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Natural Resource Management Strategy for Southern Tasmania

2010–2015

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OUR
COUNTRY

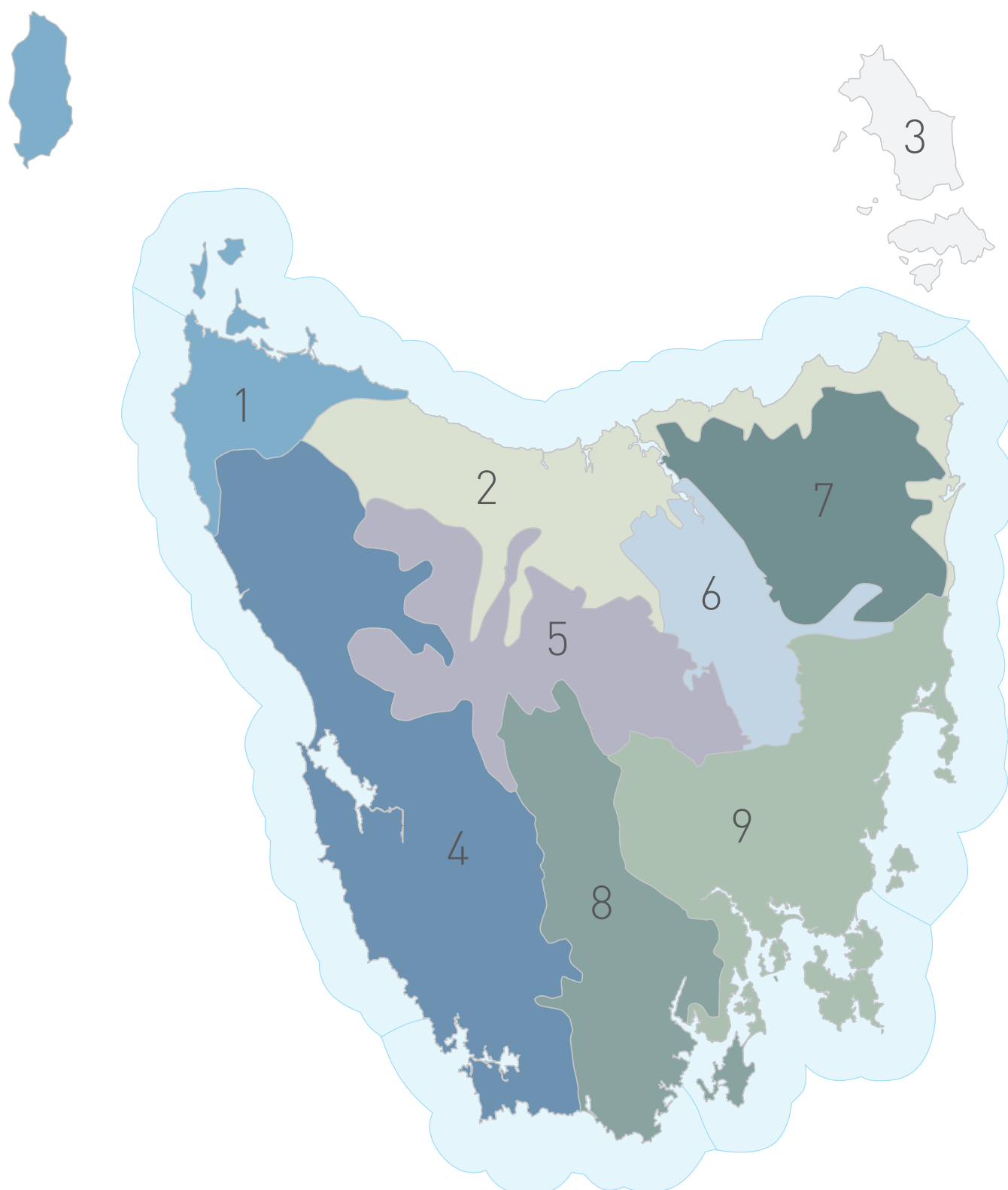




MARINE & TERRESTRIAL BIOREGIONS, TASMANIA

MAP KEY

- | | | |
|--------------------|----------------------|--------------------|
| 1. King | 4. West | 7. Ben Lomond |
| 2. Northern Slopes | 5. Central Highlands | 8. Southern Ranges |
| 3. Flinders | 6. Northern Midlands | 9. South East |





TASMANIAN NATURAL RESOURCE MANAGEMENT REGIONS





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The Board of NRM South appreciates and acknowledges the efforts of the Southern Tasmanian Region community in contributing to the development of this strategy. Many individuals worked with the project team to review achievements and attended workshops. Additionally, key stakeholders have considered how their activities can be incorporated in the implementation plan.

The strategy development was undertaken by NRM South staff who worked closely with Rare Consulting to deliver this document.

In particular, the Board would like to acknowledge Anna Lyth and Mark McKenzie from Rare Consulting, and Aniela Grun, Alistair Kay, Joel Winter and Kathleen Broderick from NRM South.

SUPPORTING DOCUMENTS

This document is supported by an Environmental Scan which can be found on the NRM South website: www.nrmsouth.org.au

DISCLAIMER

In developing this strategy, every effort has been made to ensure that the information is correct and that the content reflects the combined input from the Southern Region community. The Board of NRM South hopes that this strategy will assist in guiding and coordinating natural resource management activity in the Region. Although NRM South is not wholly responsible for implementing this strategy, it will update information as it becomes available (and as resources allow) and encourage commitment from others in strategy implementation.

FURTHER INFORMATION

Further information about this strategy can be obtained by contacting NRM South.

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FOREWORD



Natural Resource Management Strategy for Southern Tasmania 2010–2015

This strategy is intended to guide natural resource management in the Southern Region from 2010 to 2015. This document is a result of the review of the Southern Region Natural Resource Management Strategy (2005), research on emerging issues and changed circumstances (environmental scan), and extensive consultation with stakeholders.

NRM South is committed to undertaking, coordinating, facilitating and reporting actions under this strategy and will also undertake specific actions as identified in Appendix A.

While the three natural resource management regions in Tasmania have developed their strategies independently, based on the needs and preferences of the stakeholders in the region, NRM South is committed to working together with the other regions where it makes sense to adopt a state-wide approach.

All organisations in the region that have a natural resource management focus, including industry, business, state and local government, and community group peak bodies are also encouraged to identify areas where their plans and programs align with this strategy. Many stakeholders have already provided information on their planned actions which can be viewed on the Regional Strategy Implementation Plan at the NRM South website at www.nrmsouth.org.au. This document will remain live over the period of the strategy and organisations will have an opportunity to update it periodically.



EXECUTIVE SUMMARY



About the Natural Resource Management Strategy for Southern Tasmania 2010–2015

The purpose of this strategy, the *Natural Resource Management Strategy for Southern Tasmania 2010–2015*, is to provide a strategic, integrated framework for natural resource management in the Southern Region of Tasmania.

NRM South has facilitated the development of the strategy as part of its core role. The development of the strategy is in accordance with the *Tasmanian Natural Resource Management Act 2002* and subsequent amendments to that Act. Through the review and development of accredited regional strategies such as this, the Tasmanian State Government supports integrated natural resource management across Tasmania.

The strategy is based on best knowledge at time of writing, as well as on previous and existing work, and has been developed with community consultation. It is a whole-of-region and multi-stakeholder strategy intended to provide a focus for natural resource management in the Southern Region of Tasmania and to improve integration and coordination of planning and activities, particularly between sectors and across geographical boundaries.

The strategy is intended to guide existing and forthcoming plans relevant to natural resource management in Southern Tasmania, including property-based plans, catchment management plans, regional land use and settlement plans, and strategies that are state-wide in scope.

A collaborative effort

Responsibility for the management of the Region's natural resources rests not only with government and natural resource management custodians, but with the entire community. As a consequence, this strategy seeks to engage all relevant stakeholders in the management of the region's natural resources. These stakeholders include:

- business and industry;
- the community at large;
- government;
- natural resource management funding and sponsorship bodies;
- land owners and water managers.



Measurement and reporting of progress

Monitoring, evaluation and reporting on the results are important elements of this strategy and its implementation. These activities will help the Region:

- be accountable to partners investing in natural resource management;
- learn about the effectiveness of actions undertaken so they can be adjusted if required;
- ensure programs and investment achieve the vision, goals and targets for natural resource priorities.

NRM South plans to monitor and report progress on the strategy through the bi-annual review of headline indicators. The Implementation Plan will also be monitored to gauge the level of NRM activity in the region.

The strategy framework

The vision provides overarching guidance for the regional strategy. Consultations revealed support for the existing vision and it remained unchanged from the 2005 strategy.

The Southern Region's natural resources will be protected, sustainably managed and improved for the shared environmental, social and economic benefit of our Region by a well-informed, well-resourced and actively committed community.

Two objectives for the Region and five key strategic themes form the framework for this strategy from which strategic actions are recommended and implementation plans can be developed. Details and justification of these are outlined in the main document and are summarised on pages xii - xiii. Note that the indicators that will be used to measure progress were selected as best fit for this purpose.

Criteria for indicator selection include:

- the cost of monitoring (a strong preference is given for existing monitoring data);
- responsiveness (the degree to which the indicator will respond to management activity);
- the timeframe of the response. They are not (and are not intended to be) comprehensive measures.

The Framework provides a structure and clarity for monitoring and reporting purposes, and it will be possible to consider progress in natural resource management against this framework.



VISION

The Southern Region's natural resources will be protected, sustainably managed and improved for the shared environmental, social and economic benefit of our Region by a well-informed, well-resourced and actively committed community.



STRATEGIES

Strategic directions that will be pursued to support the achievement of the objectives



strategy 1

Maximise return for natural resource management investment



strategy 2

Increase community awareness of the Region's natural resource assets



strategy 3

Manage current and emerging threats to the Region's natural assets



strategy 4

Measure and report changes in natural resource condition



strategy 5

Increase stakeholders' capacity to use the Region's natural resources wisely



ACTIONS

Specific high-level actions.

a detailed list of actions can be found in Section 3.3 (pp.19-22)

OBJECTIVES

1. Protect and ensure wise use of the Region's natural assets
2. Enhance the resilience of local communities

HEADLINE INDICATORS

Indicators that will be used to assess progress in respect of each of the strategies

1. Number of organisations actively participating in natural resource management in the Region (as evidenced by participation in the implementation plan).
2. Percentage of actions with one or more stakeholders implementing them.

1.

- Value of investment in research planning activities (annual basis)
- Total value of annual capital investment in natural resource management activities in the Region
- Number and extent of active collaborative catchment plans in the Region

2.

- Assessment of baseline community awareness
- Number of organisations delivering awareness-raising activities
- Range of issues addressed by activities
- Total annual expenditure on awareness-raising

3.

- Number of threats addressed
- Number of stakeholders addressing threats
- Number of environmental flows calculated (and implemented in a water management plan)
- Number and extent of climate change adaptation plans in the Region that address the vulnerability and adaptive capacity of natural assets
- Number of new pests or diseases reported/established
- Number of pests eradicated
- State Coastal Policy is approved and implemented
- Marine reserves are established in accordance with the Tasmanian Marine Protected Area Strategy
- Land use planning provides for sustainable use of natural resources and protects significant environmental assets and landscapes

4.

- Number of resource condition reports available (e.g. State of the Derwent)
- Completion of State of the Region report
- Data availability for baselines of natural resource condition

5.

- Number of property management plans and/or management agreements in place
- Number of full-time equivalent extension officer positions in the Region



A STATEMENT FROM THE TASMANIAN ABORIGINAL COMMUNITY



Aboriginal people have lived on the islands that make up Tasmania for upwards of 40,000 years, living interdependently with the land throughout that time.

Many of the values Aboriginal people hold as important exist within and across the wider landscape, and respect, management and protection of those values is seen as a broad Tasmanian community responsibility.

The whole landscape is part of the story. All Aboriginal sites are important in that each one is an integral part of the country.

In recent times, the Tasmanian Aboriginal community has progressed from being dispossessed of land a little over 200 years ago to having a small amount of that land returned (in 1995). Other areas of land have been purchased by the Aboriginal community. With the return of land, a number of land management problems, resulting from historical and contemporary European land management practices, have been inherited by the Aboriginal community.

