



AN INTRODUCTION TO  
THE STANDARD FOR  
QUALITY NATURAL  
RESOURCE MANAGEMENT  
for everyone involved in NRM

December 2007



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## List of acronyms

CMA	Catchment Management Authority
ISO	International Organization for Standardisation
M&E	Monitoring and Evaluation
NRC	Natural Resources Commission
NRM	Natural Resource Management
NSW	New South Wales

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# 1 Introduction

The *Standard for Quality Natural Resource Management* (the Standard) aims to promote quality practice in the natural resource management (NRM) sector, and encourage adaptive management to achieve improvements in resource condition. This document explains the benefits of the Standard and how it can be used by all natural resource managers to build and maintain high-quality, systematic approaches to NRM. In NSW, Catchment Management Authorities (CMAs) are legally obliged to meet the Standard. However, the Standard will be most powerful if used by all natural resource managers.

This document has been prepared by the Natural Resources Commission (NRC) to help **all** natural resource managers understand the Standard and its benefits. If you would like to learn more about implementation of the Standard and how it can be used in your organisation, please contact the NRC.

This document is a companion to and should be read in conjunction with the Standard.<sup>1</sup> The Standard is the primary document that is universally applicable and focused on outcomes. The *Guide to Using the Standard for Quality Natural Resource Management: A Guide for CMAs*<sup>2</sup> and the other references listed in it provide more specific information about natural resource management practices and methods.

## 1.1 What is the Standard?

The Standard is a set of seven inter-related components that define the characteristics of quality NRM practice. These characteristics are expressed as *Required Outcomes* that effective natural resource managers are expected to meet. These *Required Outcomes* provide consistent reference points to help organisations and individuals evaluate and improve their decision-making and management approaches at all institutional scales (from national to property scale) and through all phases of the adaptive management cycle (plan-implement-audit-respond). Thus the Standard improves the ability of those managing natural resources to deliver the greatest possible improvements in resource condition. It also promotes a consistent level of quality across the NRM sector.

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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>.

<sup>2</sup> Natural Resource Commission (2005) *Guide to Using the Standard for Quality Natural Resource Management: A guide for CMAs*. Available at <http://www.nrc.nsw.gov.au>.

The Standard is a management standard rather than a technical standard – that is, it sets criteria for quality practice, but does not define strict steps to be followed or detailed specifications that must be adhered to. It is similar in style to other management standards, such as *AS/NZS ISO 9001* (quality management systems)<sup>3</sup> and *AS/NZS ISO 14001* (environmental management systems),<sup>4</sup> but quite different to more prescriptive standards or guidelines such as the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.<sup>5</sup>

The Standard defines the characteristics of quality that the best natural resource managers already achieve in their work. It aims to formalise these characteristics, extend their acceptance as quality practice, and promote a consistent level of rigour and professionalism across the NRM sector. In other words, the Standard aims to make high quality practice common practice.

## 1.2 Why a standard for NRM?

In both the private and public sectors, standards are widely used to facilitate and ensure the quality of services and products. Standards set performance expectations, provide criteria for assessing quality and guide improvement.

A specific standard for NRM is needed because:

- natural resources are managed in complex and variable natural and institutional environments
- there is often limited social, economic and environmental knowledge to inform decisions
- the outcomes of investments in NRM may be difficult to measure in the short to medium-term
- there is increasing community awareness of our dependence on healthy natural resources and increasing community expectations about how these resources are managed
- NRM is increasingly becoming a 'business' or industry in its own right, and therefore needs to embrace some of the rigour and discipline used in other industries to focus efforts and deliver results.

In a complex environment with limited information and open systems, adaptive and high-quality decision-making is the best way to effectively manage towards identified targets. Like other widely used models for management systems and business process improvement – such as *AS/NZS ISO 9001*, *AS/NZS ISO 14001* and *The Business Excellence Framework*<sup>6</sup> – the Standard is based on the principle that high-quality systems and processes are essential to enable organisations to make good decisions that will lead to the best possible outcomes.<sup>7</sup> In the NRM sector, the Standard supports managers to make the most efficient use of available resources to achieve the greatest possible long-term outcomes.

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<sup>3</sup> Standards Australia, Sydney/Standards New Zealand, Wellington (2000) *Quality Management Systems – Requirements AS/NZS ISO 9001:2000*.

