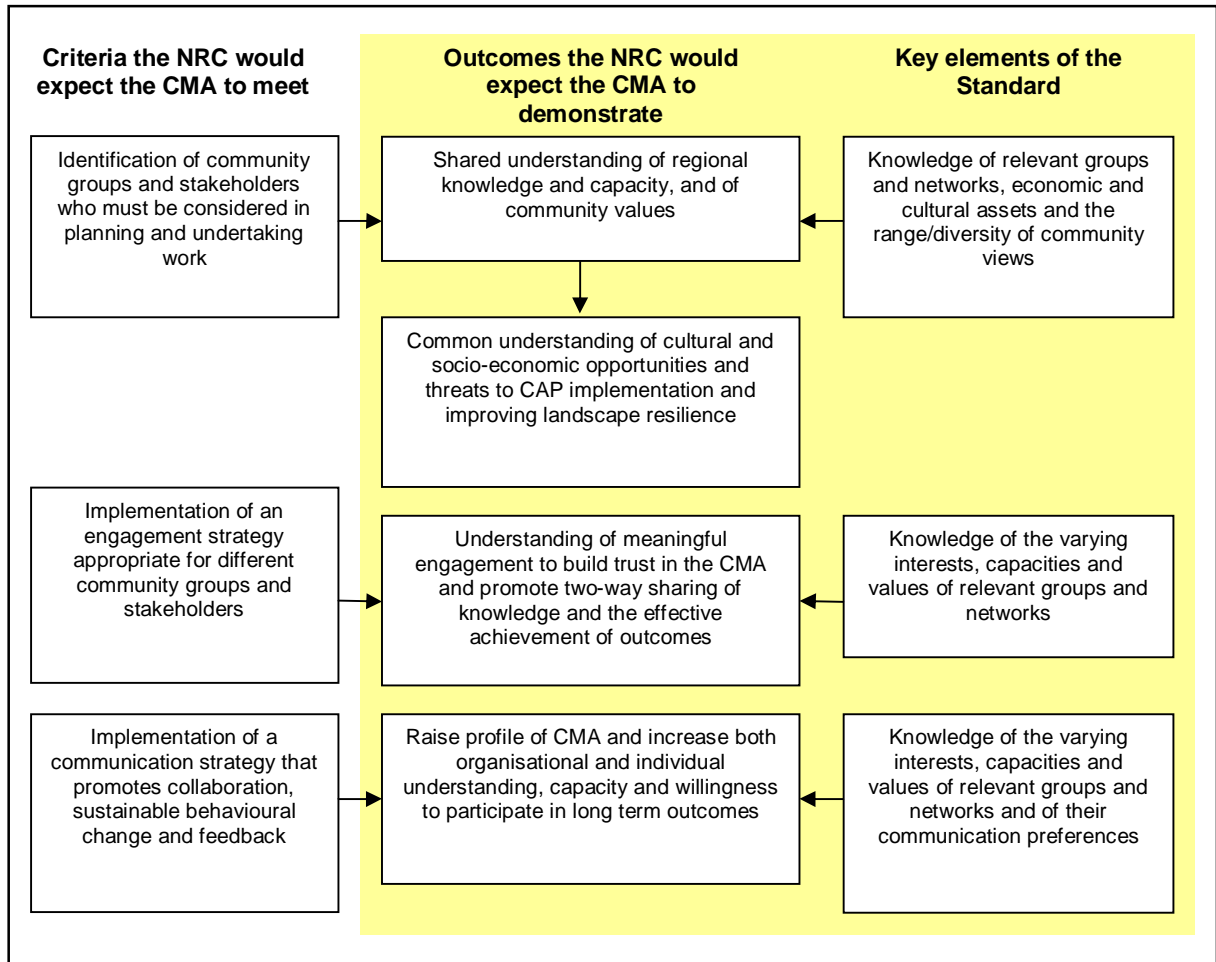
The NRC's third line of inquiry was whether the CMA is effectively engaging its communities. Given that 89 per cent of land in NSW is in private management, it is critical for CMAs to engage private landholders and other stakeholders who manage the natural resources on this land. This allows CMAs to 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, the auditor looked for evidence that the CMA:

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

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

Figure 4.1: The framework the auditor 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 audit team found that the CMA Community Engagement Strategy set the framework for community engagement in the Region and established draft Stakeholder Engagement Plans. These engagement plans identified and documented the CMA's key community groups and stakeholders. Interviews across



all levels of the organisation confirmed that a level of common knowledge was facilitated through activities and processes outlined in the Community Engagement Strategy and associated plans. All levels of the CMA demonstrated a consistent understanding of community knowledge, capacity and values.

The CMA had focussed on fostering community NRM capacity, which they believe had resulted in the emergence of an NRM industry in the Northern Rivers Region. For example, the CMA was instrumental in engaging with the Aboriginal 'Green Teams' and providing them with employment opportunities. This relationship allowed these groups to develop their skills and experience in the NRM industry and successfully attract funding independent of the CMA.

The CMA Board and staff recognised that cultural change was required in some stakeholder groups such as traditional farming in order to improve the uptake of NRM practices. The CMA had developed strategies to take these cultural differences into consideration with a view of fostering cultural change and alignment of CMA and stakeholder values.

A key mechanism the CMA used to engage with the community was through the Community Program. The Community Program model involved the awarding of Community Engagement Contracts to Community Support Officers (CSO), Aboriginal Green Teams and other community representatives to foster relationships with the local community and stakeholders. The contract outcomes for these projects were linked to the CAP management targets for the Community Theme. The case study **NRCMA Community Support Officer (CSO) in Box 4.1** provides an example of the unique process employed by the CMA which established an extended community presence across the region.

The Kyogle CSO provided records and statistics that demonstrated the maintenance of detailed contact lists of all community and stakeholders engaged. However the contribution made by these contractors towards Community Theme outcomes could not be clearly demonstrated by the CMA.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated a good understanding of community groups and stakeholders, and used this understanding to inform the development of its Community Engagement Strategy (*Community Engagement*).
- ▶ Demonstrated that it had collected knowledge to improve community engagement across the region (*Collection and Use of Knowledge*)

4.2 Appropriate engagement 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 the CMA had established strong and long standing relationships with its key partners in the region and fostered a strong respect for the CMA and its role. The external stakeholders



interviewed acknowledged the positive and constructive working relationship they had established in working with the CMA staff at all levels.

The CMA had established draft Stakeholder Engagement Plans in consultation with the Board. The CMA advised that the plans were working documents which are constantly being updated and consequently, they had never been finalised.