Aboriginal land management knowledge and practices have been increasingly acknowledged by sections of the wider community. Aboriginal people have strong physical and spiritual links with country. Land management expertise of the old people has survived. Today's Aboriginal community is also developing knowledge and skills of contemporary land management practices.

The aim of this statement is to promote the views, needs and aspirations of Tasmanian Aborigines in relation to sustainable natural resource and land management that ensure protection and enhancement of Aboriginal culture and heritage values throughout Tasmania.

This statement was prepared and endorsed by the Tasmanian Aboriginal Land Council, Tasmanian Aboriginal Centre and the Aboriginal Land Council of Tasmania at Risdon Cove, 25 June 2004.

The statement was found to be still relevant in November 2009 by the Tasmanian Aboriginal Land and Sea Council Committee.

About This Strategy

Natural resources include water, land (including soils), air, plants, animals and microorganisms, and the systems they form. Natural resource management is the management of any activity that uses, develops or conserves these resources. The purpose of this document is to provide a strategic, integrated framework for natural resource management in the Southern Natural Resource Management Region of Tasmania (the Region).

The strategy is based on current knowledge, as well as on previous and existing work, and has been developed with extensive community consultation. It is a whole-of-region strategy intended to provide a focus for natural resource management in the Region and to improve integration and coordination of planning and activities, particularly between sectors and across geographical boundaries.

This strategy is intended to complement a range of existing and forthcoming strategies and plans relevant to natural resource management in Southern Tasmania, including property-based plans, catchment management plans, regional land use and settlement plans, and strategies that are state-wide in scope.

The specific actions which will be the basis of the implementation of this strategy are captured in a separate 'Implementation Plan' document that can be found on the NRM South web site and which will remain 'live' for the duration of this strategy.



1.1 BACKGROUND

1.1.1 Southern Tasmania - Our Region

Tasmania's Southern Region covers 2.5 million hectares and supports almost half of Tasmania's 500,000 population. The Region includes Hobart and its urban fringes, as well as many small towns and hamlets, and spans the twelve urban and rural municipalities of Brighton, the Central Highlands, Clarence, the Derwent Valley, Glamorgan Spring Bay, Glenorchy, Hobart, the Huon Valley, Kingborough, Sorell, the Southern Midlands and Tasman.

Its people are diverse, and cover a wide spectrum of social and demographic measures. Eighty-five per cent of the Region's population lives in the Greater Hobart area. The major employment sectors are health care and social assistance, public administration and safety, retail trade, education and training. Agriculture, fisheries and forestry, tourism-related occupations and professional, scientific and technical services also contribute strongly to the Region's economy and identity.

Southern Tasmanians are active volunteers and there are over 100 local community groups caring for bushland, coastal areas and cultural heritage in the Region. There are also many active groups of landholders working together to manage natural resources. Just five per cent of the Region's land managers manage seventy-five per cent of the productive land.

Southern Tasmania is one of the most environmentally diverse areas anywhere in Australia and has an abundance of natural resources. It features river systems and lakes in near pristine condition, a diverse flora and fauna population that includes many species endemic to Tasmania, a range of complex landscapes, internationally recognised natural icons, and a long and complex coastline looking out to countless offshore islands and stacks.

Encompassing the South-West Wilderness World Heritage Area, Macquarie Island World Heritage Area, four internationally recognised Ramsar-listed Wetlands, seven national parks (including alpine ecosystems) and six marine reserves, Southern Tasmania has a wide array of ecosystems with high terrestrial, estuarine and marine biodiversity. Many of the Tasmanian terrestrial and marine bioregions are found within, and overlapping, the southern region's boundaries. The Region's wealth of natural resources underpins the economic, social and environmental well-being of the community. Being rich in natural assets and diversity presents many unique challenges and opportunities. By working together we can balance economic, social and environmental needs and build a resilient and sustainable future for Southern Tasmania. This strategy provides direction for this and through iterative strategies we will more clearly define and develop our sustainable future.

1.1.2 Development of the strategy in accordance with the *Tasmanian Natural Resource Management Act 2002*

NRM South was established in 2003 under the *Tasmanian Natural Resource Management Act 2002* as one of three regional natural resource management bodies in Tasmania and as part of a network of fifty-six similar entities throughout Australia. NRM South has facilitated the development of this regional strategy as part of its core role. The development of the strategy is in accordance with the *Natural Resource Management Act*.

Through the review and development of accredited regional strategies such as this, the Tasmanian State Government supports integrated natural resource management across Tasmania. Under the *Natural Resource Management Act*, regional strategies can only be accredited if they demonstrate that they adhere to criteria approved by the Minister via recommendation from the Tasmanian Natural Resource Management Council.

1.1.3 The role of NRM South

NRM South's role is to guide and enhance the management of natural resources across the Region through facilitating the development of a regional strategy for Southern Tasmania.

NRM South is also responsible for implementing strategic actions; however, it is not the only organisation responsible for this. Other stakeholders, including all levels of government, industry and natural resource 'care' groups in the Region have a role in the implementation of the regional strategy. NRM South has a responsibility under the *Natural Resource Management Act* to engage with all tiers of government, business and the community to facilitate better management of Southern Tasmania's wealth of natural assets in line with the strategic directions of the regional strategy.

NRM South's proposed actions and responsibilities under this strategy are outlined in Appendix A.

1.1.4 Building on the previous strategy

This strategy builds on the *Natural Resource Management Strategy for Southern Tasmania (2005)*, which established the foundation for strategic and integrated direction in natural resource management for the Region. Its implementation has:

- focused attention on core issues, priority areas of concern and key opportunities for best practice natural resource management;
- helped bring regional stakeholders together with a common focus and, in doing so, has provided a framework for partnership building and collaboration towards common goals;
- allowed more directed and prioritised investments across government, community and industry sectors throughout the Region.

1.1.5 Investment in natural resource management since the last strategy

Considerable investment has been made by the state and federal governments into the implementation of the 2005 strategy. Over \$14 million in direct funds from the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality was invested in the Region between 2005 and 2010. Additionally many projects leveraged investment and in-kind support from organisations active in the Region including local government, businesses, landholders and community groups. It is also likely that many groups and individuals contributed to the overall effort and that their work has gone unrecorded.

Investments delivered seven principal achievements:

1. Positive examples of engagement of stakeholders and community.
2. Positive collaborations and successful partnerships developed.
3. Awareness-raising about natural resource management issues and sustainable practice in a number of sectors.
4. Development and application of integrated and holistic approaches to natural resource management.
5. Improvement in natural resource management information and data consistency and access.
6. Progress in working towards better monitoring, evaluation and reporting for improvement.
7. Capacity building across natural resource management and the Region and in sectors of the community.

Projects directly improve natural resources through activities such as developing and implementing sustainable practices and undertaking direct action through the implementation of catchment and local conservation plans.



1.1.6 The need for a reviewed strategy

While the challenge associated with the successful management of the Region's natural resources is perennial, the nature of this challenge is constantly changing as a result of external factors such as urban development pressures, climate change, changes in economic circumstances, and changing societal attitudes.

This reviewed strategy arose out of a need to revisit the community's strategic response to the management of the Region's natural resources and to ensure that:

- the strategies pursued in the recent past continue to be relevant in the face of changing pressures;
- new strategies are developed to mitigate against emerging threats.

In addition, the 2010–2015 strategy must build on the previous strategy by continuing to provide a framework for the:

- priority allocation of scarce natural management resources;
- development of strategic collaborations between government, industry and community stakeholders;
- development of new synergies in areas where management of natural assets will deliver broader benefits to the community (e.g. tourism);
- seeding of investment partnerships;
- continuity of past work associated with high priority natural resource management activities.



1.2 STRATEGIC CONTEXT

1.2.1 Guiding principles of natural resource management

This strategy has been developed in the spirit of the seven guiding principles of natural resource management and the sustainable development objectives of the resource management and planning system of Tasmania. Respect for the Aboriginal community's rights and values in natural resource management is a further overarching principle for the implementation of this strategy.

The seven guiding principles from the Tasmanian Natural Resource Management Framework help focus decisions and actions and ensure that we achieve the greatest benefit from the time, energy, skills and money invested in fostering our natural resources. These principles are:

ECOSYSTEM APPROACH

Natural resource management should be based on an understanding of the relationship between natural resources and the ecosystems they support, and upon careful monitoring of change over time.

BALANCED DECISIONS

Natural resource management decisions should take proper account of the range of environmental, social and economic benefits, and values and costs, in accordance with the objectives of the Tasmanian resource management and planning system.

INTEGRATED MANAGEMENT

The management of natural resources should be integrated within regions and catchments, as well as across industry sectors, government agencies and specific issues.

PRIORITY BASED

Natural resource management actions are to be undertaken according to priorities that are based on the best available science and information, and relevant experience, as well as on assessment of the relative cost-effectiveness of various options.

PREVENTION IS BETTER THAN CURE

It is often more efficient to prevent damage than to repair it. Therefore, where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

PARTNERSHIPS

To be effective, natural resource management requires the establishment of partnerships between all levels of government and the community, including the Aboriginal community, industry, landholders and individuals, with agreed roles and responsibilities.



WE ARE ALL RESPONSIBLE

All Tasmanians receive benefits from the use, development and conservation of natural resources and share the responsibility for their sustainable management, and for providing the economic resources to do so.

The objectives of the Tasmanian resource management and planning system are:

1. To promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity.
2. To provide for the fair, orderly and sustainable use and development of air, land and water.
3. To encourage public involvement in resource management and planning.
4. To facilitate economic development in accordance with objectives 1, 2 and 3.
5. To promote the sharing of responsibility for resource management and planning between the different spheres of government, the community and industry in Tasmania.

Sustainable development means managing the use, development and protection of natural and physical resources in a way, or at a rate, that enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while at the same time:

- sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations;
- safeguarding the life-supporting capacity of air, water, soil and ecosystems;
- avoiding, remedying or mitigating any adverse effects of activities on the environment.



1.2.2 Ongoing issues for natural resource management

An independent assessment of current and ongoing issues and natural resource condition, and consultation throughout the Region, confirmed that many issues identified in the 2005 strategy remain, namely:

- management of invasive weed species;
- assessment and management of the impacts associated with urban expansion, infrastructure development and land use change;
- management of waterways and wetlands to maintain or improve water quality and ecosystem health;
- protection of ecosystems, particularly biodiversity hotspots (areas of significant biodiversity that are threatened);
- management of soil health and salinity;
- coastal erosion and multiple (and potentially competing) uses of coastal and marine resources;
- management of bushfire risks and bushfire risk management approaches;
- management of the impact of human activities on natural resource values, such as the impact of recreational activities and household behaviour (e.g. four-wheel drive recreational activities, domestic pets and the illegal collection of firewood from reserves), and the impacts of industrial and commercial activities (e.g. forestry, tourism, fisheries, aquaculture and agriculture);
- the need for ongoing improvement in the collection and availability of baseline data about natural resource condition, and monitoring of natural resource health and environmental change to inform rational and well-guided decision making and effective natural resource management planning.



1.2 STRATEGIC CONTEXT

1.2.3 Emerging Risks

The synthesis of the independent scan of emerging issues and the concerns raised in the consultation process identified three broad areas of emerging concern for natural resource management in the Region moving into this next strategy period.

CLIMATE CHANGE

Climate change will provide multiple risks and opportunities across the Region, community and natural resource sectors. Identifying the risks and vulnerability to (and adaptive capacity of) natural resources, communities and productive activities that depend on natural resources will be essential in developing well-targeted adaptation responses. There will also be a focus on understanding the resilience of ecosystems to climate change and identifying opportunities to support ecosystem adaptation. Adaptation will be the main focus of natural resource management activity in the climate change area.

However, identification and development of opportunities for sustainable greenhouse gas mitigation in a range of sectors, including the agricultural and forestry sectors, will present new issues and opportunities for natural resource management and should form part of the development of a sustainable and resilient regional economy and community.

CUMULATIVE LAND USE AND DEVELOPMENT PRESSURE

Continued development pressures and ad hoc decision making could potentially lead to loss of natural values and conflicting uses. For example, urban growth on the fringes of Greater Hobart and on highly valued estuarine and coastal environments presents diverse and integrated pressures on natural resources and environmental values. These include:

- increased exposure of communities to coastal zone risks associated with climate change;
- risks to waterway and wetland health;
- fragmentation of connected ecosystems reducing the resilience of these;
- loss of biodiversity;
- growth in greenhouse gas emissions in the Region through increased rates of consumption and growth in road-based travel.