<sup>4</sup> Standards Australia, Sydney/Standards New Zealand, Wellington (2004) *Environmental Management Systems – Requirements with guidance for use AS/NZS ISO 14001:2004*.

<sup>5</sup> Australian and New Zealand Environment and Conservation Council/Agriculture and Resource Management Council of Australia and New Zealand (2000) *National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Available at <http://www.mincos.gov.au>.

<sup>6</sup> SAI Global (2007) *GB 002-2007: The Business Excellence Framework 2007*.

<sup>7</sup> For an overview of the process to develop the Standard see Natural Resources Commission (2005) *Recommendations – State-wide standard and targets*. Available at <http://www.nrc.nsw.gov.au>.

### 1.3 Who can use the Standard?

The Standard can be used by any natural resource manager at any scale to improve their approach to NRM and assure stakeholders of the quality of this approach. For example, it can be used by:

- regional NRM bodies
- local government
- government agencies
- community NRM groups
- industry groups concerned with NRM
- landholders.

The Standard promotes and enables innovation and flexibility in response to local needs. It takes into account the considerable variability in the biophysical, social, economic and cultural conditions in different geographic regions, as well as the characteristics, roles and responsibilities of various NRM organisations.

The Standard should be used in a way that is most appropriate to the needs and functions of different managers and organisations. It can be used to continually assess and improve the quality of existing business and management systems. It can also be used to more rapidly improve or redesign systems, or develop entirely new ways of doing business.

For example, a typical NRM business system based on the 'plan-implement-audit-respond' adaptive management cycle can be assessed against the *Required Outcomes* of the Standard to identify ways to improve it. Similarly a water, vegetation or property management plan, or the process to develop or evaluate a management plan, can be designed from scratch using the *Required Outcomes* of the Standard as guidance.

### 1.4 Structure of this document

This document explains the value of the Standard, and how it can be used by any organisation or individual involved in managing natural resources:

- Chapter 2 provides an overview of the scope and components of the Standard and describes the benefits of adopting the Standard to inform and enhance systematic approaches to NRM
- Chapter 3 explains how the Standard can be used to evaluate and improve existing systems, and build high-quality new systems at any scale
- Chapter 4 provides guidance on how self assessment and external audits can be used to ensure improvement over time
- Chapter 5 explains that this document and the Standard itself will be subject to review and improvement.



## 2 Understanding the Standard and its benefits

The Standard aims to improve the efficiency and effectiveness of NRM investments in achieving improvements in resource condition. It supports natural resource managers to optimise their present investment to ensure the best possible long-term outcomes. The Standard encourages consistent, transparent and rigorous decision-making throughout the adaptive management cycle.

To provide an overview of the Standard, and help explain its value, the sections below discuss:

- the scope and components of the Standard
- the relationship between the Standard and the adaptive management cycle
- the benefits to all natural resource managers of using the Standard and taking a systematic approach to managing natural resources.

### 2.1 Scope of the Standard

The Standard sets out seven inter-related components that characterise quality NRM practice. For each component, the *Required Outcome* describes the level of quality that natural resource managers are expected to achieve (see Section 2.1).

However, the Standard does not prescribe how the *Required Outcomes* should be met: it is not a 'recipe' for managing natural resources. Rather, it provides guidance on how each *Required Outcome* might be achieved and indicates what evidence might be provided to demonstrate that it is being achieved. The guidance is not mandatory. It is up to individual natural resource managers to judge the most appropriate way to meet the *Required Outcome* in their particular circumstances.

This flexible, non-prescriptive approach is essential in the NRM sector, because the sector is so varied and complex. The way natural resource managers consider the Standard needs to sensibly correspond to the nature and magnitude of the decision or activity concerned.

The Standard is also designed to provide a common foundation, so all natural resource managers can build consistent approaches, speak a common language and apply the same logic in many different situations.

## 2.2 Components of the Standard

The seven components of the Standard and the *Required Outcomes* are listed below. These components are inter-related, and the achievement of each *Required Outcome* depends on and is related to the achievement of others. Thus successfully meeting the Standard depends on meeting the *Required Outcome* for all components rather than for single components.

### Collection and use of knowledge

*Required Outcome: Use of the best available knowledge to inform decisions in a structured and transparent manner.*

This requires that natural resource managers use the best available knowledge to inform decisions and that this is done in a structured manner. It also requires that the way in which information and other knowledge has influenced their decisions be transparent. This transparency will help managers identify and address information gaps, and provide confidence to their community and other stakeholders that their decisions are well founded.