The plans documented key contacts and contact details, objectives of engagement, capacity of stakeholders and their values, spatial-institutional-temporal representation, opportunities and levels of engagement and risk management. The plans demonstrated that an analysis of each stakeholder group had been undertaken and actions were in place to manage opportunities and threats the stakeholders present to CAP implementation.

The CMA demonstrated the implementation of the engagement plans through actions such as joint publication of handbooks with its stakeholders, networking through advisory committees and current Memoranda of Understanding with Local government and other groups.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated a good understanding of community groups and stakeholders, and used this understanding to inform the development of its Community Engagement Strategy (*Community Engagement*).

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 audit found that the CMA had sophisticated approaches for communicating its messages, and to a lesser extent, hearing and responding to the messages sent by communities. These approaches were guided by the CMA's Communications Strategy (January 2007), which was linked to the Boards Strategic plan and the Community Engagement Strategy. The Communications Strategy covers communication approaches across the organisation, with the community and its stakeholders. The strategy outlines the communication aims, objectives and target audience and comprises a Communications Plan which for each objective, tailors actions, identifies the audience, specifies the method of communication, message to be communicated and person or group responsible for action.

The CMA demonstrated it had implemented an appropriate strategy for communication reflecting the varied values of their communities and promoting collaboration, behavioural change and feedback. It had done this through mechanisms such as its detailed CAP, a well structured easy to follow CMA web site, published brochures and publications available by subscription or from the web-site and CSO shop fronts, Board meetings with Local Government, workshops and community forums. The shop-fronts maintained by CSOs provided a high profile for the CMA brand.

Whilst many of the actions of the Communications Plan nominated two way communications, there was opportunity to improve the Plan by formalising what the CMA wanted to learn from nominated events,



how those lessons or knowledge would be captured and how they would contribute to the CMA's knowledge pool to influence future investment.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Demonstrated a good knowledge of the varying interests, capacities and values of relevant groups and networks (*Collection and use of knowledge and Community engagement*).
- ▶ Could not demonstrate a planned approach capture key lessons from its communications with stakeholders (*Collection and use of knowledge and Community engagement*).



Box 4.1: Community Engagement – Case Study: NRCMA Community Support Officer Support Program

Key stakeholders of the NRCMA include rural communities, farmers and graziers, urban communities, indigenous communities, Landcare groups, tourism operators, relevant government agencies and other institutions. To effectively engage with these diverse stakeholders the CMA created Community Engagement Contracts which included the Community Support Officer Program. This program contracted a range of community facilitators to deliver the CAP targets for community engagement. The program was co-funded by local government and allowed the CMA to have a large community 'presence' across a wide geographic distribution. The program was successful in leveraging additional resources (both monetary and in-kind) in a variety of ways:

- ▶ *Leveraging of funding from other stakeholders:* CSOs were active in engaging with a range of potential stakeholders who invest in NRM activities in the region. The CSOs identified opportunities to joint design and fund projects with such organisations to produce outcomes for a variety of CAP themes and provide additional resources to help achieve CAP targets. An example of this was the property visited east of Kyogle (see summary below) where the CSO had identified Envirofund as being the most appropriate funding source for the proposed project. The CSO then assisted the land holder with project application.
- ▶ *Increasing in-kind contributions from land holders:* CSOs maintained contact with land holders showing initiative in NRM projects and land management and encouraged increased in-kind effort, particularly in terms of long term maintenance and management. This helped create 'stewardship' over CMA projects and increase project success over the long term.
- ▶ *Joint funding:* CSOs were often joint-funded with local government allowing the CMA to invest more funds in other NRM activities.

The CSO role was specifically designed to foster project partners and was successful in developing strong relationships with landholders and the broader community NRM network, particularly the Landcare movement.

Community Support Project (for the property visited east of Kyogle): This project involved the removal of weed infestations (predominantly lantana and privet), through a targeted bush regeneration program, and revegetating drainage lines on the property with endemic native species. Almost 1 km of drainage line had been treated in this fashion and was showing signs of returning to a natural system. The project was also an excellent 'learning experience' for the land owners who have continued this work on other parts of their property. The land owner was also active in engaging and supporting other land owners to undertake similar work in the locality.

Photo below: Plantings after treatment of Lantana on the property visited east of Kyogle.



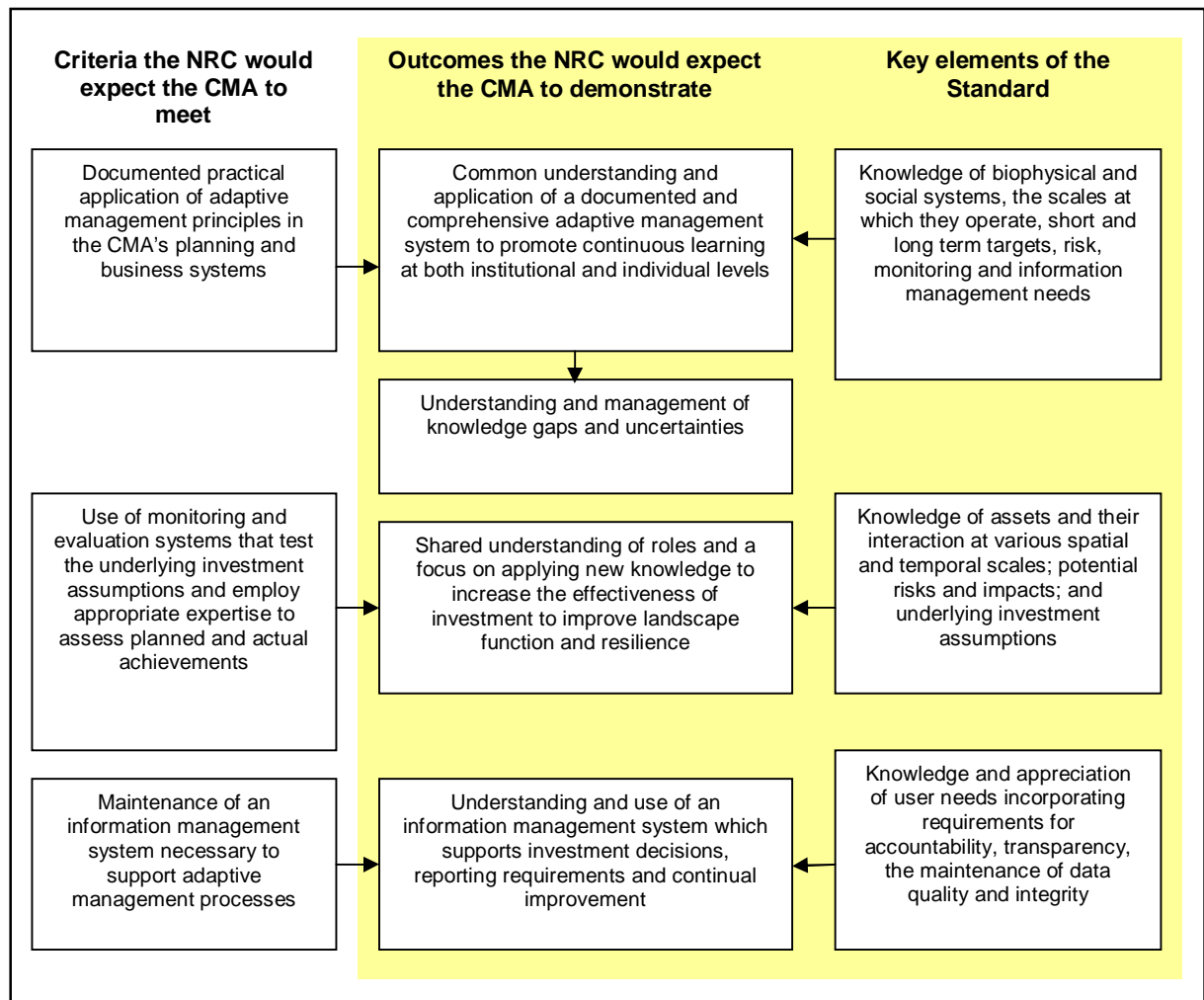
5. Effectively using adaptive management