Infrastructure development, including significant road infrastructure projects and irrigation schemes, presents similar pressures, although the development of irrigation schemes raises issues surrounding:

- the impact of changed water flows on estuarine and wetland systems downstream;
- the implications of changed water supply to agricultural practices, soil health and land management;
- the sustainable use of water for irrigation and opportunities for the development of sustainable crops.

THE RESILIENCE OF LOCAL COMMUNITIES AND ECONOMIES

In addition to the physical risks to natural resources in the Region there are also concerns about the relative capacity of local economies and communities to respond to natural resource challenges and opportunities.

Demographic shifts in some rural and non-urban coastal communities present changes in the stock and characteristic of local knowledge about natural resource concerns and management responses, thus impacting on the relative capacity of communities to respond to natural resource issues.

Changing market value of agricultural activities and challenges in accessing financial support for innovation and restructuring to more sustainable and resilient rural activities is also an emerging issue for communities that depend on productivity from the land, while there are pressures on poorly resourced local governments (particularly those beyond major population centres) to manage natural assets through planning and the provision of infrastructure.

Such social and economic restructuring presents a challenging backdrop for natural resource management but confirms the need to consider mechanisms for enhancing the resilience of communities and economies for responding to a range of ongoing and emerging natural resource threats and opportunities.



Developing the Strategy

2.1 STRATEGIC DEVELOPMENT PROCESS

This regional strategy has been developed following a strategy review and stakeholder consultation process. The process is presented graphically in Figure 1.

Issues identified through the considerable stakeholder and technical consultation program facilitated by NRM South in 2007 and further consultations on 'Caring for our Country' held in 2009 were also referred to in the development of these background studies.

2.1.1 Strategy review

The strategy review process involved the development of two independent and objective background studies that commenced in August 2009.

1. A reflective study entitled 'Summary of principal achievements in natural resource management in the Southern Region of Tasmania since 2005', reviewed and reflected on the implementation of the 2005 natural resource management strategy for the Region and facilitated the identification of gaps in progress and lessons learned.
2. A high-level strategic study entitled 'Natural resource management in Southern Tasmania: A scan of strategic environmental issues and emerging concerns', provided an independent and objective analysis of the key issues for the Region based on a scan of existing natural resource management issues, emerging issues and consideration of changing socioeconomic, regulatory and political operating environments for the Region.

2.1.2 Strategy development – Consultation

NRM South facilitated a stakeholder consultation process in November 2009 to verify the findings of this independent work, build on the regional issues identified and identify the broad directions for the new strategy. In total, this consultation process received input from some 126 individuals via four consultation forums, meetings and written submissions, and an online survey.

Participants in the consultation forums were given the opportunity to hear a summary of findings from the two independent review studies and contribute their views about the key issues and concerns for natural resource management for the next five-year period. Participants also had the opportunity to critically discuss the relevance and usefulness of a set of strategic directions. The consultation process produced a significant volume of detailed and diverse feedback which was synthesised for input into the development of this strategy.

FIG.1 THE STRATEGY REVIEW AND DEVELOPMENT PROCESS





The breakdown of participants according to the consultation method is outlined in Table 1, while a breakdown of those who participated in the four community consultation workshops (two in Hobart, one each at Eaglehawk Neck and Buckland) is shown in Figure 2. A more comprehensive summary of the strategy development process and outcomes of the stakeholder consultations is provided in Appendix B.

Table 1: Participants according to consultation method

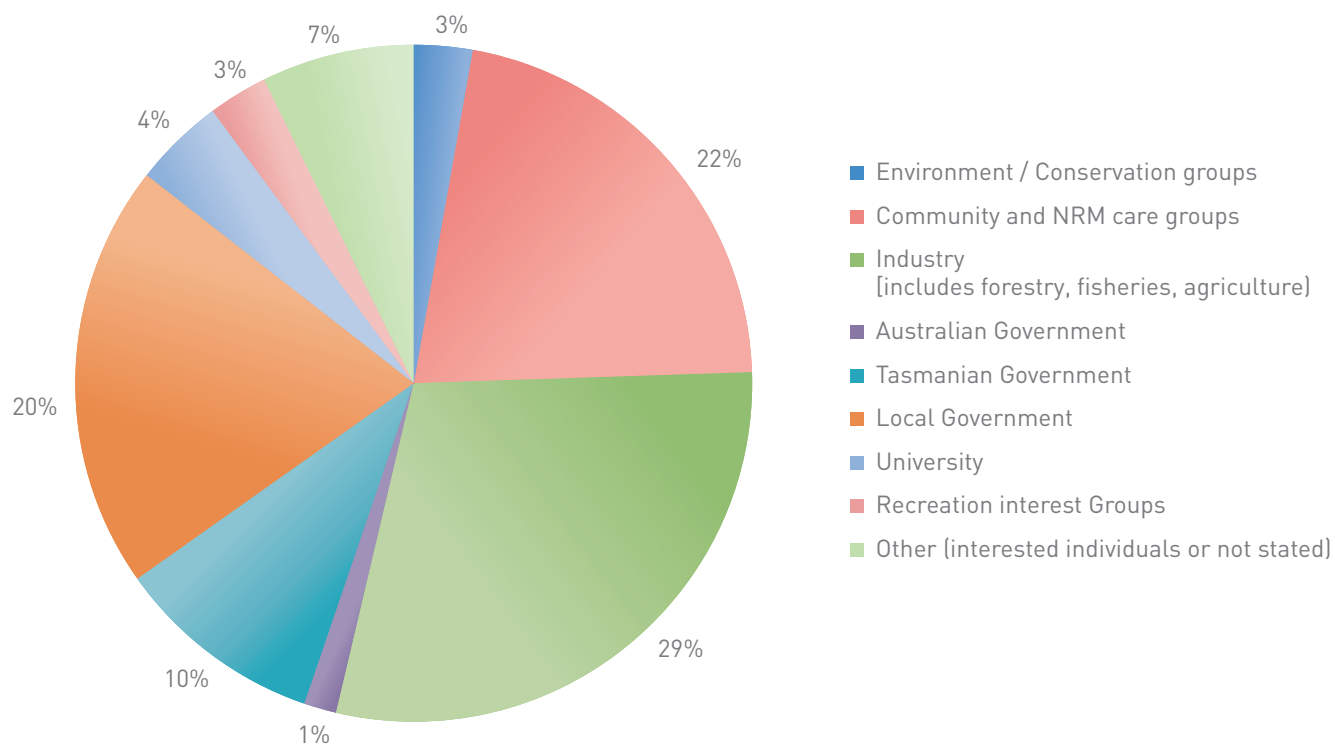
Method of consultation	No. of participants
Face-to-face community consultation workshops and meetings	69
Completed online survey responses	56
Written submission	1
Total	126

2.1.3 Strategy development – Validation

A draft strategic framework was presented to key stakeholders and the NRM South Board in February and March 2010. Key state and local government, research, industry and non-government stakeholders who will play an important part in implementing many of the actions were consulted in face-to-face meetings and through an emailed feedback form prior to finalisation of the draft strategy. Much of their input was captured in the 'Implementation Plan' which can be found on the NRM South website. This document is 'live' for the duration of the Strategy and NRM South will periodically seek to collect data for reporting progress on the strategy and update this plan.



FIG.2 CONSULTATION WORKSHOPS – PARTICIPANTS BY SECTOR



DRAFT FOR CONSULTATION

A draft version of this document was circulated for public comment over a six week period in June and July 2010. In all, NRM South received 17 written responses to the document and many verbal responses. Where possible, the comments and suggestions have been incorporated in this document and each respondent has received direct feedback about how their submission has informed this final version.

Many of the suggestions were for specific actions. NRM South is committed to capturing community actions into the Implementation Plan. Community groups requested a facilitated workshop for this purpose and NRM South is committed to ensuring that ample opportunity is provided for eliciting and coordinating community actions as part of our ongoing Community Engagement program.



2.2 REVIEW OF PAST PERFORMANCE

SECTION 2



Analysis of the activities implemented across the Region in response to the 2005 strategy identified seven principal regional achievements:

- positive engagement of stakeholders and community across sectors;
- working together and development of successful partnerships;
- awareness raising in the community and targeted sectors;
- developing and applying integrated and holistic approaches;
- improving information and data consistency and access;
- working towards better monitoring, evaluation and reporting for improvement;
- building capacity in sectors of the community.

While there have also been achievements in the maintenance and improvement in resource condition in parts of the Region and in some resource areas (e.g. the eradication or significant reduction in some invasive weed species and improvement in Ramsar Wetland water quality and natural habitat), a lack of quantitative information on the state of natural resources made it difficult to provide a meaningful assessment of quantitative changes in the resource condition.

The review of activities and achievements across the Region also exposed some apparent deficiencies in respect of progress in natural resource management since 2005. These include:

- an uneven distribution of natural resource management activities across the natural resource theme areas. Areas of particular strength in activity included management of water resources and native flora and fauna, whereas activity in the land resources, marine and cultural landscape theme areas tended to be less prolific;
- significant data gaps in baseline and monitoring data for natural resource condition assessment;
- a lack of progress in the improvement of integrated policy, planning (including regional strategic land use and settlement planning) and decision making across scales for improved natural resource outcomes.

Some other issues needing further attention were also mentioned. For example:

- the need for improved attention to the incorporation of cultural landscape values into natural resource management;
- the need to address rural tree decline.

Furthermore, the review revealed the difficulty in monitoring progress on the previous strategy and the new framework seeks to address this issue and make it possible to report on progress in NRM.



2.3 STRATEGIC ISSUES IN THE REGION

2.3.1 Scan of strategic environmental issues and emerging concerns

The scan confirmed that natural resource management is complex and challenging for a variety of reasons including the breadth of natural resource assets and issues in the Region, the diversity in values associated with natural resources and the integrated nature of the task of natural resource management itself.

ONGOING ISSUES AND PRESSURES FOR THE REGION

As the Region moves into the next strategy period it is apparent from the scan that many of the issues associated with natural resource management will remain unchanged, particularly the:

- continuation of invasive weed management (an ongoing challenge for a variety of stakeholders);
- management of impacts associated with urban and infrastructure development, and land use change;
- management of rivers, catchments and estuaries to improve water quality, flows and ecosystem condition;
- protection of ecosystems and species for biodiversity;
- management of soil health and salinity.

NEW PRIORITIES FOR THE COMMUNITY

Other issues have emerged in the community as new priorities. For example:

- understanding the implications of global warming on the future regional climate and understanding the implications of climate change on natural resources both marine and terrestrial to identify priority issues (scenario modelling and risk and vulnerability assessment);
- developing strategies, and implementing these, for both mitigation of greenhouse gas emissions and adaptation to climate change;
- pursuing more sustainable behaviours and practices across a range of community sectors including households, industry and commerce, and government.

SIGNIFICANT CHALLENGES FOR NATURAL RESOURCE MANAGEMENT

These changing operating environments and community priorities point to two core significant issues for the Region. These are climate change (particularly its implication for adaptation, but also for opportunities in mitigation via natural resource activities) and ongoing pressures associated with land use change and development.

EMERGING OPERATING ENVIRONMENTS

It is recognised that natural resource management issues associated with new major infrastructure projects and cumulative development pressures need to be managed including integrated planning for the continued urban expansion of Greater Hobart and coastal settlements, land use reclassification and major infrastructure projects. In addition to changing community interests, operating environments for natural resource management in the Region are changing. These include:

- an evolving climate change policy and regulatory environment that will present opportunities and risks for the regional economy and natural resource oriented industries;
- an emerging understanding about bio-physical changes associated with climate change (risks, threats and opportunities) through the roll-out of research activity in the climate change impacts and adaptation field across sectors and scales;
- demographic changes and population movement from the mainland associated with an ageing population and an increasing attraction of Tasmania and the Region for lifestyle purposes (sea-changers, tree-changers and rural lifestyle). This will have variable and locally specific impacts on the Region, presenting opportunities and challenges for local communities, economies, services and the management of natural resources;
- the roll-out of regional planning in Tasmania in which sustainability and natural resource management interests have the opportunity to become central considerations.