### Determination of scale

*Required outcome: Management of natural resource issues at the optimal spatial, temporal and institutional scale to maximise effective contribution to broader goals, deliver integrated outcomes and prevent or minimise adverse consequences.*

This requires managers, as part of their business systems and processes, to explicitly and systematically consider scale at all stages of the adaptive management cycle. The consideration of scale as part of relevant business processes will help natural resource managers to consistently plan and implement policies, programs and projects that take account of the implications of scale and thus maximise benefits across environmental, economic, social and cultural issues.

### Opportunities for collaboration

*Required outcome: Collaboration with other parties to maximise gains, share or minimise costs or deliver multiple benefits is explored and pursued wherever possible.*

This requires managers to explore the costs and benefits of collaborative action with other users and managers of natural resources, and seek to collaborate when this will increase the effectiveness and benefits of planned NRM activities, or reduce the costs.

### **Community engagement**

*Required outcome: Implementation of strategies sufficient to meaningfully engage the participation of the community in the planning, implementation and review of natural resource management strategies and the achievement of identified goals and targets.*

This requires natural resource managers to develop and implement strategies to meaningfully engage a range of communities and community members and involve them in each phase of the adaptive management cycle.

### **Risk management**

*Required outcome: Consideration and management of all identifiable risks and impacts to maximise efficiency and effectiveness, ensure success and avoid, minimise and control adverse impacts.*

This requires natural resource managers to systematically assess and manage all risks associated with their NRM decisions and activities. These risks include factors or events that could have adverse effects on NRM activities and the achievement of their objectives, as well as the potential for NRM activities to have adverse effects themselves.

Managers should systematically identify and assess risks at strategic, organisational and project levels, develop risk management strategies, and regularly review and update these strategies.

### **Monitoring and evaluation**

*Required outcome: Quantification and demonstration of progress towards goals and targets by means of regular monitoring, measuring, evaluation and reporting of organisational and project performance and the use of results to guide improved practice.*

This requires natural resource managers to plan and implement monitoring and evaluation (M&E) programs that they will use to assess the effectiveness of their activities. It also requires them to incorporate the lessons learned through M&E into their planning and decision-making processes. In this way, they will close the adaptive management 'loop' and be able to achieve continual improvement. An NRM organisation's M&E programs should be designed to address its decision-making needs. Managers may also rely on collaborative approaches to M&E and information derived from other M&E programs for broader information.

### **Information management**

*Required outcome: Management of information in a manner that meets user needs and satisfies formal security, accountability and transparency requirements.*

