



RECOMMENDATION

LOWER MURRAY DARLING  
CATCHMENT ACTION PLAN

July 2007





## RECOMMENDATION

# LOWER MURRAY DARLING CATCHMENT ACTION PLAN

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## List of acronyms

CAP	Catchment Action Plan
CMA	Catchment Management Authority
DECC	Department of Environment and Climate Change
DPI	Department of Primary Industries
JSC	Joint Steering Committee
MER	Monitoring Evaluation and Reporting
NRC	Natural Resources Commission
NRM	Natural Resource Management
NSW	New South Wales
PVP	Property Vegetation Plan

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Document No. D07/2041

ISBN: 1 921050 28 4

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# 1 Introduction and overview

The Natural Resources Commission (NRC) has reviewed the Lower Murray Darling Catchment Action Plan (CAP) and recommends that this CAP be approved. The NRC further recommends that the Minister require the CMA to undertake a review of the CAP within 18 months of approval to incorporate its progress on the specific actions identified in this report.

CAPs are an important component of the new institutional model for delivering natural resource management (NRM) in NSW. Under this model, 13 CMAs are responsible for planning and investing in NRM within their catchments. Each CMA has developed a CAP to use as a 10-year strategic plan or 'investment portfolio' for NRM in its region. These CAPs should set clear directions for all NRM activities in their regions and should integrate other NRM plans, including regional strategies, water sharing plans and regional conservation plans. Ultimately, the CAPs should set the direction for an integrated, whole-of-government approach to achieving catchment and state-wide targets, and should become the primary vehicle for public and private investment in NRM.

The NRC is required to advise the Minister for Climate Change, Environment and Water on whether or not to approve the CAP prepared by each CMA. Specifically, the NRC must determine whether each CAP complies with the *Standard for Quality Natural Resource Management*<sup>1</sup> (the standard) and promotes the state-wide targets for NRM.<sup>2</sup>

In addition, the NRC agreed to consider whether each CAP fulfils other specific requirements nominated by the NSW Government and Joint Steering Committee (JSC).<sup>3</sup>

## 1.1 Overview of findings

The NRC's recommendation is based on its findings that the Lower Murray Darling CAP:

- demonstrates a reasonable level of compliance with the standard at this point in time
- provides some confidence that the targets will promote the achievement of the state-wide targets over time.

The NRC is satisfied that the CAP fulfils most of the other specific government requirements.

The CAP currently relies on vegetation targets as a proxy for delivering biodiversity improvements. The CAP includes a biodiversity chapter and an action plan outlining the areas of work the CMA will focus on over the next 18 months to further develop its biodiversity targets.

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<sup>1</sup> Natural Resources Commission (2005) *Standard for Quality Natural Resource Management*. Available at <<http://www.nrc.nsw.gov.au/module.aspx?id=3>>.

<sup>2</sup> Natural Resources Commission (2005) *Recommendations: state-wide standard and targets*. Available at <<http://www.nrc.nsw.gov.au/module.aspx?id=3>>.

<sup>3</sup> Including the priorities set by the Australian Government and NSW Government Natural Resource Management Joint Steering Committee, NSW Department of Environment and Climate Change and NSW Department of Primary Industries.

Most of the targets appear to be SMART.<sup>4</sup> The CMA should improve the measurability and information supporting the achievability of the targets over time.

The NRC believes the Lower Murray Darling CMA will continue to refine its CAP and targets and successfully work with its community to implement the CAP as:

- the CMA demonstrated good results in the January 2006 Systems Review<sup>5</sup>
- the CMA Board has formalised its Strategic Planning Framework
- the CMA has reasonable plans to improve its compliance with the standard
- the recommended actions described in section 1.2 below will focus the CMA on the key areas that require improvement and to refine the catchment and management targets
- the NRC will regularly review the CMA's progress.

The NRC considers that to successfully implement and improve the CAP, the Lower Murray Darling CMA will require support from the government. This support will be necessary to:

- enable the CMA to improve its knowledge and information management systems
- continue to improve monitoring and evaluation arrangements, given the limited funding available and historic lack of clarity on roles and responsibilities for monitoring and evaluation in NSW
- provide flexibility in funding cycles to improve the ability of the CMA to deliver NRM outcomes in priority areas.

## 1.2 NRC's recommendation

In accordance with section 13 (b) of the *Natural Resources Commission Act 2003*, the NRC recommends that the Minister approve the Lower Murray Darling Catchment Action Plan without alteration.<sup>6</sup>

The NRC further recommends that the Minister require the CMA<sup>7</sup> to undertake a review of the Catchment Action Plan within 18 months of approval to incorporate its progress on the following actions:

- demonstrating the CMA Board is applying and refining its Strategic Planning Framework to develop and approve high quality strategic plans
- continuing to develop its processes to improve compliance with the standard, in particular its processes for decision making and priority setting, collaboration, risk management and use of best available knowledge
- working with the Department of Environment and Climate Change on the actions set out in the CAP to further develop biodiversity targets

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<sup>4</sup> 'Specific, Measurable, Achievable, Relevant and Timebound' (SMART), see below for further details.