LAND USE CHANGE AND DEVELOPMENT PRESSURES

The study affirms the continuing significance of development and land use change associated with human activities as core pressures on natural resource condition in the Region. Examples of key pressures include:

- the impact on natural resources and natural resource management approaches of changing land use. For instance, from woodland to agriculture, or agriculture to plantation or urban development;
- the risk of fragmenting natural ecosystems, restricting ecosystem connectivity and the capacity to facilitate refugia for vulnerable species, due to the development of land for urban and infrastructure use, agriculture or forest plantations;
- the cumulative impact of urban expansion on natural resources including habitat loss, pollution of waterways and degradation of urban reserves and other ecosystems of value;
- the pressure to focus development in coastal and estuarine zones due to the relative attractiveness of these environments for human settlement, tourist activities and recreation;
- major infrastructure projects.

Such pressures may also present opportunities for natural resource management interests to be better addressed; for example, regional planning should facilitate community reflection on the character and form of urban development into the future, while new irrigation infrastructure schemes may present opportunities for improving natural resource condition (via sustainable river flows and sustainable practice in soil management).

FIG.3 ACTION THEME AREAS



CLIMATE CHANGE

The global imperatives for acting on climate change, including the need for mitigation and adaptation, are now clear. The Australian Government is now a party to the Kyoto Protocol and is implementing a program of mitigation actions. It also has a National Adaptation Program which is rolling out and facilitating priority adaptation research, collaboration and engagement of stakeholders. Similarly the Tasmanian Government has committed to a greenhouse gas emission reduction target to reduce emissions to at least sixty per cent below 1990 levels by 2050 while it also recognises that there are many climate change risk and adaptation issues that need to be understood.

The most significant climate change challenge for natural resource management in the Region will be the management of the impacts of climate change on natural resources, particularly key natural resource values. There are numerous issues for the Region to consider, including understanding:

- which natural systems and natural resource commercial activities are most at risk;
- which natural systems we should facilitate adaptation for;
- the extent of the challenge spatially, sectorally and temporally.

Management of water resources (particularly water availability, river flows and the impact this has on water quality and other natural resources) will continue to be a key issue for the Region due to both natural climate variability and potential impacts of climate change.

Mitigation of global warming, via measures to reduce greenhouse gas emissions and enhance sinks, will engage natural resource management on a number of fronts. Mitigation considerations include carbon sequestration, the need to limit the removal of carbon sinks through the management of forests and land use

change, and private landholder commercial carbon offsetting or soil sequestration opportunities. Mitigation responses will also need to pervade other sectors throughout the community, including urban growth and development, individual lifestyle choices, industry, government and commercial activities. Some of these may have implications for natural resource management, such as the way we design and develop our urban environments into the future.

ACTION THEME AREAS FOR THE MANAGEMENT OF NATURAL RESOURCES

Four overarching action areas for the effective management of natural resources in the Region were identified in the scan. These are likely to form the foundations for natural resource management programs (Figure 3):

- the need for baseline data and continued monitoring and evaluation;
- development of systems and mechanisms for better policy, planning and decision making;
- engagement of the community in, and about, natural resource management;
- implementation of strategic and integrated natural resource management programs and activities.

Actions in these areas will need to be undertaken with due consideration of the guiding principles of natural resource management, sustainable development and in the context of climate change risks and opportunities.

Further explanation of these action areas is available by reading the 'Environmental Scan Executive Summary and Discussion Paper' on NRM South's website at www.nrmsouth.org.au



The Strategy 2010–2015

3.1 STRATEGY FRAMEWORK

The strategy is guided by two objectives for the Region and five key strategic themes from which strategic actions and implementation plans can be developed. The objectives provide an understanding of the context of natural resource management and the dual focus on both the natural system and the human systems they support. The strategic themes cut across the two objectives and help to group implementation actions. Details of these are outlined on the following page and are summarised alongside the indicators that will be used to measure progress.



3.2 KEY IMPROVEMENT OBJECTIVES



3.2.1 Protect and ensure wise use of the Region's natural assets

The natural assets of Tasmania's Southern Region have the potential to significantly enhance the economic prosperity, social cohesion and environmental amenity of communities in the Region. Conversely, the degradation of these assets in the near term constitutes a significant opportunity cost for future communities by effectively constraining their economic and social performance.

Wise use of the Region's natural assets means that present-day communities are afforded an opportunity to enjoy the benefits of these assets in a manner that does not reduce the ability of future generations to enjoy the same quality of opportunity.

Achievement of this objective will require a pursuit of actions that both protect and preserve those natural assets that are under significant stress, and facilitate reasonable community use of current assets in a way that minimises the risk of any significant reduction in the utility of these assets for future generations.

3.2.2 Enhance the resilience of local communities

The long-term viability of human settlements is inextricably linked to the state of the natural resources in the Region. At a very basic level, this link has historically required communities to assume stewardship of their natural environment in terms of acting to secure potable water resources (availability and quality), ensure soil health and maintain the health of natural ecosystems.

A series of macro-scale changes are creating new threats to the future health of the Region and the communities that rely on the natural resources. Chief among these is climate change with its consequent threats in terms of increased major storm events, catastrophic bushfires, species extinction and disease migration.

These changes bring a new dimension to the traditional challenge associated with the effective management of the interface between human settlements and the natural assets of a given Region. The effective response to this challenge will require adoption of actions that improve the resilience of local communities in the face of climate change related events.

VISION

The Southern Region's natural resources will be protected, sustainably managed and improved for the shared environmental, social and economic benefit of our Region by a well-informed, well-resourced and actively committed community.

STRATEGIES

Strategic directions that will be pursued to support the achievement of the objectives

1. **strategy 1**
Maximise return for natural resource management investment
2. **strategy 2**
Increase community awareness of the Region's natural resource assets
3. **strategy 3**
Manage current and emerging threats to the Region's natural assets
4. **strategy 4**
Measure and report changes in natural resource condition
5. **strategy 5**
Increase stakeholders' capacity to use the Region's natural resources wisely

ACTIONS

Specific high-level actions.

a detailed list of actions can be found in Section 3.3 (pp.19-22)



OBJECTIVES

1. Protect and ensure wise use of the Region's natural assets
2. Enhance the resilience of local communities



HEADLINE INDICATORS

Indicators that will be used to assess progress in respect of each of the strategies

1. Number of organisations actively participating in natural resource management in the Region (as evidenced by participation in the implementation plan).
2. Percentage of actions with one or more stakeholders implementing them.

1.

- Value of investment in research planning activities (annual basis)
- Total value of annual capital investment in natural resource management activities in the Region
- Number and extent of active collaborative catchment plans in the Region

2.

- Assessment of baseline community awareness
- Number of organisations delivering awareness-raising activities
- Range of issues addressed by activities
- Total annual expenditure on awareness-raising

3.

- Number of threats addressed
- Number of stakeholders addressing threats
- Number of environmental flows calculated (and implemented in a water management plan)
- Number and extent of climate change adaptation plans in the Region that address the vulnerability and adaptive capacity of natural assets
- Number of new pests or diseases reported/established
- Number of pests eradicated
- State Coastal Policy is approved and implemented
- Marine reserves are established in accordance with the Tasmanian Marine Protected Area Strategy
- Land use planning provides for sustainable use of natural resources and protects significant environmental assets and landscapes

4.

- Number of resource condition reports available (e.g. State of the Derwent)
- Completion of State of the Region report
- Data availability for baselines of natural resource condition

5.

- Number of property management plans and/or management agreements in place
- Number of full-time equivalent extension officer positions in the Region

3.3 STRATEGIES AND ACTIONS

SECTION 3



3.3.1 Strategy 1: Maximise return for natural resource management investment

Improving natural resource management will require the combined effort of all stakeholders in the Region. Any investment decisions must be underpinned by good information about the state of resources, level of threats, and opportunities for intervention. These information needs are addressed in Strategy 4. NRM South and other stakeholders in the Region can document their actions for implementation of the strategy in a shared Implementation Plan. It is important to identify potential overlap and gaps in current resourcing.

Investment in natural resource management (both financial and non-financial) occurs in an arena that is characterised by strong competition from other community priorities such as education, health and public infrastructure. It is therefore essential that investment in natural resource management activity is managed in such a way as to minimise waste and maximise community returns. It is important to identify potential overlap and gaps in current resourcing.

The following specific actions are recommended:

1. Develop and implement a natural resource management research plan that identifies knowledge gaps and research priorities around the state of the Region's natural assets and physical processes (land and marine). Work with other regions to coordinate research.
2. Develop and implement evaluation frameworks and processes for the continual improvement of natural resource management activities.
3. Work collaboratively to identify options for increasing and sustaining funding to support natural resource management activities.
4. Promote and support innovation in natural resource management (e.g. pilot projects and promotion of good practice).
5. Encourage collaborative activities for natural resource management among all stakeholders to take maximum advantage of all potential synergies in natural resource management activities.
6. Monitor and communicate the progress of the regional natural resource management strategy to all key stakeholders.
7. Quantify the value of the Region's natural resources at both a local community and whole-of-state level.
8. Improve integration of policy, planning and legislative actions across scales to reduce contradictions and improve natural resource management decision making processes.
9. Review and evaluate existing natural resource incentive programs for landholders with a view to encouraging greater protection of ecosystem values across scales (i.e. biodiversity, geodiversity, wetlands and waterways).
10. Identify priorities and opportunities to implement natural resource management across scales (e.g. across a landscape or bioregion).
11. Undertake collaborative planning processes to identify priorities for natural resource management actions. Plans should be developed at a range of scales such as catchment, landscape or coastal plans, asset plans (e.g. reserves, wetlands) and property plans. Plans should facilitate integrated management of resources.



3.3 STRATEGIES AND ACTIONS

3.3.2 Strategy 2: Increase community awareness of the Region's natural resources

Effective management of the natural resources of the Region requires the active engagement of all stakeholders, including the general public. Engagement of these stakeholders will require raising community awareness of:

- the link between the state of the Region's natural resources and viable local communities;
- the actions that can be taken by individuals to protect natural resource values;
- natural resource management programs and activities.

The following specific actions are recommended:

1. raise awareness of the Region's natural values and the threats and opportunities for management.
2. promote and implement water efficiency and sustainable waste management practices (including wastewater and stormwater management practices) within the wider community.
3. raise household and industry awareness about the adverse impacts that dumping waste has on the condition of natural resources.
4. raise awareness about energy efficiency opportunities and facilitate opportunities for the take-up of renewable energy alternatives.
5. develop and implement target education programs to increase understanding about good natural resource management practices (including the management of weeds) among individuals and organisations.
6. raise stakeholder awareness about the need to consider climate change impacts on current and future natural resource management practices, including the development of appropriate adaptation strategies.
7. develop and implement an education program to improve stakeholder understanding of productive ecosystems and raise awareness of sustainable practices (including farming, aquaculture and fisheries).



3.3.3 Strategy 3: Manage current and emerging threats to the Region's natural assets

There are a growing number of threats to the state of the Region's natural assets. Some of these threats are well known (such as invasive weed species and the impact of climate variability on water resources) while others are emergent threats associated with climate change. Good stewardship requires concerted action on known threats and vigilance in respect of emerging threats.

The following specific actions are recommended:

1. Improve the connectivity of vulnerable habitat areas.
2. Minimise the negative impacts associated with development on native habitat and species.
3. Undertake climate change risk and vulnerability assessments for public reserves (land and marine) and develop adaptation strategies as required.
4. Reduce the threats to natural values posed by invasive species, bushfire, climate change including sea level rise, urban development and unsustainable human activities.
5. Promote efficient and socially just use of shared water resources while simultaneously maintaining the health of the Region's natural water assets.
6. Undertake research to support industry adaptation in vulnerable natural asset areas in the Region (e.g. aquaculture, fisheries, forestry and agriculture).
7. Develop and implement a strategic framework and guiding principles for the encouragement of sustainable (and resilient) economic development opportunities in the Region.
8. Ensure that land use planning and development (local and regional level) incorporates consideration of natural resource considerations and seeks to take reasonable steps to minimise the adverse impacts of development on the Region's natural resource assets.
9. Include consideration of climate change and greenhouse emission impacts in the environmental impact assessment of development, in accordance with the framework outlined in the Tasmanian Climate Change Strategy.
10. Develop regional-scale climate change scenarios for use in climate change risk and vulnerability assessments and develop targeted adaptation strategies.
11. Conduct a comprehensive cost-benefit analysis of the nature of opportunities to mitigate the adverse impacts of climate change on natural resource condition.