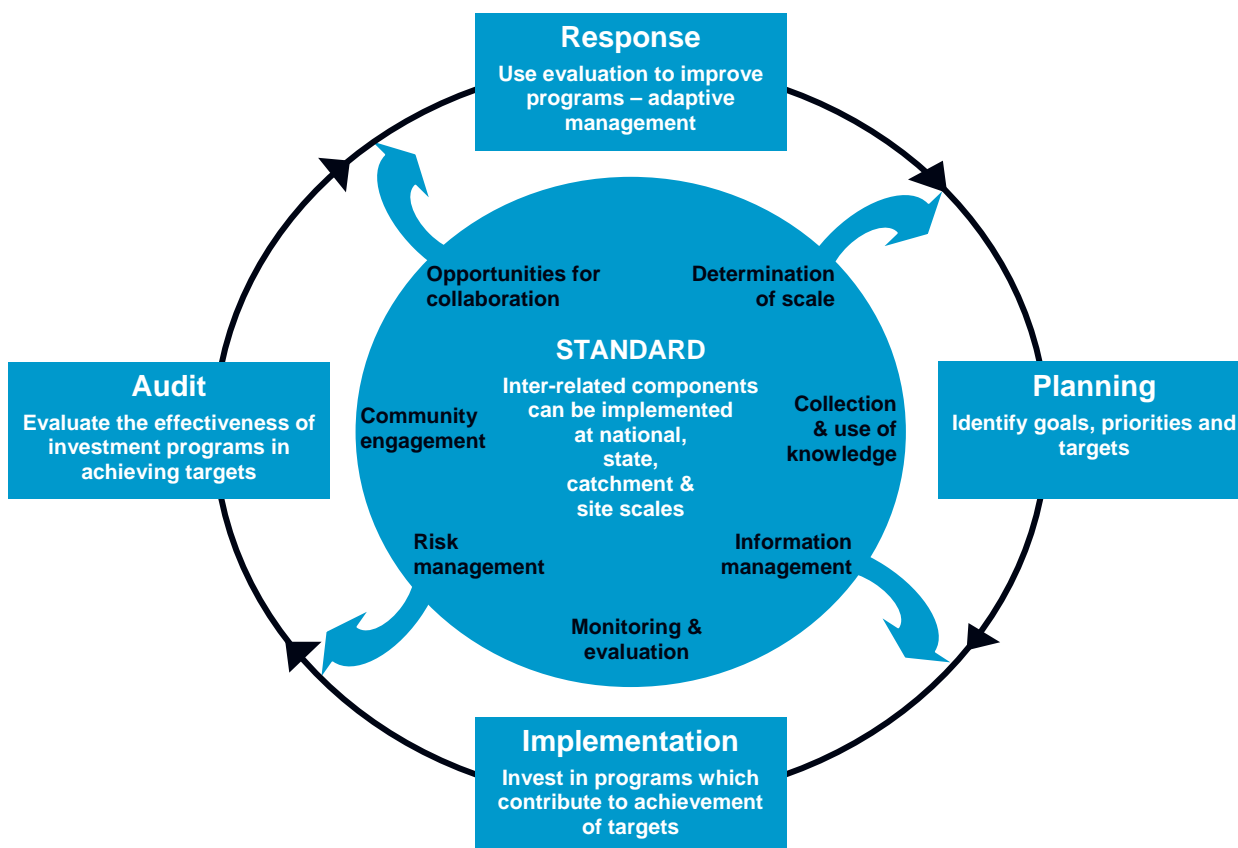
This requires that natural resource managers develop information management systems that will make it easy for them to access and use this information, and maintain transparency, accountability and continuity.

## 2.3 The Standard and the adaptive management cycle

The seven components of the Standard can inform and promote the adaptive management cycle. This cycle of planning, implementation, audit and response is illustrated in Figure 2.1. Each of the seven components should be considered in each phase of the cycle, to identify appropriate actions particular to that phase of the cycle. For example, in the planning phase ‘Community engagement’ may involve dialogue with the community to determine their values and vision for their local area, while in the implementation phase it may involve building community capacity to undertake on ground works. However, the relevance of the different components of the Standard will vary in each phase.

If the Standard is widely adopted throughout the NRM sector, it will help embed adaptive management in NRM practice. This is important, given that the sector has changing and complex institutional arrangements and long-term investment horizons.

**Figure 2.1: Components of the Standard underpin adaptive management at all scales**



The Standard can be used to support two different types of improvement in NRM organisations: continual improvement, or more rapid, ‘step’ improvement. Continual improvement involves routine planning, testing, checking and improving. Rapid or ‘step’ improvement involves using the Standard to inform more significant system development or re-design.<sup>8</sup> These two different approaches are explained further in Chapter 3.

<sup>8</sup> Griffith et al. (2007) *Exploring key attributes and standards of a model for quality assured regional NRM*. Land and Water Australia.

## 2.4 Benefits of using the Standard and taking a systematic approach to managing natural resources

Natural resource managers need high-quality inputs to be confident that their decisions and actions will result in the best possible resource condition outcomes. They also face a wide range of challenges, including:

- managing complex and interdependent natural systems, where processes operate at different scales and long time lags exist between intervention and outcomes
- dealing with uncertainty, where the reliability of data to inform decision-making has traditionally been poor
- balancing competing values to determine priorities and trade offs
- working in a complex institutional environment with a range of organisations, at different scales, with different responsibilities and sometimes diverse approaches
- being part of a broader system which has mixed drivers and influences, and where it is necessary to coordinate many actions across a wide range of geographic and institutional scales.

Taking a systematic approach to NRM business helps to manage these challenges. With quality systems and management approaches for NRM, managers can focus on the natural resource outcomes they are aiming to achieve, knowing that their work is supported by rigorous, logical practices that are consistent across their organisation. The Standard provides the criteria to ensure that these systems and approaches are high quality and will support organisations in achieving their goals.