<sup>5</sup> The Systems Review means a review carried out on the CMA's business systems. More information on the Systems Review process is available at <http://www.nrc.nsw.gov.au/submodule.aspx?id=97>.

<sup>6</sup> Under section 23(1) of the *Catchment Management Authorities Act 2003*.

<sup>7</sup> Under section 26(1) of the *Catchment Management Authorities Act 2003*.

- maintaining and enhancing links between the CMA and local government as a key part of supporting the integration of natural resource management and local planning.

The NRC's recommendation is explained in more detail in Chapter 4.

Successful completion of these actions should enable the CMA to prepare and publish a revised CAP that will more fully comply with the standard and significantly increase the likelihood of the CAP promoting achievement of the state-wide targets.

The NRC will undertake an audit within 2 years of approval.<sup>8</sup> To support this, the NRC will require a letter from the CMA to report their progress on the actions on a 6-monthly basis.<sup>9</sup> If reasonable progress in completing the recommended actions is not evident from these letters, the NRC will consider bringing the audit forward.

### 1.3 Process used to develop this advice

The NRC developed its recommendation using a rigorous process developed in consultation with NSW Government agencies and the JSC, and subsequently endorsed by the CMA Chairs. The process included:

- identifying the needs of all government stakeholders and developing a single process to meet all of these needs
- meeting with the Lower Murray Darling CMA to help it prepare for the CAP review, and undertaking a formal review of the CMA's business systems (the 'Systems Review') to identify what changes to these systems were needed to comply with the standard
- providing follow-up support to the CMA to help it make the necessary changes to its business systems
- evaluating the draft CAP and supporting documents for compliance with the standard, likelihood of promoting achievement of the state-wide targets, and fulfilment of NSW legislative requirements and other government requirements
- discussing the NRC's initial findings and recommendation with the CMA and relevant government agencies, discussing with the CMA its strategic planning and decision-making processes, evaluating the final Lower Murray Darling CAP, the Lower Murray Darling CMA Strategic Planning Framework, supporting documents, and plans for improvement with relevant agencies; and finalising this advice.

In evaluating all CMAs' CAPs and formulating its advice, the NRC took into account that the CMAs are relatively new organisations, and that many aspects of the new institutional model for NRM are still developing. When the CMAs were established in late 2003, they were responsible for implementing on-ground activities in accordance with pre-existing Catchment Blueprints.<sup>10</sup> In May 2005 the NSW Government adopted the standard and a set of state-wide targets for NRM.<sup>11</sup> The CMAs have been required to modify their operations according to the new standard, and to develop their CAPs in accordance with this.

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<sup>8</sup> Under section 13 (c) of the *Natural Resources Commission Act 2003*.

<sup>9</sup> Under section 16 (3) of the *Natural Resources Commission Act 2003*.

<sup>10</sup> These 21 Catchment Blueprints were developed in 2002 by advisory Catchment Management Boards.

<sup>11</sup> Natural Resources Commission (2005) *Recommendations: state-wide standard and targets*. Available at <<http://www.nrc.nsw.gov.au/module.aspx?id=3>>.



The NRC also acknowledges that there will be variations between the CMAs' CAPs. This is because the new institutional model promotes regional decision-making and allows flexibility and innovation. It is also due to the fact that each CMA is at a different stage of organisational development. Given this, the NRC assessed the Lower Murray Darling CAP with regard to the Lower Murray Darling CMA's unique characteristics and current stage of development. Over time, application of the standard should underpin continuous improvement in all CMAs and their CAPs.

## **1.4 Structure of this document**

The rest of this document explains the NRC's recommendation in more detail:

- Chapter 2 sets out the NRC's assessment of the CAP against all requirements
- Chapter 3 sets out the NRC's assessment of whether the Lower Murray Darling CMA will improve its CAP and its compliance with the standard and likelihood of promoting the state-wide targets over time
- Chapter 4 sets out the NRC's recommendation and actions to focus the CMA on the key areas that require improvement, and outlines how the NRC proposes to monitor progress.

## 2 NRC's assessment of the CAP

The NRC assessed the Lower Murray Darling CAP to determine whether it is a good strategic plan that complies with the standard and will guide the Lower Murray Darling CMA in promoting achievement of the state-wide targets. In particular, it:

- examined the process the Lower Murray Darling CMA used to develop the CAP, and the resulting CAP, and evaluated these against the standard
- assessed the CAP targets to determine whether they promote achievement of the state-wide targets
- assessed whether the CAP fulfils NSW legislative requirements and reflects other specific government requirements.

Overall, the NRC considers that the Lower Murray Darling CAP has some elements of a strategic plan. The Lower Murray Darling CMA has developed a CAP based heavily on the content of the Lower Murray Darling Catchment Management Board's Catchment Blueprint (the Blueprint), which was developed prior to introduction of the standard and state-wide targets. Even though the Blueprint was not informed by the standard and state-wide targets, the NRC believes that the resulting CAP demonstrates a reasonable level of compliance with the standard for this point in time and the NRC has some confidence that it will promote the state-wide targets.