3.3.4 Strategy 4: Measure and report changes in natural resource condition

A review of the 2005 strategy together with stakeholder consultation conducted during the development of this strategy, highlighted a deficiency in the current level of quantitative information about resource condition. Much has been achieved since 2005 in developing monitoring methodologies and databases and partnership arrangements for managing data. However, there is a need to secure more and better information about the resource state to inform the design of natural resource management policy and programs in the future.

The actions that are recommended to support the delivery of improved information on the condition of the Region's natural assets are as follows:

1. Work with key research institutions and organisations to identify and implement opportunities for applied research that support:
 - the establishment of quality baseline data;
 - the evaluation of natural resource management activities;
 - the conduct of risk and vulnerability assessments.
2. Continue to produce and improve existing reports on natural resource condition (such as State of the Environment, State of the Derwent, State of the Tasmanian Wilderness World Heritage Area, Waterways Monitoring Reports, State of the Forests).
3. Share or publish resource condition data and develop new reports evaluating changes in resource condition.
4. Undertake a regional risk and vulnerability assessment for natural resources in the Region to inform priorities for adaptation planning.
5. Conduct collaborative cross-scale (e.g. landscapes or bioregions for land and marine) pilot projects that incorporate monitoring and evaluation of the effectiveness of this approach for future strategy consideration.
6. Improve accessibility and use of the best available science and research (including social and economic) about natural resource condition, threats and natural resource management issues.
7. Provide regular updates on changes in resource condition to key decision makers (local government, state government agencies and other natural resource custodians).

3.3 STRATEGIES AND ACTIONS



3.3.5 Strategy 5: Increase stakeholders' capacity to use the Region's natural resources wisely

Engagement of key stakeholders in the use of the Region's natural assets is considered to be a major priority. This engagement should target improvements in the capacity of key stakeholders to protect the Region's assets while also helping the community to realise the benefits of sustainable use of these assets.

The following actions are recommended to support the achievement of this objective:

1. Collaborate with recreational fishing groups and other coastal recreation groups to identify and advance opportunities for protecting natural resource values of marine reserves and minimising the adverse impacts of recreational activities on the marine environment and/or reserves.
2. Support local community action, including landcare and other care groups, who work to enhance the condition of natural assets.
3. Engage with landholders and land managers to maintain or improve the security of threatened species.
4. Increase participation of the wider community (i.e. households, business, industry, landholders and schools) in the protection of natural resources.
5. Work with the tourism industry to increase ecotourism and identify opportunities to reduce the adverse impacts of tourism activity on the natural environment.
6. Collaborate with the farming community to increase adoption of sustainable farming practices and identify new innovations that enhance the condition of natural resources in the Region.
7. Work with the aquaculture and fisheries industries to identify and promote sustainable practices.
8. Work with recreational and sporting organisations to raise awareness of the opportunities to reduce the impact of their activities on the natural environment.
9. Work with Tasmanian irrigation scheme managers and farming communities to manage the impact of irrigation schemes on natural waterway assets and identify innovative opportunities for more efficient use of water resources.
10. Develop a voluntary challenge and incentive program to encourage greater adoption of sustainable practices by government, business, industry, households and individuals.

Implementing the Strategy

4.1 A COLLABORATIVE RESPONSIBILITY

4.1.1 Effective management of the natural resource management asset requires whole-of-community action

The wise use of the Region's natural assets requires the involvement of the wider community and potentially delivers benefits to government, business, industry, landholders, community groups and the general public. There are a number of stakeholders, however, who hold a very significant stake in natural resource management.

4.1.2 Community

For the purpose of natural resource management in the Region, community stakeholders comprise two discrete segments – natural resource management custodians and the general public.

Natural resource management custodians include local community organisations and volunteer groups who are actively involved in natural resource management actions such as care of coastal areas, bush care, water quality monitoring and weed management. The actions identified in this strategy are designed to assist these organisations through the identification of program synergies and the provision of the information and funding needed to support continued delivery of valuable natural resource management activities in the future.

Members of the general public play a pivotal role in the maintenance of the Region's natural assets. Sustainable use means that people can enjoy the many recreational and economic benefits afforded by these resources for many years to come. Many of the actions identified in this strategy are designed to raise the general public awareness of the significance of the Region's natural resources and the practical actions that can be implemented to preserve these assets.

4.1 A COLLABORATIVE RESPONSIBILITY

4.1.3 Business and industry

There are a significant number of business and industry organisations that have a major stake in the management of the natural resources in the Region as their continued prosperity is highly dependent on the natural resource condition. These groups include agriculture, aquaculture, fisheries, forestry and tourism.

This strategy identifies a series of collaborative actions that seek to strengthen the relationship between the daily activities of business and industry and the delivery of natural resource management actions. Specific actions include the identification of priorities and the active promotion of natural resource management stewardship practices among business and industry groups.

In addition, the strategy highlights a number of opportunities for potential business and industry investment in value-enhancing natural resource management activities and programs.



4.1.4 Funding and sponsoring bodies

Funding and sponsoring bodies are critical to the design, development and delivery of natural resource management activities and programs throughout the Region. Like all investors, however, these stakeholders are keen to ensure that their investment is managed in such a way as to optimise returns to the economy and local communities.

This strategy seeks to accommodate this objective by improving the coordination of natural resource management activities in the future and developing a strong fact base that supports the accurate identification (and treatment) of key risks to the future state of the Region's natural resources.

In addition, the strategy accommodates a measurement and reporting framework that allows investors in natural resource management to progressively identify the tangible benefits of their investment.

4.1.5 Government

All three levels of government (local, state and federal) play an active role in supporting the effective delivery of natural resource management actions within the Region.

Local councils play a major role in ensuring the wise use of natural assets through the conduct of municipal activities, provision of infrastructure, the administration of local planning and development regulations, and participation in regional planning activities.

Within the Region, local councils have been recipients of funding for local projects, supporters of community focused activities, and initiators of programs and projects focused on local needs. Local councils in the Region also work together where necessary to address regional and cross-boundary natural resource management threats, to maximise the return for investments in natural resource management through the more efficient use of project resources, and improve project outcomes through collaboration with a range of other government agencies, natural resource management groups, business and industry.

At a state government level there are a number of Tasmanian government agencies that play a core role in the management of the Region's assets. These agencies include the Department of Primary Industries, Parks, Water and Environment; the Department of Economic Development, Tourism and the Arts; the Department of Justice; the Tasmanian Climate Change Office; Forestry Tasmania and Hydro Tasmania.

The Australian Government also plays a role in the management of the Region's natural assets by ensuring the protection of areas of national significance, administration of national environment legislation, and allocation of national funding schemes such as 'Caring for our Country'.

The actions identified in this strategy seek to consolidate the links between government agencies and non-government bodies in order to increase community returns from natural resource management investment. In addition, the strategy contains explicit actions designed to engage non-traditional government agencies (e.g. tourism) in future natural resource management activities.

4.1.6 Land and water managers

The Region's land and water managers operate at the front line in terms of ensuring wise use of the Region's land and water resources. The nature of their daily activities can serve to enhance the quality of the Region's assets or, conversely, can erode the value of these assets.

This strategy recognises the important link between the activities of these stakeholders and promotes practices that support positive stewardship of the land and water assets of the Region.

4.2 PERFORMANCE AND REPORTING

4.2.1 Monitoring, evaluation, reporting and improvement framework

Monitoring and evaluation are different but related activities. Monitoring is the regular gathering of information in a consistent manner. It provides information to keep track of and address progress towards improving natural resource management and condition. Monitoring is also a tool that tells us whether the condition of our resources is stable, improving or declining.

Evaluation is the systematic review of a program, project, strategy or other activity to determine whether it is working as intended, the impacts it is producing, the reasons why it is producing the identified impacts, and whether it is being implemented cost-effectively. Evaluation involves collecting and analysing information (e.g. monitoring data) to make judgements and recommendations for future action. Once evaluation is complete, key findings should be communicated and implemented to complete the improvement cycle.

Monitoring, evaluation, reporting and improvement are important elements of this strategy and its implementation. These activities will help the regional stakeholders:

- be accountable to partners investing in natural resource management;
- learn about the effectiveness of actions undertaken so that they can be adjusted if required;
- ensure programs and investments achieve desired outcomes to improve natural resource management.

Major investors, such as the Australian and Tasmanian governments, have specific requirements that must be met before they will agree to invest in regional natural resource management activities. These requirements are outlined in the National Standards and Targets Framework, the Natural Resource Management Monitoring, Evaluation, Reporting and Improvement Framework and the Tasmanian Natural Resource Management Framework, as well as in related state government frameworks such as Tasmanian Together 2020 and the Tasmanian Surface Water Quality Management Strategy. These documents provide useful information for anyone seeking to monitor and evaluate natural resource management activity.

4.2.2 Reporting responsibility

NRM South is responsible for leading monitoring, evaluation, reporting and improvement of this strategy and its implementation (Appendix A). To this end, NRM South will:

- identify how its activity will contribute towards implementation of the strategy in the implementation plan and will work to continually improve the effectiveness of activity through monitoring, evaluation and reporting;
- regularly ask stakeholders to identify how their activities will contribute towards implementation of this strategy (minimum every second year);
- regularly report implementation progress as indicated by the headline indicators to NRM South and the Region (minimum every second year);
- organise a periodic and collaborative evaluation of achievements;
- prepare a periodic report to the Region presenting achievements and evaluation findings;
- formally review the strategy at least every five years.

In line with the requirements of the Natural Resource Management Monitoring, Evaluation, Reporting and Improvement Framework, monitoring and evaluation will be done so that it will:

- be useful and usable for all partners;
- be simple, cost-effective, affordable and practical;
- recognise that natural resource management interventions encompass a range of time-scales – action may take some years to show results;
- allow for meaningful interpretation of data.

The reporting function of NRM South will be overseen by the Board of NRM South.

4.2.3 Resource condition – Monitoring and reporting

It is important that natural resource management activity under this strategy be undertaken in a clear context. Establishment of baseline conditions and regular monitoring and reporting of resource condition is an important underpinning of a good strategy. These activities are identified under Strategy 4 in this document. There are many scales and levels of information required and activities will include a suite of monitoring programs, data sharing arrangements and reports on varied geographic scales within the Region.



4.3 MANAGING RISK

The strategy outlined in this document is highly dependent on the successful coordination of collaborative actions among traditional and non-traditional natural resource management stakeholders. Such an approach carries significant risk of non-achievement owing to possible changes in direction of individual stakeholders. In addition the combination of a relatively new agenda and low levels of general community awareness suggest that any loss of momentum with this agenda could have longstanding negative impacts on future funding of natural resource management activities in the Region.

This section provides a brief outline of some of the key implementation risks and discusses the actions that will be employed to mitigate against these risks.

4.3.1 Changing priorities of key natural resource management partner organisations

Achievement of the strategic objectives outlined in this document will require individual organisations to deliver the actions outlined in the accompanying implementation plan. Given the dynamic nature of many of the organisations, however, it is highly likely that the nature of their strategic directions will change over the five-year period of this strategy. This could potentially result in reduced emphasis or loss of focus on some of the core actions identified in this strategy.

The principal consequence of this risk is the non-achievement of identified actions that could lead to community perceptions of poor management and/or wasted resources, thereby making it more challenging to secure funding for natural resource management activities in the future.

There is a need to periodically review the actions that have been identified in light of changing organisation priorities.

For this reason, this strategy has been designed with a defined set of strategic directions supported by a 'live' implementation plan. This allows the implementation plan to be adjusted in accordance with changing priorities and/or emphasis of partner organisations, thereby ensuring that the strategy remains relevant throughout its life. It is envisaged that this task will be coordinated by NRM South

4.3.2 Inability to demonstrate tangible outcomes

It is fair to say that public and private sector organisations investing in natural resource management activity expect to be able to see tangible outcomes for their investment. These returns may take various forms in terms of improvement in the condition of natural assets, aversion of threats to natural assets, or realisation of economic or social benefit from wise use of these assets. Accordingly, there is a fundamental requirement to demonstrate value.