In the fourth line of inquiry, the auditor 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 used appropriate experts to assess planned and actual achievements
- ▶ maintained information management systems necessary to support the adaptive management process.

Each of these criterion is shown in 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 the NRC would expect to see if the CMA is using these elements of the Standard.

Figure 5.1: The framework the auditor 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 the 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 audit found that the CMA did not have a consistent understanding of adaptive management across the organisation.

The CMA was undertaking activities that demonstrated continual improvement such as innovations in the delivery of NRM outputs on the ground, reviews and improvement to theme programs from year to year and improvements to systems and processes. However this was not undertaken within a structured adaptive management framework that supported the notion of "learning by doing" across all levels of the organisation.

The audit found that strategic documents such as the Strategic Plan and Investment Program did not adequately acknowledge adaptive management. These documents did not document how principles such as use of best available knowledge and risk would be monitored and managed to support adaptive management.

At the operational level, Theme Program Implementation Plans (TPIP) broadly identified knowledge sources used to support decisions and prioritisation processes but there was limited discussion on knowledge gaps and there was limited assessment of the program-specific risks to the achievement of program outcomes. TPIPs did however refer to the Monitoring, Evaluation and Reporting (MER) Framework as the tool to monitor implementation of the plans.

The Program Managers (PMs) acknowledged that outcome-based evaluation of programs had not been effectively undertaken across themes. This was primarily due to factors such as technical difficulty, the time lag before NRM outcomes are evident, resource constraints and the timeframe in which to assess previous work before the next year's program is finalised. The PMs proposed the use of the Assumptions Tables used in its Theme Logic Tool as the mechanism to assist in the evaluation of program outcomes.

The CMA had a Risk Management Register however it was not sufficient to support adaptive management. Risks to CAP implementation were identified in the Investment Program 2008/09 and actions to control these risks were broadly addressed in the development of the TPIPs. It was not evident however, how the CMA monitored to ensure that the actions to control the risks were actually implemented. The risk management register should be supported by an effective knowledge management process and the MER Framework.



Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Could not demonstrate how structured adaptive management processes were used to support innovation and learning across the organisation and the region (*Collection and use of knowledge, Risk Management and Information Management*).

5.2 Monitoring and evaluation system

To effectively apply adaptive management principles, CMA's 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 (for example, that the expected quantity of native grasses were planted, or that the expected length 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 (for example, whether fencing or revegetation of a riparian zone resulted in improved water quality and riverine ecosystem health). In addition, it 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 audit found that the CMA had an established Monitoring, Evaluation and Reporting (MER) Framework that outlined the Programming Review and Planning for the CAP Revision Process. The framework was defined by two components.

The first component of the strategy focussed on Monitoring and Evaluation (M&E) for *delivery of projects and monitoring project performance, project outcomes and outputs*. The procedures for this component provided specific MER instructions for Contractor M&E, Contract Contacts M&E, and the conduct of Project Process Audits. The projects visited demonstrated consistent implementation of these procedures to monitor and capture data on the delivery of project outputs. However on review of these procedures, it was found that they did not facilitate structured learning. For example the procedures did not:

- ▶ specify the requirement to document knowledge gaps;
- ▶ demonstrate a focus on attaining and capturing new knowledge and lessons learned from completed projects; and did not
- ▶ input new knowledge to the decision making processes of new projects.

The second component of the strategy focussed on M&E for *program delivery and monitoring program outcomes and change in resource condition*. The Program Managers (PMs) reported that the procedures for this component of the strategy had not been developed. The PMs were considering the use of the Assumptions Tables used in its Theme Logic Tool as the mechanism to assist in the evaluation of program outcomes.

The CMA had evaluated a number of Theme programs and had captured these reviews through standard business reporting practices such as Board papers. The reviews focussed mainly on the



mechanics of administering the program rather than achievements towards resource condition outcomes, and were not part of a systematic formal monitoring and evaluation process.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:

- ▶ Could not demonstrate it had robust systems and processes to support the capture and evaluation of information for the purpose of fostering adaptive management across all levels of the organisation (*Collection and use of knowledge; and Monitoring and evaluation*).

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 audit found that at the strategic level, the CMA did not have an explicit information management system that supported adaptive management. However the CMA's structured Project Development Process (PDP), MER Framework and Risk Management Register provided elements of a system which if integrated with a knowledge management process would support adaptive management.

A review of CMA records for the projects inspected confirmed that project data and information was effectively collected and recorded in accordance with the PDP and MER Framework procedures. The data and information recorded was only limited from an adaptive management perspective by the limitations of the MER Framework as previously discussed.

The General Manager and Program Managers advised that knowledge at the CMA is inherently managed by the CMA's staff expertise and organisational structure. However the CMA did not have a documented knowledge management process to maintain knowledge, document knowledge gaps and assess the risks the gaps represent to CAP implementation. The CMA had not developed an action plan to bridge knowledge gaps based on the risks the gaps represent to CAP implementation (prioritised across themes).