Undertaking NRM in a manner that meets the Standard has many advantages. For example, it will help in:

- **Managing uncertainty** - When the outcomes from action may not be evident or measurable for several years, meeting the Standard gives confidence that the most appropriate decision has been made, and increases the probability that the desired outcomes will be achieved.
- **Improving transparency and accountability** - Meeting the Standard's *Required Outcomes* helps to identify specific investment priorities and trade offs, and can demonstrate transparent and rigorous decision-making to third parties.
- **Maximising efficiency and effectiveness** - The Standard encourages managers to get the most out of the available resources through effective coordination of partnerships, a focus on achieving multiple benefits from single investments, meaningful engagement with stakeholders and sharing of information. It promotes actions and investments that maximise gains and minimise costs.
- **Promoting consistency and integration between institutions and managers at different scales** - Use of the Standard by a wide range of organisations and individuals involved in NRM will ensure that different approaches to managing natural resources are underpinned by consistent logic and understanding of quality. This will encourage integration and alignment and ensure more efficient and effective outcomes. One long-term benefit of greater consistency across organisations will be the establishment of common data sets to enable assessment of resource condition across regions.

- **Promoting quality practice** - Where there is a limited pool of funding available, and many players seeking funding, self-declaration of compliance with the Standard sends an important signal to investors that an organisation is undertaking high-quality management of natural resources.

In NSW, the Standard has been introduced as part of a broader framework to promote high-quality management of natural resources. The Standard is being implemented together with state-wide targets and independent auditing to achieve real results. Box 2.1 describes the arrangements in NSW.

#### **Box 2.1: The framework for NRM in NSW – the Standard, targets and audit**

In NSW, the Standard together with agreed state-wide targets and regular auditing provides a framework for rigour and accountability in NRM that will lead to real improvement in resource condition. The Standard helps ensure rigour and consistency in NRM decision-making, while the targets focus activity on agreed natural resource goals and priorities. The regular and systematic audits drive improvement.

The NSW Government adopted the Standard in May 2005.<sup>9</sup> It has also adopted 13 state-wide targets for NRM<sup>10</sup> that are included in the *State Plan*,<sup>11</sup> and established the NRC with an independent auditing function.

The regionally based CMAs are required to meet the Standard in all areas of their business. They have developed Catchment Action Plans using strategic planning processes that meet the Standard, and must ensure that the processes for implementing these plans also meet the Standard. The Catchment Action Plans contain targets that contribute to the 13 state-wide targets. These regional level targets have been designed to suit the unique requirements of individual catchments. The Standard has helped to ensure that these priorities have been informed by the best available information and analysis.

The NRC will audit the effectiveness of the implementation of the Catchment Action Plans in meeting the Standard and contributing to the state-wide targets. By continually improving their performance against the Standard in the implementation and regular review of their plans, NSW CMAs will provide confidence to their stakeholders and investors that they will achieve their catchment targets and make progress to the state-wide targets.

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<sup>9</sup> The NRC recommended the Standard, targets and an aspirational goal for NRM in May 2005. The NSW Government adopted the Standard, a core set of targets and the aspirational goal in May 2005. The NRC provided final recommendations including refined targets in September 2005. The remaining targets were adopted in February 2006.

<sup>10</sup> Natural Resources Commission (2005) *Recommendations – State-wide standard and targets*. Available at <http://www.nrc.nsw.gov.au>.

<sup>11</sup> NSW Government (2006) *The State Plan: A New Direction for NSW*. Available at <http://www.nsw.gov.au/StatePlan>.

### 3 Using the Standard to develop and implement high-quality NRM systems

High-quality business systems enable NRM organisations to achieve high-quality results. In a broad sense, business systems are the framework of methods, processes or procedures for operating that help an organisation fulfil all the tasks required to achieve its goals. These systems enable a consistent approach to activities across all levels of an organisation, and are a means by which organisations can manage change and improvement.

Most NRM organisations already have systems and processes in place for their core NRM functions at different phases of the adaptive management cycle and across different scales of the organisation (strategic to operational). These systems might include, for example:

- strategic planning and prioritisation processes
- land management planning processes
- program implementation systems
- monitoring and evaluation strategies and processes
- contract management systems
- communication and engagement strategies.

The Standard can be used to regularly assess the quality of these systems, and identify opportunities for improvement. It can also be used as an input for designing and implementing new ways of doing business to achieve more rapid improvement.