The NRC is concerned the lack of evolution of the CAP from the Blueprint may limit its value as a long-term strategic plan. The strategic planning process used by the Lower Murray Darling CMA to evolve its Blueprint to the CAP is not clearly described within the CAP. The Lower Murray Darling CMA has, in discussions with the NRC, explained how it used strategic planning in developing the CAP. The Lower Murray Darling CMA Board has now documented its strategic planning process in a Strategic Planning Framework. This will allow the CMA to develop an updated CAP that demonstrates how strategic decision making has occurred and improves the CAP's compliance with the standard and ability to promote the state-wide targets.

The NRC is satisfied that the CAP fulfils most of the other specific government requirements.

The CAP currently relies on vegetation targets as a proxy for delivering biodiversity improvements. The CAP includes a biodiversity chapter and an action plan outlining the areas of work the CMA will focus on over the next 18 months to further develop its biodiversity targets.

Most of the targets appear to be SMART. The CMA should improve the measurability and information supporting the achievability of the targets over time.

The NRC has also identified some areas of the CAP that require improvement to more fully comply with the standard and promote achievement of the state-wide targets. The NRC believes that the Lower Murray Darling CMA needs to continue to evolve its capacity for strategic planning, in order to effectively review and improve its CAP over time. The CMA also needs to improve its approach to collaboration and risk management at all levels of the organisation and its internal knowledge and information management systems. The NRC believes that the Lower Murray Darling CMA will be able to refine the CAP and CAP targets over time, to address these areas. The CMA has demonstrated it has reasonable plans in place to

achieve improvement. In addition, the actions recommended by the NRC will help the Lower Murray Darling CMA focus on the key areas requiring improvement.

The sections below discuss in detail the NRC's assessment of the process used to develop the Lower Murray Darling CAP, whether the targets within the CAP will promote achievement of the state-wide targets, and whether the CAP fulfils the legislative requirements and reflects other specific government requirements.

The Lower Murray Darling CMA's plans for improvement are discussed in Chapter 3 and the NRC's recommended actions are outlined in Chapter 4.

## 2.1 Is the CAP consistent with the state-wide standard?

A CAP that is developed in accordance with the standard and state-wide targets should contain clear priorities that were determined using a rigorous and transparent process. The NRC evaluated CAPs against the following question to test this requirement:

- Was the CAP developed using a rigorous and transparent process?

The standard contains seven interdependent components which, when applied properly and together, should help CMAs make rigorous and transparent decisions and prioritise their NRM activities in a way that leads to sensible and integrated NRM outcomes at all scales.

Proper application of the standard in developing a CAP should help CMAs to:

- use the best available information
- take appropriate account of scale issues to maximise the net benefit of investments
- capture opportunities for collaboration to maximise gains
- engage the community in a meaningful way
- effectively manage risks
- establish monitoring and evaluation systems
- effectively manage information.

The NRC examined the process the Lower Murray Darling CMA used to develop its CAP, and evaluated this process and the resulting CAP against the standard. The NRC found that the CAP demonstrates a reasonable level of compliance with the seven components of the standard. The NRC's assessment takes into account the fact that the Lower Murray Darling CMA is a relatively new organisation operating within a new regional model for NRM. Given this, the NRC does not expect the same level of compliance with the standard that it might reasonably expect from a more mature organisation.

The Lower Murray Darling CAP describes the process the CMA undertook to develop the CAP which was comprised of the work undertaken to develop the former Blueprint of the Catchment Management Board, and a subsequent update of targets for the CAP.

The NRC discerned the following key phases for development of the Blueprint prior to 2003:

- **Identification of NRM objectives:** Working groups, made up of Board members and scientific, community and agency representatives, identified the "primary NRM areas" for

targets. Working groups also identified and analysed issues, collected and reviewed data and trends.

- **Defining management actions:** Technical Task Teams identified issues impacting on three management units in the catchment, and assessed and quantified management actions.
- **Ranking and integrating management actions:** Management actions were prioritised on the basis of their contribution toward achieving the catchment targets, cost, environmental benefit, community acceptance and feasibility. A GIS based tool was used to determine where multiple benefits from investment could be derived. This extended process produced a table of prioritised management actions.
- **Consultation on targets:** A large number of meetings and workshops with the community were held as well as media and exhibition activities.
- **Development of monitoring and evaluation provisions:** Technical specialists determined the monitoring requirements for targets.

The NRC could discern the following key phases for development of the CAP:

- **Review of catchment and management targets:** The Board, technical experts and CMA staff cross checked the Blueprint targets for relevance. The CAP states most targets were considered still relevant given the “slow pace of change”<sup>12</sup>, the community expectation for implementation of the Blueprint and the “size of investment...to develop [previous regional NRM] strategies.”<sup>13</sup>
- **Update of targets:** The Board decided to refine aspects of the riverine health and salinity catchment targets given new knowledge. The CMA also consulted technical experts to develop soil management targets.
- **Consultation on the CAP:** This involved community meetings, presentations to NRM groups, and consultation with indigenous groups, local government and industry. Feedback was received and was considered in developing the CAP.