At the strategic level, the Investment Program 2008/09 recognised the need for the Board to ensure it was using best available information to inform decisions however the process used by the Board to ensure this occurred was not documented.

At the theme level, information used to develop program strategies was managed by theme teams. Each theme team comprised CMA personnel and stakeholders with specialist expertise and a strong understanding of information availability and gaps relating to the Theme, for the North Coast Region. The knowledge and tools used to develop the TPIPs were listed in the plans.

At the project level the CMA demonstrated that it had developed tools such as the Bush Recovery Work Book, an interactive database designed to manage all information from the Bush Recovery Project from landholder applications, field assessments, and works complete. The workbook had integrated within it, resource data for CMA officers such as interpretive notes, weeds list and vegetation types. Another example of where elements of adaptive management were applied at the project level is presented in case study **Orara River Health Project in Box 5.1**.

Based on inquiries made with respect to this criterion, in respect to the Standard, the CMA:



- ▶ Could not demonstrate the application of information management systems able to support adaptive management (*Collection and use of knowledge* and *Monitoring and evaluation*).

Box 5.1: Adaptive Management – Case Study: Orara River Health Project

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 that staff and collaborators can readily apply those principles in the many diverse circumstances in which they work.

To effectively apply adaptive management principles, CMAs' programs need to be designed and delivered in ways that facilitate structured learning. In addition, the CMA needs to use experts with appropriate skills and knowledge in assessing its planned and actual results.

A good example of this approach was Skewes Quarry sub-project which was part of a broader strategy name the **Orara River Health Project**. The sub-project restored stream channel structure and geomorphic features in response to channel degradation associated with previous gravel extraction activities that had changed the location of the main river channel in flooding events and shortened its length. The sub-project used innovative 'soft engineering' techniques to restore the original channel length, recreate geomorphic features, re-establish connection to two tributaries important for fish habitat and provide opportunities for riparian vegetation to re-establish through natural regeneration.

The sub-project had been ongoing since 1995 and at the time of audit was in a monitoring phase. The initial investment was only \$40,000, so achievement of the outcomes required innovative and cost effective actions. The approach to the project was 'to work with natural processes as much as possible to maximise the outcomes from the available resources'. Additionally, knowledge regarding the most appropriate techniques to rehabilitate the channel was limited in 1995 so the 'learn by doing' principle needed to be applied.

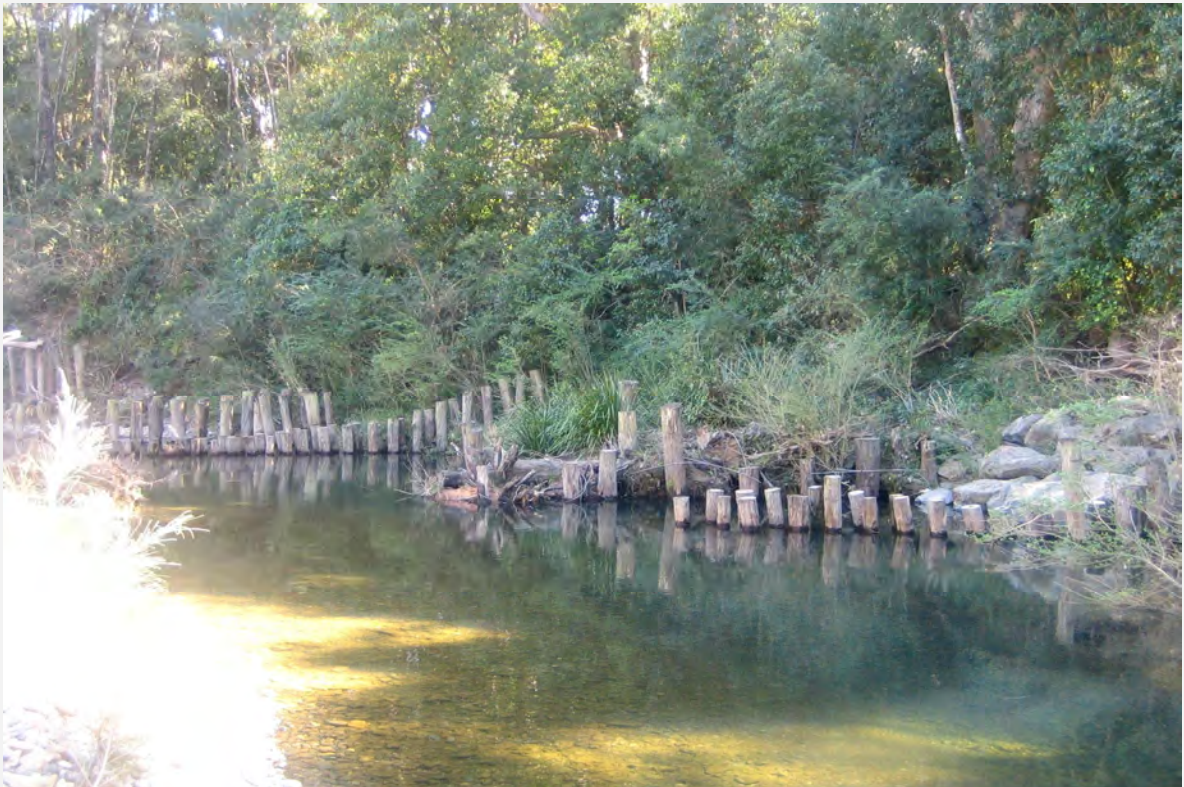
The project engaged 'experts' in geomorphic restoration several times to test assumptions, assess the success of the rehabilitation program and provide recommendations to change the program direction/investment accordingly.

The project was very successful and signs were positive that the benefits would be maintained over the long term. Outcomes were being achieved across several CAP themes with the environment being stable enough for other processes to occur such as natural regeneration of riparian and aquatic vegetation. The project provided valuable knowledge of how to rehabilitate the geomorphology of streams of this nature and ongoing monitoring will enhance the knowledge of its success through time.