The sections below explain:

- how the Standard can be used to continually improve existing systems (continual improvement)
- how the Standard can be used develop new high-quality systems or significantly re-design existing systems ('step' improvement)
- how the Standard is relevant to NRM systems and organisations at different scales.

#### 3.1 Improving the quality of existing systems

Ensuring that an organisation has high-quality systems does not necessarily require the development of entirely new systems. Where existing systems provide a sound starting point, the Standard can help to build on these systems by identifying areas for improvement, then ensuring that strategies for improvement are implemented.

NRM organisations that wish to improve their existing systems or business practices can:

1. assess the quality of existing systems, using the *Required Outcomes* of the Standard as assessment criteria
2. identify gaps where the system is not adequately addressing a particular *Required Outcome*
3. identify and prioritise actions to improve the quality of that system.

This process should be undertaken on a regular basis, for example, as part of management reviews, to ensure systems are continually improved.

NRM organisations can also integrate the Standard with their other business management and compliance systems – such as human resources management and performance systems, financial management systems, governance systems, or risk management systems. In addition, they can consider other standards to further strengthen their approach to NRM. For example, a risk management system could be implemented in accordance with the *Australian/New Zealand Standard for Risk Management*.<sup>12</sup>

### 3.2 Developing new high-quality systems

The *Required Outcomes* of the Standard can be used as inputs to the design of new systems. If an NRM organisation is establishing new ways of carrying out its business, or wants to completely rebuild an existing system, the Standard's components can provide direction about what should be included and considered in a particular system to enhance its quality. This more rapid or 'step' improvement is beneficial for organisations that need to quickly improve performance, or for high performing organisations that have reached a plateau. Using the Standard in this way supports innovation in NRM.

For example, a new NRM organisation developing its first strategic plan may decide to follow a typical planning process – considering strategic issues, identifying objectives and targets, consulting with stakeholders, and so on. The Standard provides guidance on what additional aspects should be considered to ensure the planning process is high-quality and appropriate to the NRM sector – such as considering how collaboration with others might help to realise the organisation's strategic objectives.

Similarly, in considering how to manage a specific natural resource issue, an NRM organisation may refer to the components of the Standard to ensure it is considering all the relevant factors necessary for quality management of natural resources. This can help it develop a high-quality management approach for that issue.

### 3.3 Relevance of the Standard at different scales

The Standard can be used to evaluate and improve any system or approach for managing natural resources at any scale. Table 3.1 provides some examples of these activities and processes for NRM organisations operating at different scales.

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<sup>12</sup> Standards Australia (2004) *Australian/New Zealand Standard for Risk Management AS/NZS4360:2004*.



**Table 3.1: Examples of NRM activities and processes that can be evaluated and improved using the Standard**

Natural resource managers and organisations	Typical NRM activities and processes
Regional NRM bodies	Developing and prioritising catchment and management targets Developing investment strategies and prioritising investments Implementing and managing programs and projects
Government agencies (natural resource managers and policy makers)	Developing and implementing policies and programs Allocating funding between CMAs and other NRM groups Managing public land Planning for land use and development
Local government	Planning and managing local NRM initiatives and projects Managing public land Planning for land use and development
Community NRM groups	Developing and managing NRM projects Applying for funding and grants
Industry groups concerned with NRM	Developing and managing NRM projects Identifying research priorities
Landholders	Deciding if, when, where and how to undertake NRM activities on farm

Only NSW CMAs are required by legislation to meet the Standard. However, any natural resource manager in NSW can use the Standard to plan and implement activities that will contribute to meeting the regional targets in Catchment Action Plans and the state-wide targets.

The complexity of systems and management approaches in the NRM sector varies according to the size and responsibilities of the different NRM organisations. Larger institutions, such as regional NRM bodies and government agencies, can use the Standard in establishing, evaluating and improving their formal business systems at the strategic, organisational and project levels. Smaller groups and individuals can use the Standard more directly to inform their on-ground activities by systematically thinking through each component of the Standard when considering action. This will mean, for example, that landholders apply the same logic at the property scale that managers in larger organisations apply in managing issues at the state scale. The application of the same logic to NRM at different scales will promote consistency throughout the sector and foster cooperation and integration between organisations.

### **Box 3.1: Developing systems that meet the Standard – the experience in NSW**

In NSW, CMAs have been leading the way in using the Standard to improve the way they manage their NRM investments. CMAs have been working with the Standard since 2005 to develop and implement business systems and processes that help them meet the Standard in all their activities across the adaptive management cycle.