Table 2.1 summarises the NRC’s assessment of the Lower Murray Darling CAP development process and the resulting CAP against the components of the standard. The table also lists selected evidence to support this assessment.

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<sup>12</sup> Lower Murray Darling Catchment Action Plan, October 2006, pg 37.

<sup>13</sup> Lower Murray Darling Catchment Action Plan, October 2006, pg 30.

**Table 2.1: NRC assessment of the CAP development process against the standard**

Component	Assessment of process against this component	Selected evidence
Collection and use of knowledge	<p>The CAP describes a structured process that used best available knowledge for the development of targets for the Blueprint prior to 2003.</p> <p>The process for using best available knowledge to inform strategic planning and decision-making at Board Level was explained by the CMA Board and has now been documented in the Strategic Planning Framework.</p> <p>It is not clear from the CAP that best available knowledge was used to select relevant factors and inform the strategic planning underpinning the updating of targets and development of the CAP subsequent to the Blueprint.</p> <p>The next steps for the CMA are to integrate recent information as it reviews and updates the CAP and the targets, and to ensure and demonstrate that knowledge is used appropriately to inform decision-making and priority-setting at all organisational levels in the CMA.</p>	<ul style="list-style-type: none"> <li>▪ <i>Section 3</i> explains the development of the Blueprint prior to 2003. This and the supporting documents list the guiding steps for target development, describe the process, and document the analysis behind the process.</li> <li>▪ The CMA determined that most of the Blueprint targets were still relevant for the CAP. The NRC could not determine from the CAP that the factors on which the CMA based its assessment were based on best available knowledge.</li> <li>▪ Some targets were updated with new information (e.g. salinity targets, riverine health catchment target performance indicator and soil management targets).</li> <li>▪ <i>Support Document 2 (Regional Profile)</i> contains background information on the catchment's NRM issues, however this document does not include any information from after 2000.</li> <li>▪ The CAP states that a gap analysis was conducted to review knowledge associated with each target area. The CAP does not clearly identify these knowledge gaps.</li> </ul>
Determination of scale	<p>Some aspects of spatial and temporal scale issues were considered in target development. The CAP also demonstrates a sound awareness of spatial and temporal scale issues for implementation. However, it is unclear from the CAP how scale was used at a strategic level to inform prioritisation.</p> <p>The next step for the CMA is to improve and demonstrate its determination of optimal scale for management, through structured and transparent decision-making and priority-setting.</p>	<ul style="list-style-type: none"> <li>▪ When undertaking the catchment targets issues analysis for the Blueprint (<i>Support Document 3</i>), the scales of benefits from management action were considered.</li> <li>▪ Maps demonstrate spatial priorities for several management targets. Spatial priorities were determined based on the areas where most benefit could be derived from investment.</li> <li>▪ The CAP recognises the links between some catchment targets, and describes the social and economic benefits associated with achieving catchment targets.</li> <li>▪ The CAP depicts the relationship between federal, state and regional NRM strategies and plans and the CAP.</li> </ul>

Component	Assessment of process against this component	Selected evidence
<p>Opportunities for collaboration</p>	<p>The development of the CAP involved a collaborative effort. The CAP also recognises the benefits of collaboration to achieve targets.</p> <p>The next step for the CMA is to develop a process for systematically considering potential collaborators, and the costs and benefits of collaboration with existing and potential partners.</p>	<ul style="list-style-type: none"> <li>▪ <i>Section 3</i> describes collaboration between the CMA, agencies and technical experts in CAP development.</li> <li>▪ The CAP describes a number of formal partnership agreements, including partnerships with local councils.</li> <li>▪ The CMA is involved in a '<i>Tri-state Natural Resource Management Forum</i>' to manage cross-border issues. The CAP lists a number of tri-state and multi-partner projects.</li> <li>▪ <i>Section 2.3</i> outlines some of the key collaborators for implementation of the CAP as well as identifying collaborators for each target. The CAP also includes some targets that are the responsibility of others.</li> </ul>
<p>Community engagement</p>	<p>The CAP outlines how the catchment community was engaged in development of the CAP. The CAP also explains mechanisms for ongoing community engagement.</p>	<ul style="list-style-type: none"> <li>▪ <i>Section 3</i> describes how the community was involved during CAP development, including consultation with the general community, NRM groups, indigenous groups, industry groups and government. The CAP also describes the type of community feedback received.</li> <li>▪ The key contributors to development of the CAP are listed.</li> <li>▪ The CMA's <i>Communication and Community Engagement Policy</i> provides a consistent community engagement framework, and a basis for developing community engagement strategies for individual projects. The CMA also has an <i>Indigenous Engagement Policy</i> and protocol.</li> </ul>