Photo below: Log and Rock 'Jam' on the Orara River to redirect flows



Photo below: 'Pins' Inserted on Outside Bend to Create Geomorphic Structure and Stability





Attachment 1

Conclusions, Suggested Actions and CMA Response



This Section provides a table summarising conclusions of the audit of the implementation of the Northern Rivers CAP, the actions the auditor suggested the CMA take to improve this implementation and a summary of the 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 - Has Northern Rivers CMA effectively prioritised its investments to promote resilient landscapes that support the values of its communities?		
<p><i>Criteria 1.1: whether the CMA had a commonly understood definition of what constitutes resilient landscapes in their region.</i></p> <ul style="list-style-type: none"> ▶ The CMA had a common understanding of what constitutes resilient landscapes which was expressed through a Board-approved definition. The key components of the definition were not consistently addressed in strategic or operational documentation. ▶ Planning processes including Theme Logic tables enabled the CMA to focus operational activities on improved resilience, however operational documents such as the Theme Program Implementation Plans (TPIP) did not consistently address the key components of resilient landscapes. ▶ Board members and senior management clearly articulated the goal of resilience at a high level and demonstrated a common understanding of what resilience means to the Northern Rivers Region. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 1. Ensure all strategic and operational planning documentation such as the annual Investment Program and the Theme Implementation Plans explicitly document how the goal of resilient landscapes has been carried from the CAP to on-ground works. 2. Prior to approval, the Board expressly challenge the future Theme Implementation Plans of the CMA on their contribution to the goal of resilient landscapes. 	<ol style="list-style-type: none"> 1. Northern Rivers CMA agrees with the suggested action. This will be timed with the review of documents as required by investors. Northern Rivers CMA will complete the action by December - March 2010 (dependent on timing of Investors requests). 2. Northern Rivers CMA agrees with the suggested action. CMA Board minutes will be taken to reflect the deliberation of the contribution when reviewing Plans. Northern Rivers CMA will complete the action by March-May 2010.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<ul style="list-style-type: none">Operational staff had an excellent knowledge of resilience and how individual projects contributed to improved resilience.A strong theme across all levels of the CMA was the importance of community and stakeholder engagement in attaining the goal of resilience.Stakeholders understanding of resilience varied however all stakeholders were able to clearly articulate the synergy between their organisational project objectives and the CMA's desired project outcomes.		



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 1.2 : whether the CMA had a system that ranked investment options, which incorporated the best available information and multiple CAP target achievement</i></p> <ul style="list-style-type: none"> ▶ At the strategic level, funding to each scheme was allocated in a transparent manner. However, the extent to which the use of best available knowledge, risk management or targeting multiple cross-theme outcomes were considered in the Board's decision process were not documented in the Investment Program 08/09. ▶ The CMA's Project Development Process systematically ranks investment options at the program and project level with evidence of use of best available knowledge, stakeholder engagement and the use of prioritisation criterion and tools supporting investment decisions. ▶ The CMA demonstrated significant engagement and stakeholder involvement in investment decisions at the program and project levels. ▶ The Investment Program and Theme Program Implementation Plans have not effectively identified and documented opportunities to establish cross-theme multiple CAP targets. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 3. Review the process used for the allocation of funding at the strategic (theme) level and document how the requirements of the Standard were applied to the decisions. 4. Review the process used to capture the cross theme multiple CAP targets identified by the Theme Logic Tables and document them in the Theme Program Implementation Plans. 	<ol style="list-style-type: none"> 3. Northern Rivers CMA agrees with the suggested action. The CMA Board will overtly document the initial allocation of funds and guidelines to staff, using the Standard. Northern Rivers CMA will implement the action each time substantial funding is negotiated. 4. Northern Rivers CMA agrees with the suggested action. Program developers will overtly identify where multiple targets are being achieved. The CMA notes that DECCW and Service first, the financial systems service providers, will be informed through GMs working group, that current finance and reporting systems need to be improved to allow CMA to meet this requirement for the 2010-2011 year. Northern Rivers CMA will implement the action during the 2010/11 year, then annually.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 1.3: whether the CMA had a system that ensures short and long term investment priorities are consistent with each other and integrated with other planned NRM targets.</i></p> <ul style="list-style-type: none"> ▶ The CMA demonstrated a transparent process to link short term investments to State Wide Targets and CAP management targets. ▶ The CMA had processes in place to maintain project accountability and collect information on progress towards management targets. ▶ The CMA demonstrated that long term investments are preferentially funded to maintain project momentum and continuity. ▶ The CMA does not have a mechanism to determine whether the accumulation of project outputs is working toward Resource Condition Targets. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 5. Develop a process that evaluates the extent to which the outputs of the CMA activities are contributing to effective achievement of Resource Condition Targets. 	<ol style="list-style-type: none"> 5. Northern Rivers CMA agrees with the suggested action. A process currently underway to link contract outputs to Catchment targets in a documented manner. <p>Northern Rivers CMA will complete the action by February 2010.</p>