Typically, CMAs' systems address the periodic processes they carry out, such as strategic catchment planning and regular Catchment Action Plan reviews, as well as their everyday core business activities, such as project selection and management. For example, a CMA's project management system may guide project staff to actively monitor the risks to the project's success, manage and share information generated by the project, and evaluate the performance of the project.

CMAs can improve their ability to consistently meet the Standard by regularly assessing their existing systems, determining whether they are meeting the *Required Outcomes* and improving them where necessary. Continual improvement of CMA business systems over time should increase the likelihood that CMA investments will lead to the achievement of the catchment targets specified in their Catchment Action Plans, and contribute to the achievement of the state-wide NRM targets.

## 4 Self assessment and external audit

Consistent with the adaptive management cycle, all natural resource managers and organisations that use the Standard can use regular self assessment to improve their systems over time and thus improve their capacity to consistently meet the Standard and deliver high-quality NRM outcomes. External audits are an alternative form of assessment but are usually reserved for situations where organisations need to or are required to demonstrate to management, investors and communities that sound investments are being made.

The sections below discuss:

- why systematic self assessment is important for NRM organisations
- the different ways organisations can approach self assessment
- the role of external audit.

### 4.1 The importance of self assessment

It is important to systematically check the effectiveness of NRM business systems. An effective way to do this is to undertake regular self assessment to check that systems continue to work as intended, and to identify areas for improvement.

Other standards for management systems specify the need for regular self assessment. For example, *AS/NZS ISO 14001*<sup>13</sup> requires environmental management system audits to determine whether the system conforms to planned arrangements and whether the system has been properly implemented and maintained. These audits can be undertaken by the organisation's staff or by external consultants.

*AS/NZS ISO 14001* also specifies requirements for 'top management' to review the environmental management system at planned intervals. The purpose of these reviews is to ensure the system's continuing suitability, adequacy and effectiveness, and to assess opportunities for improvement and need for change.

In these cases, the aim of self assessment – and any subsequent improvements to the environmental management systems – is to further improve the organisation's environmental performance. Self assessment by NRM organisations has the same purpose: identifying opportunities to improve systems and activities and acting on those opportunities, enables NRM organisations to improve their ability to make sound decisions and ultimately deliver the best possible resource condition outcomes.

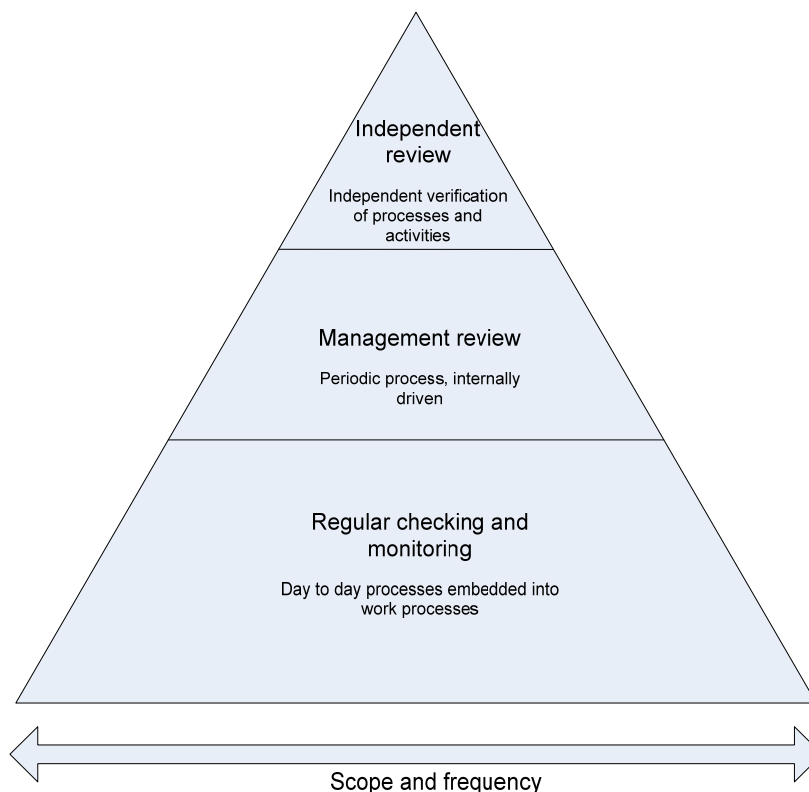
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<sup>13</sup> Standards Australia, Sydney/Standards New Zealand, Wellington (2004) *Environmental Management Systems – Requirements with guidance for use AS/NZS ISO 14001:2004*

## 4.2 Approaches to self assessment

Self assessment can take place at a number of different levels and for different purposes, to suit the particular role and structure of any organisation. For example, it can occur through simple mechanisms that ensure staff check on and evaluate key parameters on a regular basis. Or it can be a formal review or audit process, which is driven by internal needs and undertaken by internal or independent personnel.