Component	Assessment of process against this component	Selected evidence
Risk management	<p>The CAP demonstrates consideration of risk in the process of target development. It also specifies some risks to successful implementation of the CAP.</p> <p>The next step for the CMA is to develop an overarching risk management strategy that ensures it consistently identifies, prioritises, manages and reviews risks at all levels of its operations.</p>	<ul style="list-style-type: none"> <li>▪ The process to develop the targets incorporated risk and hazard analysis. Targets are designed to address risks ('pressures') to resource condition through 'responses'.</li> <li>▪ <i>Appendix 3</i> details an organisational risk assessment based on AS4360.</li> <li>▪ The CAP lists some external factors that can influence the achievement of catchment targets (for example, climate change, economic conditions), identifies some general risks to the achievement of targets and corresponding management actions, and identifies some target-specific risks and corresponding management actions.</li> <li>▪ The CAP states that the CMA conducts risk assessments at the beginning of projects, to identify and mitigate risks.</li> </ul>
Monitoring and evaluation	<p>The CAP is supported by an approach to monitoring that should enable the CMA to quantify and demonstrate progress to targets.</p> <p>However, the 2011 strategic evaluation proposed in the CAP does not provide a timely evaluation of the efficiency, effectiveness and appropriateness of management actions in achieving progress towards catchment targets.</p>	<ul style="list-style-type: none"> <li>▪ The CAP outlines performance indicators for each target and monitoring programs for each catchment target. Specified performance indicators for management targets are not always clear and measurable.</li> <li>▪ <i>Supporting Document 4</i> (compiled in 2003) contains extensive details on the monitoring required to quantify progress towards the catchment targets, including benchmarks, approaches to monitoring programs and indicators.</li> <li>▪ <i>Section 10</i> of the CAP explains the CMA's adaptive approach to project implementation. The CMA also intends to produce an annual report card on the catchment to illustrate progress towards catchment targets.</li> <li>▪ <i>Section 10</i> also explains the CMA's plan to undertake a more strategic evaluation of the success of management actions in 2011. Given that the monitoring provisions for the catchment targets were developed in 2003 and implementation of some management actions were begun in 2005/06, this is not a timely plan for evaluating the efficiency, effectiveness and appropriateness of NRM activities in the catchment.</li> </ul>

Component	Assessment of process against this component	Selected evidence
Information management	<p>The CAP provides limited confidence that the CMA has good information management systems in place.</p> <p>The next step is for the CMA to ensure that information is managed so that knowledge and data is used transparently to inform decisions at all levels of its operations.</p>	<ul style="list-style-type: none"><li>▪ <i>Section 10</i> outlines the CMA's approach to information management.</li><li>▪ Extensive information is contained within the CAP's supporting documents. However, much of this information has not been updated since these documents were developed for the Blueprint (2000-03) and is not easily accessible to users of the CAP.</li></ul>



## 2.2 Are the CAP targets likely to promote the state-wide targets?

For the management and catchment targets within a CAP to promote the achievement of the state-wide targets they need to:

- have been developed using a rigorous and transparent process that was compliant with the standard
- provide a basis for assessing performance, which means they need to be measurable (including having timeframes, units of measure, clear target levels, and performance indicators)
- be supported by information that demonstrates that they are relevant and achievable
- demonstrate linkages between the different sets of targets, which mean that management targets should clearly contribute to catchment targets and catchment targets should clearly contribute to the state-wide targets.<sup>14</sup>

The NRC has some confidence that the Lower Murray Darling CAP targets will promote the state-wide targets. The NRC assessed the sets of catchment and management targets and found that they meet some of the above requirements. The NRC notes there are gaps in the biodiversity and community target areas. However, the CMA has a Strategic Planning Framework and reasonable plans in place that should enable the CMA to improve its CAP over time.

The NRC found that many of the targets provide a basis for assessing performance. The targets have timeframes, most have units of measure and specify target levels. All targets have defined performance indicators, however not all performance indicators will be able to be measured by the monitoring programs that the CAP specifies. Benchmarks are not always fully described in the body of the CAP. However, benchmarks for most catchment targets are outlined in *Supporting Document 4 (Detailed Monitoring and Audit Provisions)*.

The CAP contains some supporting information to explain why targets are relevant and achievable in the 'pressure', 'response', 'rationale' and 'benefit statement' section within each target area. *Supporting Document 3 (Catchment Targets and Issues Analysis)* and *Supporting Document 4 (Detailed Monitoring and Audit Provisions)* give further details on the underlying threats to natural resources, and the knowledge and justification for targets. The CAP includes risks and mitigating actions for each catchment target, however these are not always risks related to target achievement

The CAP depicts the general links between catchment objectives, catchment targets and management targets. The CAP also articulates the linkages across target areas. However, the hierarchy of targets as defined in the CAP is inconsistent. For example, some management targets describe resource condition outcomes and some describe monitoring activities. In addition, some catchment targets describe management actions.

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<sup>14</sup> These characteristics of targets correspond to the requirement of the Australian and NSW Government Joint Steering Committee that targets be 'Specific, Measurable, Achievable, Relevant and Timebound' (SMART). See Natural Resource Management Ministerial Council (2002) National Framework for Natural Resource Management (NRM) Standards and Targets. Available at <http://www.nrm.gov.au/publications/standards/index.html>.