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
Line of inquiry #2 – Have the Northern Rivers CMA’s vegetation projects contributed to improved landscape function?		
<p><i>Criteria 2.1: whether the CMA has documented expected long-term project outcomes</i></p> <ul style="list-style-type: none"> ▶ Long-term project outcomes were well documented by the CMA including linking the project to the relevant State NRM, catchment and management targets. ▶ For projects visited, operational staff demonstrated a common understanding of short and long-term goals, realistic options for action and appropriate strategies for risk management. The depth of stakeholder understanding of the CMA’s long term goals varied. ▶ The projects visited demonstrated effective use of best available knowledge in the documentation of projects and links to long term goals. Whilst the data gaps were known to project officers they were not effectively documented. ▶ The CMA applied risk management principles at the project level although it did not effectively document and regularly review project specific risk management strategies. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 6. Seek to better communicate the CMA’s long-term goals for the Region to project stakeholders. 7. Review the CMA’s Project Development Process to include improvements in the recording of knowledge gaps and project risk reviews. 	<ol style="list-style-type: none"> 6. Northern Rivers CMA agrees with the suggested action. Project briefs and agreements will clearly indicate link to long term goals for the region. Northern Rivers CMA will implement the action commencing January 2010. 7. Northern Rivers CMA agrees with the suggested action. Project risk and management will be documented at development of the theme implementation plans. This will include knowledge deficiencies and considering adaptive management (see Action 16). Northern Rivers CMA will complete the action by March-May 2010 and on an ongoing basis.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 2.2: whether the CMA successfully achieves project outcomes, and maximised opportunities to add further value.</i></p> <ul style="list-style-type: none"> ▶ The CMA's projects had successfully achieved short-term project outcomes on the ground. ▶ The use of experimental/innovative techniques on two projects inspected demonstrated that the CMA had sought to improve the way in which natural resources are managed. However, there was no underlying systems to demonstrate that the benefits from the lessons learned would be maximised across the whole of the CMA and more broadly. ▶ The CMA added value to projects through relationship building with stakeholders and through community engagement and had developed long-term collaborative partnerships. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 8. Review the CMA's Project Development Process to include procedures to capture lessons learned and enable their use across the whole of the CMA and more broadly. 	<ol style="list-style-type: none"> 8. Northern Rivers CMA agrees with the suggested action. Project completion reports now include a section for review and internal audit process. Simple case studies summary will be developed for projects completed. Northern Rivers CMA has completed the action.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 2.3 whether the CMA's projects are attracting additional resources to match CMA funding</i></p> <ul style="list-style-type: none"> ▶ The CMA was successfully attracting additional monetary and in-kind resources to projects of between 30- 50%of the amount invested by the CMA for the projects visited. ▶ The CMA had attracted over 800 land holders since 2005, to sign Landholder Management Agreements and Project Vegetation Plans. These agreements had helped to maintain CMA investment in the long term. ▶ The CMA system of project templates for reporting (Project Applications/Plans, Progress Reports and Annual and Final Reports) accounted for the additional resources including monetary and in-kind contributions. ▶ The exact value of monetary and in-kind contributions was difficult to determine and were often under-recorded. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 9. Improve the recording of monetary and in-kind contributions by land holders to enable the recording of the true value of the leverage achieved by the CMA. 	<ol style="list-style-type: none"> 9. Northern Rivers CMA agrees with the suggested action. The CMA Board noted balance required in resources used by partners and landholders in collecting information. The CMA will allocate internal resources to undertake the collection of information on a random sample of projects. Northern Rivers CMA will implement the action commencing February 2010.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 2.4 whether the CMA had a system to monitor ongoing achievement of project:</i></p> <ul style="list-style-type: none"> ▶ The CMA had a system for recording project progress and performance. The reporting system generated reliable information that accurately recorded short term targets and included opportunities to record progress towards longer term objectives. ▶ Records of CSO performance indicated that they had achieved the community, stakeholder and capacity building output targets however, the records did not effectively capture actual on ground outputs or contributions to cross-theme resource condition targets. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 10. Improve the recording of outcomes delivered through the CSO program, particularly in relation to the additional resources they generate and contributions to cross-theme resource condition targets. 11. Review the MER framework to plan and capture records on cross-theme targets achieved by projects. 	<ol style="list-style-type: none"> 10. Northern Rivers CMA agrees with the suggested action. Linked to Actions 5 & 9. Northern Rivers CMA will implement the action commencing February 2010. 11. Northern Rivers CMA agrees with the suggested action. Linked to Action 4. Northern Rivers CMA will complete the action by March 2010.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
Line of inquiry #3 - Has the Northern Rivers CMA effectively engaged its communities?		
<p><i>Criteria 3.1 whether the CMA has identified community groups and stakeholders it must consider in planning and undertaking work</i></p> <ul style="list-style-type: none"> ▶ The CMA had a framework in place for community engagement in the region and had identified and documented in detail the CMA's key community groups and stakeholders. All levels of the CMA demonstrated a consistent understanding of its communities, the communities' capacity and their values. ▶ The CMA had engaged NRM contractors such as the Community Support Officers to foster regional relationships with the community and targeted stakeholders. These contactors demonstrated that Contract output targets had been mostly achieved. However, the contribution made by these contractors towards Community Theme outcomes was not clearly understood by the CMA. 	<p>The auditor suggests that the CMA take the following actions:</p> <p>12. Develop processes to monitor the effectiveness of its engagement strategies towards the achievement of CAP management targets for the Community Theme.</p>	<p>12. Northern Rivers CMA agrees with the suggested action. This will be included as an action in the Community Theme Development Program. Linked to Action 5.</p> <p>Northern Rivers CMA will implement the action as per the General Manager's Workplan 2009 – 2010.</p>



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 3.2 whether the CMA is implementing an engagement strategy appropriate for different community groups and stakeholders</i></p> <ul style="list-style-type: none"> ▶ The CMA had established strong and long standing relationships with its key partners, who respect the CMA and its role. ▶ External stakeholders recognised the significance of the long term community capacity building approach undertaken by the CMA at all levels of the organisation. ▶ The draft stakeholder engagement plans demonstrated the CMA's analysis of each stakeholder group and documented key contacts and contact details, objectives of engagement, capacity of stakeholders and their values, spatial-institutional-temporal representation, opportunities and levels of engagement and risk management. 	<p>The auditor suggests that the CMA take the following actions:</p> <p>13. Finalise the draft stakeholder engagement plans and incorporate formalised review mechanisms within them to ensure they remain current.</p>	<p>13. Northern Rivers CMA agrees with the suggested action. A Review mechanism has been included in CMA's Board Meeting Forward Plan.</p> <p>Northern Rivers CMA will implement the action on individual plans in stages. All plans will be completed by the July 2010 Board meeting.</p>



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 3.3 whether the CMA is implementing a communications strategy that promotes collaboration, sustainable behavioural change and feedback</i></p> <ul style="list-style-type: none"> ▶ The CMA had sophisticated approaches for communicating its messages, and to a lesser extent, hearing and responding to the messages sent by communities. ▶ The CMA demonstrated it had implemented the Communications Plan through strategies that reflected the values of the varied communities. ▶ The CMA had implemented an appropriate strategy for communication, promoting collaboration, behavioural change and feedback. ▶ The CMA's Communications Strategy outlined communication approaches across the organisation, with the community and its stakeholders and specified the method of communication, message to be communicated and person or group responsible for action. ▶ Whilst many of the actions of the Communications Plan nominated two way communications, there was opportunity to improve the Plan by formalising what the CMA wanted to learn from nominated events, how those lessons or knowledge would be captured and how they would contribute to the CMA's knowledge pool to influence future investment. 	<p>The auditor suggests that the CMA take the following actions:</p> <p>14. Improve the Communications Plan by formalising what the CMA wants to learn from nominated events.</p>	<p>14. Northern Rivers CMA agrees with the suggested action. The first round of the Communication Plan review was completed in June 2009.</p> <p>Northern Rivers CMA will implement the action within the Event Template to be developed by December 2009.</p>