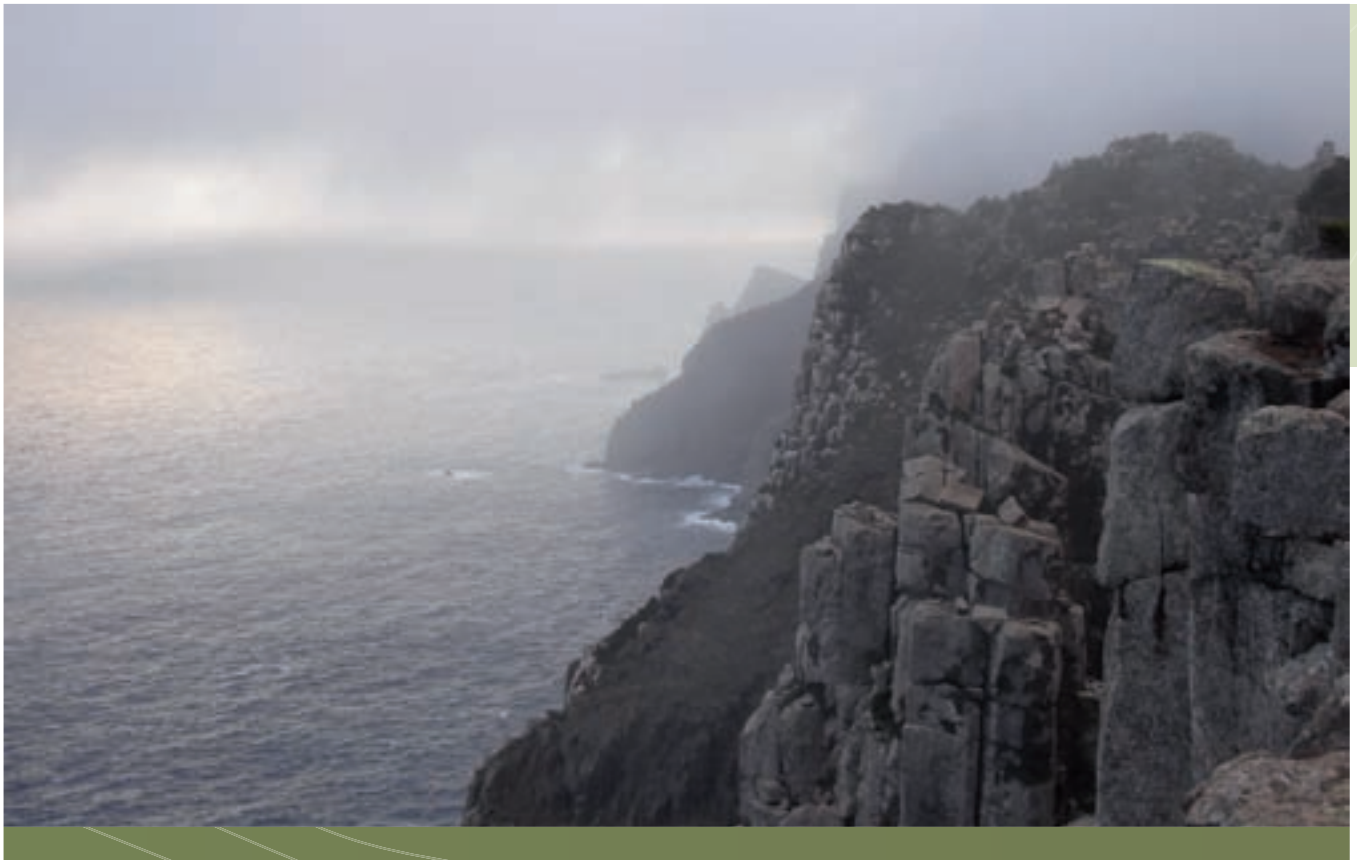
Failure to clearly communicate the benefits of natural resource management investment, typically achieved by reporting changes in resource condition, constitutes a significant risk to the quantum of ongoing investment in natural resource management activities in the future.

Management of this issue will require development of comprehensive metrics for assessing and reporting resource condition. At the time of writing this strategy, these metrics were still under development and had not been aggregated in a way that would support periodic and defensible reporting of changes in resource condition. As a consequence, there is a strong need to aggregate available data on resource condition and develop data where current gaps exist.

4.3.3 Duplication of effort and/or failure to take account of project synergies

One of the central challenges with a whole-of-community response, such as the one outlined in this strategy, is the coordination of activities by a range of largely unrelated organisations to minimise duplication of effort and maximise returns for natural resource management investment. Failure to coordinate activities can lead to the delivery of sub-optimal returns for natural resource management investment and erosion in the quality of the collaborative effort.

It is suggested that this issue is best managed by establishing regular forums designed to harness synergy between individual natural resource management partners and minimise the risk of duplicated effort. Such forums might be coordinated by NRM South on a half-yearly basis, providing an opportunity for stakeholder organisations to report on past actions and foreshadow future programs and activities.



4.3.4 Deterioration of stakeholder relationships

Any collaboration carries significant risk associated with potential deterioration of the relationships between the parties. Deterioration in these relationships can be due to factors as simple as mis-communication between the parties, or could be related to complex overlap in the wider roles of individual organisations.

Should such deterioration occur, there is a significant risk of:

- poor returns from investment as stakeholders compete for scarce funding;
- a loss of momentum toward the wise management of the Region's natural resources.

Management of this strategy will require effective management of stakeholder relationships on an ongoing basis to:

- promote information exchange;
- provide efficient mechanisms for resolution of inevitable differences that will arise in relation to project delivery.

As the legislated coordinator of the delivery of natural resource management activity in the Region, NRM South has an active role to play by developing management abilities and assisting with the resolution of natural resource management related disagreements between stakeholder organisations.

4.3.5 Decline in funding availability for natural resource management

As a relatively new public policy agenda, competition from established public policy agendas (e.g. health, economic development, education) and emerging environmental agendas (e.g. climate change) are likely to create increased competition for funds in the future and/or result in the transfer of funds for natural resource management activities to other priority areas within the life of this strategy.

The consequence of a decline in funding would likely be a reduction in natural resource management activity and reduced leverage for securing increased funding in the future.

To some extent, this risk extends well beyond the ambit of the natural resource management agenda as there is no real way to avert the funding risk associated with changes in community (as reflected by government) priorities.

The quantum of this risk, however, can be managed in two ways. The first involves the examination of opportunities to publicly demonstrate how natural resource management activities support other public policy agendas such as environmental conservation, economic development and social benefits. Secondly, the effective delivery of natural resource management programs provides the community with the confidence that scarce funds are being managed prudently and provides a platform for promoting greater community awareness of the benefits of continued natural resource management investment.



Appendices

APPENDIX A NRM SOUTH ACTIONS

NRM South implementation actions

NRM South will deliver natural resource management at a strategic level through development and reporting on performance against the regional strategy. Identifying gaps in the development and delivery of natural resource management, and working to ensure these are filled, is a key role of NRM South. We will also seek to increase overall resources and efforts for natural resource management in the Region.

The Implementation Plan (which can be found on the NRM South website at www.nrmsouth.org.au) is a key mechanism for coordination. Organisations can identify their contribution to the strategy through this working document at any time during the duration of this strategy and NRM South will periodically invite stakeholders to report data against the headline indicators and update their implementation actions.

Importantly, NRM South also has a role in managing projects and directly delivering natural resource management outcomes on the ground, engaging community and stakeholders and building partnerships, and by providing information to better inform natural resource management.



APPENDIX A NRM SOUTH ACTIONS

STRATEGY 1 MAXIMISE RETURN FOR NATURAL RESOURCE MANAGEMENT INVESTMENT

It is important that investment decisions are based on sound resource condition information, an understanding of the level of threat or opportunity, and knowledge of the possibility of successful management intervention. Investment in natural resource management (both financial and non-financial) occurs in an arena that is characterised by strong competition from other community priorities such as education, health and public infrastructure. It is therefore essential that investment in natural resource management activity is managed in such a way as to minimise waste and maximise community returns. It is important to identify potential overlap and gaps in current resourcing.

NRM South actions

1. NRM South to work with research institutions, stakeholders and other Tasmanian regions and develop a research program to support the regional strategy now and into the future (including social and economic research).
2. Monitor, evaluate, review and improve all NRM South projects and programs.
3. Provide support for natural resource management evaluation across the Region and share results through public reporting.
4. Monitor strategy progress against headline indicators and provide bi-annual public report.
5. Bring new ideas to old problems, reassess problems in light of new information, access expertise from elsewhere, and promote local case studies of excellent management (e.g. support industry awards).
6. Work collaboratively to identify options for increasing and sustaining funding to support natural resource management activities.
7. Review and develop sub-regional strategies and specific issue strategies as a mechanism to plan at whole-of-catchment/landscape scale, develop strong partnerships and ensure best return on co-investment (e.g. 'Healthy Catchments and Coasts' program, Southern Tasmanian Weed Strategy).
8. Develop and refine a specific investment model to promote the adoption of sustainable practice that incorporates the use of incentives (seek collaboration with other regions and the Tasmanian Property Management System Framework in this activity).

STRATEGY 2 INCREASE COMMUNITY AWARENESS OF THE REGION'S NATURAL RESOURCES

Effective management of the natural assets of the Region requires the active engagement of all stakeholders, including the general public. Engagement of these stakeholders will require raising community awareness of (a) the link between the state of the Region's natural resources and viable local communities, (b) the actions that can be taken by individuals to protect natural values, and (c) natural resource management programs and activities.

NRM South actions

1. Raise awareness of the Region's natural values, the threats and the opportunities for management through development of communication products and opportunities and through the provision of accurate and timely information.
2. Support education activities in the Region through provision of relevant information and work together with stakeholders to seek financial support.
3. Identify, develop and communicate sustainable practices (e.g. soil management through 'Living Soils').
4. Contribute natural resource information to state and regional planning processes.
5. Work with the Aboriginal community to raise awareness of the cultural values of the regions natural resources.
6. Support and collaborate with organisations engaged in community awareness raising activities.



STRATEGY 3 MANAGE CURRENT AND EMERGING THREATS TO THE REGION'S NATURAL ASSETS

There are a growing number of threats to the state of the Region's natural assets. Some of these threats are well known while others are emergent threats associated with climate change. Good stewardship of these assets requires concerted action on known threats and vigilance in respect of emerging threats.

NRM South actions

1. Identify priority threats and work with stakeholders to ensure that threats are addressed across tenure and industry, and to ensure resource users contribute to the investment in threat mitigation/reduction. (This is funded where it aligns with 'Caring for our Country' targets, i.e. priority areas.)
2. Review the Southern Tasmanian Weed Strategy.
3. Address climate change by identifying appropriate level of contribution and/or participation in research projects and management projects (e.g. Southern Tasmanian Councils Authority Climate Change project).
4. Develop 'Coastal management in a changing climate' program with relevant partners and seek resources.
5. Develop landscape level plans that include consideration of climate change (e.g. in conjunction with Healthy Catchments and Coasts program).
6. Develop a program to specifically address river health and recovery of river systems through river restoration projects and seek partnerships and resources to pursue (e.g. Tasmanian Department of Primary Industries, Parks, Water and Environment, Greening Australia, National Water Initiative grants, corporate sponsors).
7. Seek specific support for projects to protect the World Heritage Area from pests and pathogens.

STRATEGY 4 MEASURE AND REPORT CHANGES IN NATURAL RESOURCE CONDITIONS

A review of the 2005 strategy, together with stakeholder consultation conducted during the development of this strategy, highlighted a deficiency in the current level of quantitative information about resource condition. There is a need to secure better information about the resource state to inform the design of natural resource management policy and programs in the future.

NRM South actions

1. Regularly report on the state of the Region's assets at a whole-of-region scale and at catchment and local scales to inform management plans (seek resources and partnerships to support this activity).
2. Identify gaps in knowledge and develop appropriate steps to fill them (seek resources and partnerships to support this activity).
3. Communicate resource condition information into planning processes (regional land use planning, local government, and state and regional policy development).

STRATEGY 5 INCREASE STAKEHOLDERS' CAPACITY TO USE THE REGION'S NATURAL ASSETS WISELY

Engagement of key stakeholders in the use of the Region's natural assets is considered to be a major priority. This engagement should target improvements in the capacity of key stakeholders to protect natural resources while also helping the community to realise the benefits of sustainable use.

NRM South actions

1. Develop and support a network of extension officers across the Region (public and private sector).
2. Support community activity through the coordination of extension officers, information and opportunities for funding (and collaborate with organisations providing these services).
3. Actively seek increased investment and partnerships within the Region to increase the overall capacity.
4. Increase the knowledge and adoption of sustainable farming practices including reduction of threats and protection of soil, waterways and biodiversity.
5. Work with the Aboriginal community to provide meaningful opportunity for engagement in natural resource management.