The linkages between CAP targets and the state-wide targets are less clear. The CAP provides a table of the correlation between state-wide targets and CAP target areas in *Section 3.1* but these outline management activities which are not obvious components of management targets, particularly in the vegetation and community target areas. CAP targets in these areas do not clearly contribute to state targets for biodiversity (particularly relating to terrestrial biodiversity) and community (particularly relating to capacity of non-indigenous natural resource managers). However, other aspects of the CAP provide some indication that the CMA's activities will contribute to these state targets and the CAP includes an action plan to further develop biodiversity targets. The next step for the CMA will be to improve its CAP targets so that they provide a strategic direction for investment and action in these important areas. The CMA should also improve the measurability of the CAP targets.

### **2.3 Does the CAP meet other government requirements?**

CAPs need to fulfil a range of legislative requirements, including those under the *Catchment Management Authorities Act 2003*, the *Native Vegetation Act 2003* and the *Threatened Species Conservation Act 1995*. CAPs also need to reflect other specific requirements nominated by the NSW Government and JSC.

The NRC has assessed the Lower Murray Darling CAP against each of these requirements and priorities.

The NRC found that the CAP meets most government requirements (see Table 2.3).

The CAP currently relies on vegetation targets as a proxy for delivering biodiversity improvements. The CAP includes a biodiversity chapter and an action plan outlining the areas of work the CMA will focus on over the next 18 months to further develop its biodiversity targets.

Most of the targets appear to be SMART. The CMA should improve the measurability and information supporting the achievability of the targets over time.

As Table 2.1 outlined, the CMA intends to review its CAP targets in 2011. However, the NRC considers it important that the CMA Board further refines and demonstrates its strategic planning processes and updates the CAP and improves the targets and their measurability within the next 18 months.

In developing its findings, the NRC has consulted with the Department of Environment and Climate Change, the Department of Primary Industries and the JSC.

**Table 2.2: NRC assessment of the CAP against legislative requirements**

Legislative requirement	Finding
Biodiversity certification	<p>The NRC considers the CAP, and the systems that underpin it, meet the requirements for biodiversity certification.</p> <p>The CAP does not include specific biodiversity targets but it does include biodiversity objectives and a biodiversity chapter. The CAP currently relies on vegetation targets, specifically conservation reserves, to deliver biodiversity improvements. <i>Chapter 8.1</i> outlines the activities the CMA has or is undertaking to improve is biodiversity knowledge, planning and management and the process the CMA is following to further develop biodiversity targets.</p> <p>Aquatic biodiversity is currently addressed through the riverine health targets. Priority areas for management of aquatic species have been identified.</p>
Environmental planning instruments and other natural resource plans	<p><i>Chapter 2</i> describes and depicts the framework of legislation, policies and strategies at national, basin, state and regional scales which influence the operating environment of the CMA. The CAP lists the existing strategies and plans that were considered in its development. The CAP states that “due regard is given to government policy including planning instruments”. The CAP also outlines mechanisms for collaboration with local government on projects.</p>
Environmental Water Trust Fund	<p>The CAP includes information on how an Environmental Water Trust Fund would operate, if established. <i>Schedule 3 (Water Management)</i> describes the CMA’s possible functions in adaptive environmental water management.</p>

**Table 2.3: NRC assessment of the CAP against state and national priorities**

State/national priority	Finding
JSC Investor Preferences	The CAP targets adequately address relevant Investor Preferences. The CAP also includes an action plan and intention by the CMA to further develop its biodiversity targets.
SMART targets	<p>Most targets in the CAP appear to be SMART. However, some do not specify target levels or benchmark data and some will not be measurable given the performance indicators and monitoring programs specified.</p> <p>The CAP states that the CMA will coordinate collection of benchmark data to expand the community targets and make them SMART.</p> <p>The NRC considers the CMA should improve the measurability of the targets as part of its review and update of the CAP.</p> <p>The NRC considers the CMA should make information supporting the achievability of the targets more accessible within the CAP as it updates the CAP.</p>
Native vegetation management priorities and programs	<p>The catchment target for native vegetation is based on the ‘improve or maintain’ principle. <i>Schedule 2</i> states that the CMA will use PVPs to assess clearing proposals and deliver incentive funding for enhancing native vegetation.</p> <p>The vegetation targets aim to improve vegetation condition, maintain extent of vegetation and increase the area actively managed for conservation.</p>
Salinity targets	The salinity targets were developed using MDBC modelling techniques. There was no MDBC salinity target set for the Lower Murray Darling catchment however the CAP target refers to an end-of-valley target at the Lock 6 monitoring site which is consistent with the MDBC target at Morgan in South Australia.
National framework for NRM Standards and Targets	<p>The NRC considers that the CAP targets are consistent with the relevant ‘National Matters for Target’.</p> <p><i>Section 3.1</i> explains why the CAP does not include specific targets for ‘turbidity/suspended particulates in aquatic environments’. However the NRC considers that riverine and soil management targets will help to manage this issue.</p>
Blueprint evaluation	<i>Section 3</i> explains how the Blueprint was evaluated for the development of the CAP. The Board decided that the Blueprint targets were still relevant for the CAP and hence moved the timeframes for achievement ahead to 2015. The riverine health and salinity catchment targets were updated given new knowledge and new soil targets were created.
NSW Government Statements of Intent	Not applicable.