**Figure 4.1: Hierarchy of self assessment processes<sup>14</sup>**



As Figure 4.1 illustrates, the different types of self assessment can be seen as a hierarchy based on their scope and frequency. Within this hierarchy:

- **Regular checking and monitoring** occurs most frequently, and is likely to be widest in scope. This type of self assessment involves a range of day-to-day processes embedded into staff's daily work, such as processes to check certain parameters, review financial and other data, review project progress and review project risks.
- **Management reviews** tend to be more specific in scope and targeted at areas where significant risks or need for improvement have been identified. Typically, this type of self assessment occurs less frequently than regular checking and monitoring, but is still routine and regular.

<sup>14</sup> Figure adapted from: Standards Australia (2004), *HB 158-2006: Delivering assurance based on AS/NZS 4360:2004 Risk Management*.

- **Independent reviews** tend to be the most selective in scope and less frequent than the other measures. They may be undertaken by external consultants, or by staff who are not directly involved in the activities or area under review. This type of self assessment tends to be driven by the need for independent verification or quality assurance.

### 4.3 Role of external audit

Many natural resource managers and organisations will not be subject to external audit of their systems, though some will be subject to external financial audits. External auditors usually report and provide assurance to parties external to an organisation (for example, investors, regulators or the public). However, the results of external audits can also be used by organisations to identify opportunities to improve performance.

External audit is a key part of the framework for NRM in NSW. Box 4.1 describes some of the review and audit arrangements and experiences within the regional NRM delivery model in NSW.

#### **Box 4.1: External audit – the experience in NSW**

In the regional NRM delivery model in NSW, the NRC is an independent external auditor responsible for auditing the effectiveness of implementation of Catchment Action Plans, including CMAs' compliance with the Standard and promotion of state-wide targets. The NRC's audit process spans the life of Catchment Action Plans. Its purpose is to inform the NSW Government about the likelihood that the implementation of Catchment Action Plans will lead to the achievement of the state-wide targets. The NRC's draft audit framework describes the approach the NRC will take to auditing implementation of CAPs over their life.<sup>15</sup>

While the NRC audit function provides confidence to investors and communities that sound investments are being made, the audit findings should also be used by the CMAs to identify opportunities to improve their performance.

CMAs have already participated in two formal review processes since the Standard was adopted:

- **Systems reviews** – Independent auditors conducted reviews to identify how well CMA systems (project and strategic) met the Standard and pinpoint any gaps. The CMAs then identified strategies and priorities for improving their systems.
- **Catchment Action Plan reviews** – The NRC conducted a rigorous review of the Catchment Action Plans based on the extent to which the planning process undertaken met the requirements of the Standard and how well the plan promoted the state-wide targets. The review also considered additional requirements of other government stakeholders.

The NRC used the findings of both these processes, including the CMAs' proposed plans to improve over time, to inform its final recommendations to the NSW Government on whether the Catchment Action Plans should be approved.

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<sup>15</sup> The final audit framework will be made available at [www.nrc.nsw.gov.au](http://www.nrc.nsw.gov.au).

## **5 Review and improvement of the Standard**

This document will be reviewed and improved as the NRC, NSW CMAs, and other organisations continue to learn more about how different natural resource managers have used and benefited from using the Standard.

In time, it will also be appropriate to review and improve the Standard. For example, this might involve including additional components in the Standard, such as governance and financial management. Currently, NSW CMAs are the only organisations legally obliged to meet the Standard and their financial management and governance arrangements are subject to established public sector requirements and audit processes. However, as the Standard becomes adopted more widely and by different types of NRM organisations, it may be appropriate to include additional components covering these aspects of NRM delivery to promote consistency, transparency and full accountability throughout the NRM sector.