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
Line of inquiry #4 - Has the Northern Rivers CMA effectively used adaptive management?		
<p><i>Criteria 4.1 whether the CMA had documented the practical application of adaptive management principles in its planning and business system.</i></p> <ul style="list-style-type: none"> ▶ A consistent understanding of adaptive management was not evident across the CMA. ▶ The CMA demonstrated that improvement initiatives were occurring at its strategic, organisational and project levels. However, it did not systematically capture and promote the lessons learned from the initiatives. ▶ The CMA's strategic documents did not adequately address adaptive management. ▶ At the operational level, Program Theme Implementation Plans broadly addressed elements of adaptive management but did not systematically document knowledge gaps or actions to address program-specific risks. ▶ The CMA had identified risks to CAP implementation however it was not evident how it monitored to ensure that the actions to control the risks were implemented effectively. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 15. Develop a Board statement (CMA Adaptive Management Statement) that demonstrates commitment to adaptive management at all levels of the organisation. 16. Review the CMA's Project Development Process in the context of the CMA's Adaptive Management Statement. 17. Support the CMA's Risk Management Register with effective knowledge management processes and the MER framework. 	<ol style="list-style-type: none"> 15. Northern Rivers CMA agrees with the suggested action. The statement will be developed and linked to organisational processes. Northern Rivers CMA will complete the action by February 2010. 16. Northern Rivers CMA agrees with the suggested action. This action linked to Action 7. Northern Rivers CMA will complete the action by March-May 2010 and on an ongoing basis. 17. Northern Rivers CMA agrees with the suggested action. The risk management register has been expanded to include process linkages to the MER framework and adaptive management. A review process is included in Board Process Planning. Linked to Action 7. Northern Rivers CMA has completed this action.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 4.2 whether the CMA had monitoring and evaluation systems that test underlying investment assumptions and employ appropriate expertise to assess planned and actual achievement</i></p> <ul style="list-style-type: none"> ▶ The CMA had developed a Monitoring, Evaluation and Reporting (MER) Framework and procedures for monitoring and evaluation of <i>project delivery and monitoring</i>. The MER was effectively implemented however its procedures did not facilitate structured learning. ▶ The MER extended to M&E of <i>Program delivery and monitoring program outcomes</i> however these procedures had not been developed. ▶ Reviews of Theme Programs had been undertaken although these were not part of a systematic formal monitoring and evaluation process. 	<p>The auditor suggests that the CMA take the following actions:</p> <ul style="list-style-type: none"> 18. Develop procedures for the <i>Program delivery and monitoring program outcomes</i> component of the MER. 19. The MER procedures should be developed and reviewed the context of the CMA's Adaptive Management Statement. 	<ul style="list-style-type: none"> 18. Northern Rivers CMA agrees with the suggested action. Linked to Action 8. Northern Rivers CMA will complete the action by February 2010. 19. Northern Rivers CMA agrees with the suggested action. Linked to Action 15. Northern Rivers CMA will complete the action by June 2010.



CONCLUSION	SUGGESTED ACTIONS	CMA RESPONSE
<p><i>Criteria 4.3 whether the CMA maintained an information management system necessary to support adaptive management</i></p> <ul style="list-style-type: none"> ▶ At the strategic level, the CMA did not have an explicit information management system that supported adaptive management. However the CMA's Program Delivery Process, MER Framework, knowledge management process and risk management register may, if integrated, support adaptive management. ▶ The General Manager and Program Managers advised that information at the CMA is inherently managed by the CMA's staff and organisational structure. However the CMA did not have a documented process to identify and document knowledge and knowledge gaps. 	<p>The auditor suggests that the CMA take the following actions:</p> <ol style="list-style-type: none"> 20. Develop a knowledge management process to document best available knowledge and its sources, knowledge gap and the risk the gaps present to CAP implementation. The knowledge management process should be developed in the context of the CMA's Adaptive Management Statement. 21. Integrate the CMA's information and business management systems to establish a framework for adaptive management. The framework should be reviewed in the context of the CMA's Adaptive Management Statement. 	<p>20. Northern Rivers CMA agrees with the suggested action. Linked to Action 15.</p> <p>Northern Rivers CMA will complete the action by June 2010.</p> <p>21. Northern Rivers CMA agrees with the suggested action.</p> <p>Northern Rivers CMA will complete the action by June 2010.</p>



Attachment 2
About this Audit



Audit mandate

The NRC is required to undertake audits of the effectiveness of the implementation of catchment action plans (CAPs) in achieving compliance with those State-wide standards and targets as it considers appropriate.²

The NSW Government has adopted an aspirational goal to achieve resilient landscapes that support the values of its communities.³ 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.⁴ The NSW State Plan⁵ establishes the State-wide targets for natural resource management (NRM).

CMAs have developed CAPs that express how each specific region can contribute to the aspirational goal and the State-wide targets. The *Northern Rivers Catchment Action Plan* identifies the key natural resource issues (or themes) that need to be managed in the region, including Biodiversity, Water, Land and Community. Within each of these themes, the CMA has identified:

- ▶ Catchment 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 that will contribute to achievement of the resource condition targets.

Audit objective

This audit assessed the effectiveness of Northern Rivers CMA in promoting resilient landscapes that support the values of its communities, within the scope of the CAP.

Northern Rivers 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 directed the audits 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. 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 Northern Rivers CMA for this stage in their development.

² *Natural Resources Commission Act 2003, Section 13 (c)*

³ As recommended by the NRC in *Recommendations – State-wide standard and targets, September 2005*.

⁴ *Ibid.*

⁵ See Priority E4 in, NSW Government (2006) *A new direction for NSW, NSW Government State Plan, November 2006*



Audit criteria

To help answer 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 Standard⁶, 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 work 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 approach

In August 2008, the audit team performed the following audit work:

- ▶ interviewing a number of CMA Board and staff members, landholders and stakeholders external to the CMA
- ▶ reviewing a range of CMA and public documents
- ▶ visiting multiple sites on six projects.

At the close of the audit field work, the audit team shared preliminary observations with the CMA.

Audit methodology

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

Acknowledgements

The audit team gratefully acknowledges the cooperation and assistance provided by the Northern Rivers CMA and landholders in the Northern Rivers region. In particular we wish to thank Judy Henderson and Michael Pitt.

⁶ 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

CMA's 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 Northern Rivers region and Northern Rivers 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 Northern Rivers CMA area of operation covers approximately 50,000 square kilometres, this includes most of the New South Wales north coast, from the Camden Haven River in the south to the Queensland boarder in the north, and west to the Northern Tablelands, as well as three nautical miles out toe area (to include the Lord Howe Island Group). The map below shows the location of the Northern Rivers CMA region.

The area comprising the Northern Rivers CMA includes significant river systems and heritage listed areas. The region is home to over 450,000 people living within eighteen local councils, and has more than six million people visiting each year.