### **3 NRC's assessment of the CMA's capacity to improve the CAP over time**

The NRC assessed whether the Lower Murray Darling CMA will continue to improve its CAP's compliance with the standard and the likelihood of promoting achievement of the state-wide targets. The NRC believes the CMA will continue to improve, for the following reasons:

- the CMA demonstrated good results in the January 2006 Systems Review
- the CMA Board has formalised its Strategic Planning Framework
- the CMA has demonstrated it has reasonable plans to improve its compliance against each component of the standard
- the actions the NRC has recommended will encourage the CMA to focus on the key areas that require improvement, refine the catchment and management targets, and will promote accountability to the NRC, other CMAs, investors and the broader NSW community
- the NRC will regularly review the CMA's progress of these recommended actions, which will provide an additional incentive for the CMA to address key issues and demonstrate progress within reasonable timeframes.

#### **3.1 The CMA's plans to improve the CAP**

The NRC has assessed the Lower Murray Darling CMA's plans for improving the CAP over time, based on its discussions with the CMA during the CAP review process and its evaluation of the CAP. The NRC is satisfied the CMA has reasonable plans and processes in place for improving its CAP and the CAP's compliance with the standard.

Table 3.1 summarises the NRC's assessment of the Lower Murray Darling CMA's plans to improve its CAP against the components of the standard. The NRC believes it is important that the CMA implements, reviews and refines all of these plans and processes, and then updates the CAP within 18 months. The CMA should give particular attention to demonstrating its capacity in strategic planning, particularly focussing on improving use of best available knowledge, consideration of scale, and integration of current and future risks to catchment resource condition. In addition, the CMA should focus on developing a framework for evaluating opportunities for collaboration and an overall risk management strategy for all levels of the organisation. Improvements in these areas will be crucial to the ongoing success of the CMA as an organisation and the ability of the CMA to improve the CAP over time.

**Table 3.1: NRC assessment of the Lower Murray Darling CMA's plans to improve**

Component	Plans to improve
Collection and use of knowledge	<ul style="list-style-type: none"> <li>▪ The CAP describes the CMA's use of models, databases and decision-support systems to update and integrate new knowledge, and lists some examples of activities and mechanisms to fill knowledge gaps, including specific projects, the Portfolio system and technical experts.</li> <li>▪ <i>Portfolio committees</i> based on subregions or natural resource themes are responsible for identifying issues, knowledge, knowledge gaps and projects. External parties are sometimes involved to bring in community, industry or other expertise. The CMA also has a <i>Think Tank</i> email group for community knowledge and identifying knowledge gaps.</li> <li>▪ The CAP states that the CMA updates its knowledge base at the project level by reviewing external information in an ongoing manner. This enables the CMA to assess the relevance and appropriateness of catchment activities, and implement adaptive approaches if necessary.</li> <li>▪ The CMA intends to broaden its knowledge sources to access additional information from agencies, universities and research institutions.</li> <li>▪ The CMA intends to continue to improve its biodiversity knowledge and has an action plan to further develop its biodiversity targets.</li> </ul>
Determination of scale	<ul style="list-style-type: none"> <li>▪ The Landscape Assessment and Management Planning System decision-support tool prioritises projects on the basis of multiple benefits that can be gained from investment action at different spatial scales.</li> <li>▪ The CMA intends to add an agenda item to project planning meetings, to specifically address all aspects of scale at program and project levels.</li> </ul>
Opportunities for collaboration	<ul style="list-style-type: none"> <li>▪ The CMA intends to develop its community database to include all potential collaborators, assess collaborations after project completion, to assess 'lessons learnt' and apply these to subsequent planning, and develop performance indicators for monitoring the effectiveness of collaboration.</li> <li>▪ The CAP explains that the CMA will develop service level agreements, memoranda of understanding, and project-level collaborations with a variety of partners.</li> </ul>
Community engagement	<ul style="list-style-type: none"> <li>▪ The CMA has a <i>Communication and Community Engagement Policy</i> and Board members maintain networks within the community. The Policy guides the development of operational plans for planning and implementing community engagement activities.</li> <li>▪ The CMA has developed a community database to collect landholder and other stakeholder information.</li> <li>▪ The CMA intends to conduct an annual survey to seek community feedback on the level of satisfaction with CMA services and CAP implementation.</li> </ul>
Risk management	<ul style="list-style-type: none"> <li>▪ The CMA intends to adapt its risk management process to make it more relevant to the CMA's needs.</li> </ul>
Monitoring and evaluation	<ul style="list-style-type: none"> <li>▪ The CAP states that the CMA will undertake a comprehensive review of its monitoring programs as part of its five year review (2011).</li> </ul>
Information management	<ul style="list-style-type: none"> <li>▪ The CMA has information management systems based on GIS, record keeping and data protocols and standards.</li> </ul>
Overall	<ul style="list-style-type: none"> <li>▪ The Strategic Planning Framework states the CMA Board shall ensure that the standard will be used as a basis for making informed decisions.</li> </ul>