Strategy review and development process: Report from consultations and background research

The strategy review process involved the development of two independent and objective background studies that commenced in August 2009 (Figure B1).

1. A reflective study, entitled 'Summary of principal achievements in natural resource management in the Southern Region of Tasmania since 2005', reviewed and reflected on the implementation of the 2005 natural resource management strategy for the Region and facilitated the identification of gaps in progress and lessons learned.
2. A high-level strategic study, entitled 'Natural resource management in Southern Tasmania: A scan of strategic environmental issues and emerging concerns', provided an independent and objective analysis of the key issues for the Region based on a scan of existing natural resource management issues, emerging issues and consideration of changing socioeconomic, regulatory and political operating environments for the Region.

Issues identified through the considerable stakeholder and technical consultation program facilitated by NRM South in 2007 and further consultations on 'Caring for our Country' held in 2009 were also referred to in the development of these background studies.

B1.2 Strategy development – Consultation

NRM South facilitated a stakeholder consultation process in November 2009 to verify the findings of this independent work, build on the regional issues identified, and identify the broad directions for the new strategy. In total, this consultation process received input from some 126 individuals and produced a significant volume of detailed and diverse feedback which was synthesised for input into the development of this strategy.

The breakdown of participants according to the consultation method is outlined in Table B1. A breakdown of those who participated in the four community consultation workshops (two in Hobart, one each at Eaglehawk Neck and Buckland) is shown in Figure B2.

Table B1: Participants according to consultation method

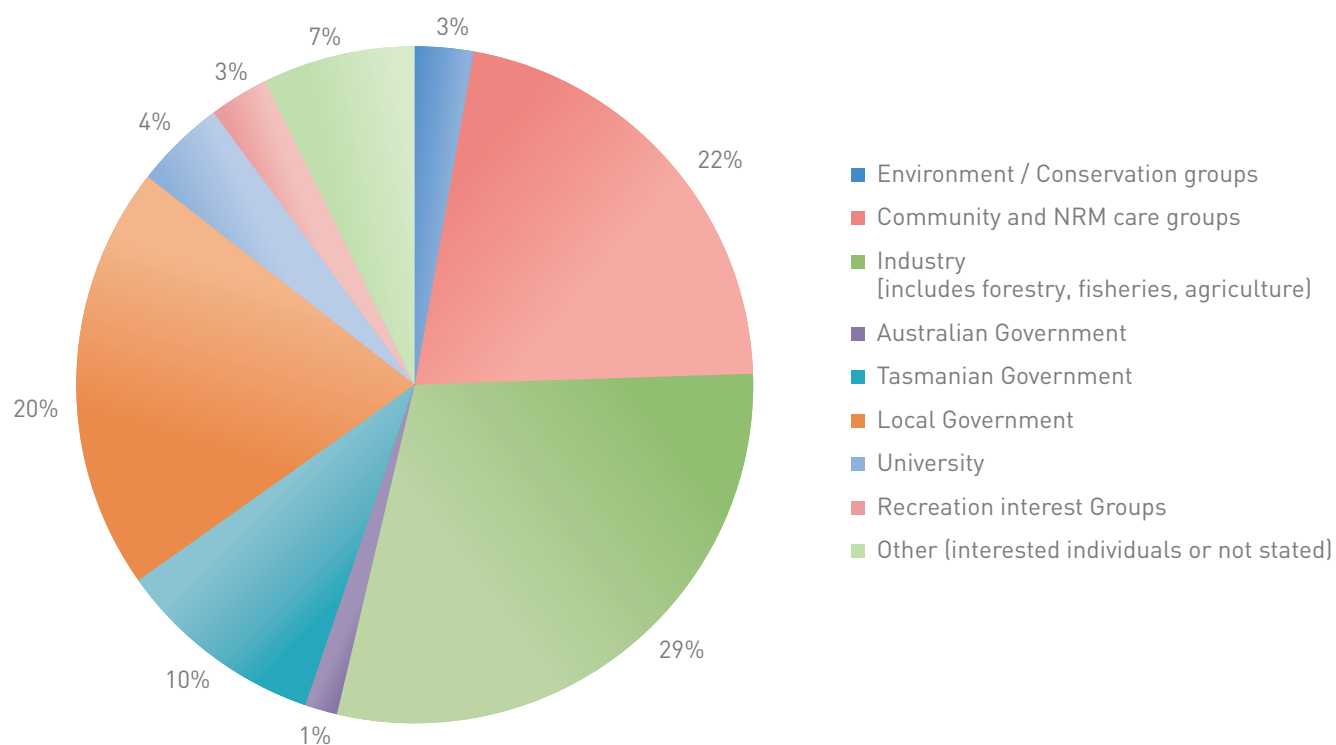
Method of consultation	No. of participants
Face-to-face community consultation workshops and meetings	69
Completed online survey responses	56
Written submission	1
Total	126

FIG.B1 THE STRATEGY REVIEW AND DEVELOPMENT PROCESS





FIG.B2 CONSULTATION WORKSHOPS – PARTICIPANTS BY SECTOR



B1.3 Strategy development – Validation

A draft strategic framework was presented to key stakeholders and the NRM South Committee in February and March 2010. Key state and local government, research, industry and non-government stakeholders who will play an important part in implementing many of the actions were consulted in face-to-face meetings and through an emailed feedback form prior to finalisation of the draft strategy.

APPENDIX B2 STAKEHOLDER CONSULTATION

SECTION 5



Participants in the consultation workshops were given the opportunity to hear a summary of findings from the two independent review studies, and contribute their views about the key issues and concerns for natural resource management for the next five-year period. Participants also had the opportunity to critically discuss the relevance and usefulness of a set of strategic directions ('straw goals' and actions). The feedback from the consultation forums, meetings and online survey significantly contributed to the development of the strategic framework of this strategy, building on consultations from prior years and the strategy review research.

B2.1 Ongoing and emerging issues identified via consultation

Participants identified issues that could be classified into six themes: planning and policy, environmental change and threats, communication, economy and resources, knowledge, and community values. Some issues were relevant across the Region, such as the need to build knowledge about the condition and changing nature of natural resources and systems with relatively scarce resources and the threat to ecosystems of bushfire and bushfire management regimes. Others were more locally specific, such as the impact of tourism on the capacity of the Tasman Peninsula community to manage natural resources effectively, and the implications of demographic and structural change in rural and coastal communities on the capacity of communities to engage effectively with natural resource management issues and opportunities for sustainable economic practice.

A summary of issues from the consultation forums raised is presented in Figure B3. A summary of the prioritisation of concerns gleaned from the online survey is presented in Figure B4.

B2.2 Towards the development of strategic actions

The consultation workshops presented a suite of straw goals for consideration and collaborative analysis. Participants assessed the goals in two ways:

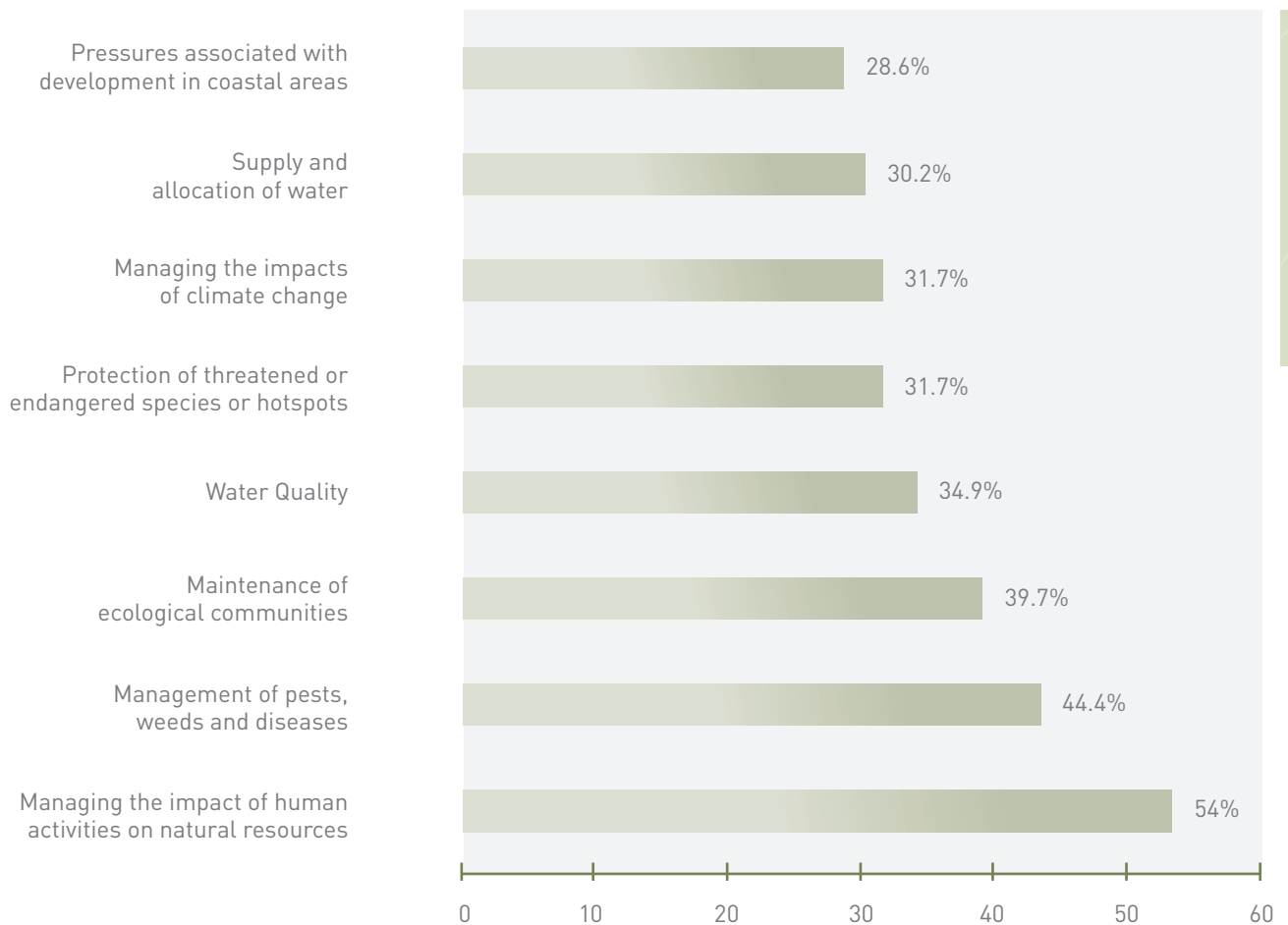
- for their comprehensiveness in incorporating the range of natural resource issues in the Region;
- for each goal's usefulness, clarity and ability to lead to realistic and achievable actions.

The feedback from this process contributed significantly to the development of the strategic framework.