The major river systems within the area include the Clarence River which discharges five million litres each year and flows for over 400 km. The region also includes significant coastal and inland lakes and estuaries.

The region includes two World Heritage Listed areas, Lord Howe Island and the Central Eastern Rainforest Region of Australia. Significant marine areas are also located within the area.

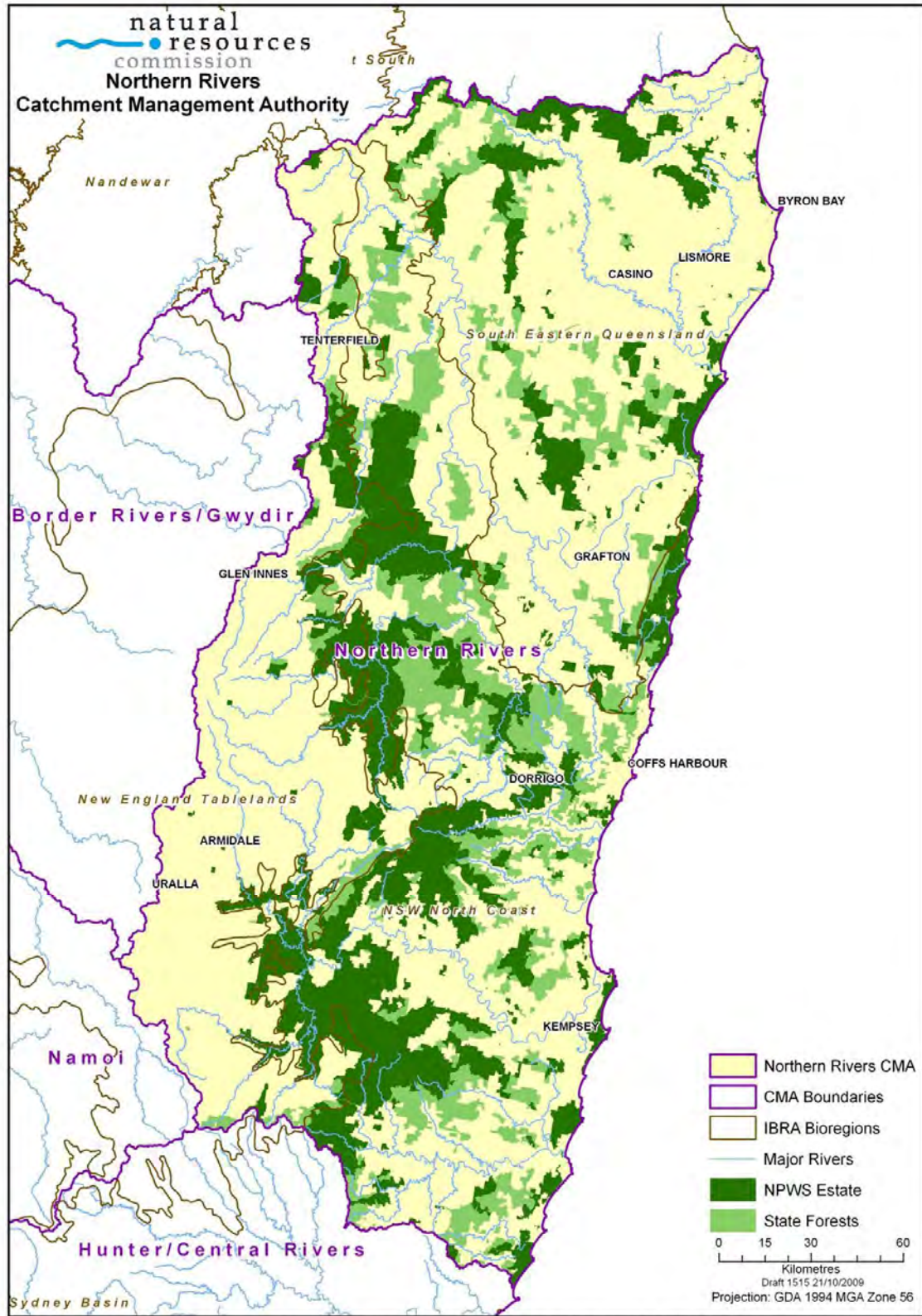
Agriculture (wool, vegetable and beef production) as well as timber production, commercial fishing and tourism also play an important economic role in the region.

Aboriginal culture is also rich in the region, and participation in natural resource management is growing with increased ownership of the land.

The region includes significant Natural Reserves and Indigenous Projected areas.

The primary role of the CMA is to better connect the work of all NRM stakeholders in the region. The CMA had key responsibilities to set targets and priorities that provide a unifying direction for all natural resource managers, so that improved NRM for the region contributes to State-wide NRM targets. The CAP is the plan to guide theses responsibilities and has been endorsed by the CMA Board and the Minister.

Figure 6 Landscape Map – Northern Rivers CMA



The CMA at a glance

The Northern Rivers CMA has six offices located at Grafton, Coffs Harbour, Alstonville, Kempsey, Armidale and Murwillumbah.

The CMA is governed by a Board comprising of a Chair and six board members which support and engage the Northern Rivers community to actively maintain and sustainably manage the natural resources within the Northern Rivers CMA.

The Board members are all members of the local community, with skills in primary production, cultural heritage, biodiversity conservation, business administration and governance.

The Board members meet monthly, their role as a Board includes undertaking regular field inspections of projects within the Northern Rivers CMA, or to view regional natural management issues and opportunities.

In the last financial year Northern Rivers CMA invested **\$11.3 million** in natural resource management activities throughout the Northern Rivers Region. The amount of additional resources attracted against investment as reported by the CMA is shown in Table A3.1, below.

Table A3.1 Funding Breakdown for the Northern Rivers CMA

Investment Period	Investment Amount (\$ mil) ⁷	Additional Resources (\$ mil) ⁸
2006/07	\$15.725	\$7.86
2007/08	\$12.974	\$6.49
2008/09	\$11.300	\$5.65

⁷ Investment amount shown is the total of Category 2 and Category 3 funding. This figure excludes Category 1 (recurrent expenditure) funding.

⁸ Conservative estimate by the CMA representing 0.5 x funding base (to be consistent with the audit findings).


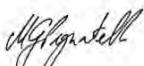
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Level 15, 133 Castlereagh Street Sydney 2000
T: 2 9239 7100 F: 2 9239 7199 E: sydmail@ghd.com.au

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Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	M. Pignatelli D Williams	A. Roy		M Pignatelli		19/11/09