## 4 NRC's recommendation

In accordance with section 13 (b) of the *Natural Resources Commission Act 2003*, the NRC recommends that the Minister approve the Lower Murray Darling Catchment Action Plan without alteration.<sup>15</sup>

The NRC further recommends that the Minister require the CMA to undertake a review of the Catchment Action Plan within 18 months of approval to incorporate its progress on the following actions:

- a) demonstrating the CMA Board is applying and refining its Strategic Planning Framework to develop and approve high quality strategic plans
- b) continuing to develop and implement processes for transparent decision-making and priority-setting at all levels of the CMA that are consistent with the standard
- c) developing a process for systematically considering potential collaborators, and the costs and benefits of collaboration with existing and potential partners
- d) developing an overarching risk management strategy that ensures it consistently identifies, prioritises, manages and reviews risks at all levels of its operations
- e) continuing to implement its processes for gathering best available knowledge and identifying and filling knowledge gaps to inform decision-making and priority-setting at all organisational levels in the CMA
- f) working with the Department of Environment and Climate Change on the actions set out in the CAP to further develop biodiversity targets
- g) maintaining and enhancing links between the CMA and local government as a key part of supporting the integration of natural resource management and local planning.

The NRC considers that this approach will allow the Lower Murray Darling CMA to 'get on with business', while also ensuring continuous improvement in the CAP document and implementation. The above actions are discussed in detail below.

- a) should encourage the CMA Board to improve its approach to strategic planning and ensure that the strategic direction and investment decisions of the CMA contribute most effectively to long-term improvement in the important natural resource assets in the catchment.
- b) should encourage the CMA, at all levels of the organisation, to build on its existing decision-making processes and to make them robust, transparent and consistent with the standard. Specifically, this should help ensure the CMA's decision-making is informed by best available knowledge, scale and an understanding of risks to resource condition. This includes current and potential future risks to resource condition, for example, the potential risks posed by climate change and water availability. It also includes ensuring that the CAP targets provide a strategic direction for investment and actions that contribute to all of the relevant state-wide targets, issues of state and national importance and improving the SMARTness of the targets.

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<sup>15</sup> Under section 23 (1) of the *Catchment Management Authorities Act 2003*.

- c) should ensure that the CMA establishes effective means for continuing to engage and collaborate with existing and potential partners through CAP implementation and review phases. It will allow the CMA to evaluate potential partnerships on the basis of risks, costs and benefits, so that partnerships contribute to maximising gains and minimising costs.
- d) should assist the CMA to systematically identify, assess, prioritise and manage risks at all levels of its business, including Board strategic decision-making, target prioritisation, investment program planning, and project planning and implementation. It should encompass the risks listed in the CAP and ensure that these risks are reviewed and managed as part of an ongoing risk management process. By developing a systematic process to effectively identify and manage risk, the CMA will be more able to achieve its catchment targets and to provide confidence to stakeholders and investors.
- e) should assist the CMA to use best available knowledge to inform decision-making and priority-setting. It is important that the CMA continues to improve its processes for gathering best available knowledge from a broad range of sources, including educational and research institutions and to identify and fill knowledge gaps.
- f) should assist the CMA to ensure the CAP provides strategic direction for biodiversity improvements in the catchment.
- g) should encourage the CMA to continue to build relationships with local government to maximise integration of the CAP and local planning instruments. Local government will play a key role in the achievement of CAP targets and the CMA needs effective mechanisms for working collaboratively with local government.

#### **4.1 How should the CMA demonstrate progress?**

The NRC will require the Lower Murray Darling CMA to report 6-monthly, in a letter, on its progress in undertaking the actions detailed above. This will require the CMA to assess and report on its own progress at regular intervals.

This kind of regular self-assessment is important for the CMA's own adaptive management, and will also create opportunities for it to seek guidance or support where necessary.



## 4.2 How will progress be monitored?

Regular review of the CMA's progress should assist the CMA in achieving and demonstrating continuous improvement. It should also highlight any additional obstacles to the CMA's progress. In addition, it should provide investors with increased confidence as they move beyond 2008/09 and into the next funding cycle.

The NRC will:

- require the Lower Murray Darling CMA to report 6-monthly, in a letter to the NRC, on its progress in taking the actions listed in this chapter
- undertake an audit if progress in taking the actions is not adequate
- audit the effectiveness of the implementation of the most recent version of the Lower Murray Darling CAP within 2 years of the date of approval
- undertake a mid-term review of this CAP in 2011. This will be a formal audit of the CMA's compliance with the standard and promotion of the state-wide targets.

## 4.3 What can the government do to support this CMA?

The NRC considers that to successfully implement the CAP, the Lower Murray Darling CMA will require support from the government to:

- enable the CMA to improve its knowledge and information management systems
- continue to improve monitoring and evaluation arrangements, given the limited funding available and historic lack of clarity on roles and responsibilities for monitoring and evaluation in NSW
- provide flexibility in funding cycles to improve the ability of the CMA to deliver NRM outcomes in priority areas.

Most of these issues are also relevant to other CMAs, and are more fully explained in the NRC's consolidated report on all CAPs.