FIG.B3 CONSULTATION WORKSHOPS – ISSUES RAISED

Planning & Policy	<ul style="list-style-type: none"> ■ Need for more strategic land use and development planning ■ Growing range of issues for local government to manage (climate change impacts, bushfire management, coastal zone development and vulnerability) ■ Limitations of the Tasmanian model planning scheme ■ Conflicting land use pressures ■ Changing natural resource values of land ■ Lack of integrated/regional planning between the three natural resource management regions ■ Irrigation schemes – weighing up value to business and landscapes ■ Contradictions between government policies ■ Lack of clarity on government responsibilities 	Environmental change/threats	<ul style="list-style-type: none"> ■ Implications of bushfire risk management on natural habitat loss and biodiversity ■ Concern about climate change effects on: <ul style="list-style-type: none"> – water availability – habitat change – bushfire risk – ecosystems – variable weather – sea-level rise ■ Tree species viability may change. Concern that bird species are declining as well as brushtail possums, wallabies, pademelons ■ Weed increase (capeweed, horehound, serrated tussock) ■ Protection of biodiversity hotspots should be a priority (includes grasslands)
Communication	<ul style="list-style-type: none"> ■ Changing media and communication channels ■ Need to communicate/share information about natural resource knowledge ■ No resources to analyse, and communicate monitoring data and information ■ Lack of collaboration between natural resource management organisations ■ Inadequate understanding of Aboriginal heritage ■ Access limitations of natural resource managers (particularly community land/coast care groups) to local information on Aboriginal cultural heritage 	Knowledge	<ul style="list-style-type: none"> ■ Uncertainty of regional climate change knowledge ■ Research in natural resource management is severely restricted due to resources ■ Loss of local and corporate knowledge as baby boomers retire but opportunities emerge as a new 'pool' of knowledge and expertise moves into Tasmania ■ Resource condition assessment is critical and complex ■ Lack of 'quality' information to guide decision making ■ Data sharing is a big issue ■ Data collection, local bio-physical knowledge and monitoring by the community are undervalued
Economy and resources	<p><i>Threats and opportunities</i></p> <ul style="list-style-type: none"> ■ Global financial crisis and its impact on availability of support and services ■ Reduction in public sector funding in Tasmania limits capacity to undertake effective natural resource management and maintain existing activities ■ New opportunities emerging for different agricultural practices and techniques (irrigation and carbon capture) ■ Increasingly dynamic economic environment for agricultural production (threat and opportunity) ■ Emerging carbon offset market services for tourists to Tasman Peninsula are supported by a very small ratepayer base which limits the capacity to provide services and undertake local natural resource management, and places a burden on the community ■ The credibility of some 'ecotourism activities' is questionable 	Community/values	<ul style="list-style-type: none"> ■ A changing and diverse mix of community values ■ Demographic shifts in rural areas (lifestyle retirees moving in, families and young people moving out) so rural landscape values and knowledge is changing; rural lifestyle are new but enthusiastic land owners with limited understanding of natural resource management ■ Tourism and transitional population present threats and opportunity ■ Cultural heritage management focused too much on tourism ■ Lack of support and acknowledgement of volunteers ■ Education needed to increase community awareness of natural resources and reduce inappropriate recreational behaviour ■ Politicisation of climate change is a barrier to positive action

FIG.B4 SURVEY: TOP EIGHT NATURAL RESOURCE ISSUES



Top eight natural resource issues that online survey respondents were most concerned about in Southern Tasmania



APPENDIX B3 PAST ACHIEVEMENTS



Analysis of the activities implemented across the Region in response to the 2005 strategy identified seven principal regional achievements of the Region.

- Positive engagement of stakeholders and community across sectors;
- Working together and development of successful partnerships;
- Awareness raising in the community and targeted sectors;
- Developing and applying integrated and holistic approaches;
- Improving information and data consistency and access;
- Working towards better monitoring, evaluation and reporting for improvement;
- Building capacity in sectors of the community.

While there have also been achievements in the maintenance and improvement in resource condition in parts of the Region and in some resource areas (e.g. the eradication or significant reduction in some invasive weed species and improvement in Ramsar Wetland water quality and natural habitat), a lack of quantitative information on the state of natural resources made it difficult to provide a meaningful assessment of quantitative changes in the resource condition.

The review of activities and achievements across the Region also exposed some apparent deficiencies in respect of progress in natural resource management since 2005. These include:

- an uneven distribution of natural resource management activities across the natural resource theme areas – areas of particular strength in activity included management of water resources and native flora and fauna, whereas activity in the land resources, marine and cultural landscape theme areas tended to be less prolific;
- significant data gaps in baseline and monitoring data for natural resource condition assessment;
- a lack of progress in the improvement of integrated policy, planning (including regional strategic land use and settlement planning) and decision making across scales for improved natural resource outcomes.

Some other issues needing further attention were also mentioned, for example:

- the need for improved attention to the incorporation of cultural landscape values into natural resource management;
- the need to address rural tree decline.

APPENDIX B4 STRATEGIC ISSUES IN THE REGION

The scan confirmed that natural resource management is complex and challenging for a variety of reasons, by the breadth of natural resources and issues in the Region, the diversity in values associated with natural resources, and the integrated nature of the task of natural resource management itself.

B4.1 Ongoing issues and pressures for the Region

As the Region moves into the next strategy period it is apparent from the scan that many of the issues associated with natural resource management will remain unchanged, particularly the:

- continuation of invasive weed management (an ongoing challenge for a variety of stakeholders);
- management of impacts associated with urban and infrastructure development, and land use change;
- management of rivers, catchments and estuaries to improve water quality, flows and ecosystem condition;
- protection of ecosystems and species for biodiversity;
- management of soil health and salinity.



B4.2 New priorities for the community

Other issues have emerged in the community as new priorities, for example:

- understanding the implications of global warming on the future regional climate and understanding the implications of climate change on natural resources to identify priority issues (scenario modelling and risk and vulnerability assessment);
- developing strategies, and implementing these, for both mitigation of greenhouse gas emissions and adaptation to climate change;
- pursuing more sustainable behaviours and practices across a range of community sectors (including households, industry and commerce, and government);
- the recognition that natural resource management issues associated with new major infrastructure projects and cumulative development pressures need to be better managed (including integrated planning for the continued urban expansion of Greater Hobart and coastal settlements, land use reclassification, and major infrastructure projects such as the Tasmanian Irrigation Development Scheme).

B4.3 Emerging operating environments

In addition to changing community interests, operating environments for natural resource management in the Region are changing. These include:

- an evolving climate change policy and regulatory environment that will present opportunities and risks for the regional economy and natural resource oriented industries;
- an emerging understanding about bio-physical changes associated with climate change (risks, threats and opportunities) through the roll-out of research activity in the climate change impacts and adaptation field across sectors and scales;
- demographic changes and population movement from the mainland associated with an ageing population and an increasing attraction of Tasmania and the Region for lifestyle purposes (sea-changers, tree-changers and rural lifestyle). This will have variable and locally specific impacts on the Region, presenting opportunities and challenges for local communities, economies, services and the management of natural resources;
- the roll-out of regional planning in Tasmania in which sustainability and natural resource management interests have the opportunity to become central considerations.

These changing operating environment and community priorities point to two core significant issues for the Region. These are climate change (particularly its implication for adaptation, but also for opportunities in mitigation via natural resource activities) and ongoing pressures associated with land use change and development.



APPENDIX B4 STRATEGIC ISSUES IN THE REGION

B4.4 Significant issues in the short and long term

CLIMATE CHANGE

The global imperatives for acting on climate change, including the need for mitigation and adaptation, are now clear. The Australian Government is now a party to the Kyoto Protocol and is implementing a program of mitigation actions. It also has a National Adaptation Program which is rolling out and facilitating priority adaptation research, collaboration and engagement of stakeholders. Similarly the Tasmanian Government has committed to a greenhouse gas emission reduction target to reduce emissions to at least 60% below 1990 levels by 2050 while it also recognises that there are many climate change risk and adaptation issues that need to be understood.

The most significant climate change challenge for natural resource management in the Region will be the management of the impacts of climate change on natural resources, particularly key natural resource values. There are numerous issues for the Region to consider, including understanding:

- which natural systems and natural resource commercial activities are most at risk;
- which natural systems we should facilitate adaptation for;
- the extent of the challenge spatially, sectorally and temporally.

Mitigation of global warming (via measures to reduce greenhouse gas emissions and enhance sinks) engages natural resource management through considerations around of the role of natural resources in carbon sequestration and the need to limit the removal of carbon sinks through the management of forests, land use change into the future and private landholder commercial carbon offsetting or soil sequestration opportunities. Mitigation responses will also need to pervade other sectors throughout the community, including the way we manage forest resources, urban growth and development, individual lifestyles, and industry, government and commercial activities. Some of these may have implications for natural resource management, such as the way we design and develop our urban environments into the future.

LAND USE CHANGE AND DEVELOPMENT PRESSURES

The study affirms the continuing significance of development and land use change associated with human activities as core pressures on natural resource condition in the Region. Examples of key pressures include:

- the impact on natural resources and natural resource management approaches of changing land use. For instance, from woodland to agriculture, or agriculture to plantation or urban development;
- the risk of fragmenting natural ecosystems, restricting ecosystem connectivity and the capacity to facilitate refugia for vulnerable species, due to the development of land for urban and infrastructure use, agriculture or forest plantations;

- the cumulative impact of urban expansion on natural resources including habitat loss, pollution of waterways and degradation of urban reserves and other ecosystems of value;
- the pressure to focus development in coastal and estuarine zones due to the relative attractiveness of these environments for human settlement, tourist activities and recreation;
- major infrastructure projects (e.g. the Tasmanian Irrigation Development Scheme) and major transport infrastructure projects.

Such pressures may also present opportunities for natural resource management interests to be better addressed; for example, regional planning should facilitate community reflection on the character and form of urban development in the Greater Hobart area into the future, while new irrigation infrastructure schemes may present opportunities for improving natural resource condition (via sustainable river flows and sustainable practice in soil management).

B4.5 Action theme areas for the management of natural resources

This study concluded that there are four overarching and fundamental action areas for the effective management of natural resources in the Region that are likely to form the foundations for natural resource management programs. They appear as common threads in the environmental scan analysis in each of the theme areas in addition to the need for integrated and well planned natural resource management on-ground activities, and include:

- the need for baseline data and continued monitoring and evaluation;
- development of systems and mechanisms for better policy, planning and decision making;
- engagement of the community in, and about, natural resource management;
- implementation of strategic and integrated natural resource management programs and activities.

Actions in these areas will need to be undertaken with due consideration of the guiding principles of natural resource management, sustainable development and in the context of climate change risks and opportunities. Further explanation of these action theme areas is available by reading the 'Environmental Scan Executive Summary and Discussion Paper' on NRM South's website at www.nrmsouth.org.au



APPENDIX C GLOSSARY

ADAPTIVE CAPACITY

The capacity of a system to adapt to its changing environment. It is applied to ecological systems and human social systems.

AGRO-ECOSYSTEM

A model for the functioning of an agricultural system, with all inputs and outputs.

BASELINE DATA

Measurement of the resource condition, attitudes and behaviours at the beginning. Setting targets requires the identification of a baseline – the level against which progress will be measured.

BIODIVERSITY HOTSPOT

An area with a significant reservoir of biodiversity that is under threat from human impact.

BIOREGION

An area of land which shares similar environmental, physical and climatic conditions and which contains characteristic ecosystems of plants and animals. Tasmania is divided into nine land bioregions and nine coastal and marine bioregions.

CAPACITY

The knowledge, skills, attitudes and resources needed to address natural resource management challenges. Community capacity building is about putting in place the necessary support mechanisms to achieve effective natural resource management.

CAPACITY BUILDING

An activity or activities designed to enhance natural resource management planning and management. This includes providing stakeholders with access to data and information; enhancing knowledge, skills and abilities; research and development; and market-based approaches.

CARBON SEQUESTRATION

The removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests or soils) through physical or biological processes.

CATCHMENT

The land area which drains into a particular watercourse (river, stream or creek) and which is a natural topographic division of the landscape. It includes 'end of catchment', that is, where catchments join other rivers or estuaries.

CLIMATE CHANGE ADAPTATION

Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects.

CLIMATE CHANGE MITIGATION

Mitigation involves acting to minimise the effects of global warming. Most often, mitigations involve reductions in the concentrations of greenhouse gases, either by reducing their sources or by increasing their sinks.

COASTAL

Any part of the Region within sight of, or directly impacted by, the sea, or potentially affected by coastal flooding or sea-level rise. The 'coastal zone' will therefore vary, depending on local topography (In the draft State Coastal Policy 2010, the coastal zone is defined as State waters and all land to a distance of 1km inland from the high water mark).

COMMUNITY

Community is used as an inclusive term to include everyone in the Southern NRM Region, in both their public and their private capacity. Community will therefore include state and local governments, industries and public land managers, as well as individuals and groups sharing an interest in natural resource management.

ECOLOGICAL PROCESSES

The biological, chemical and physical processes that take place within an ecosystem (e.g. carbon cycling, nutrient assimilation).

ECOSYSTEM

A dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit.

ENDEMIC

Confined to a particular area. For example, a Tasmanian endemic species is found only in Tasmania.

ESTUARINE

A semi-enclosed or periodically closed coastal body of water in which the aquatic environment is affected by the physical and chemical characteristics of both fluvial (freshwater) and marine systems.



APPENDIX C GLOSSARY

EVALUATION

The systematic review of a program, project, strategy or other activity to determine whether it is working as intended, what impacts it is producing, whether it is being implemented cost-effectively, and the reasons why it is producing the identified impacts. Evaluation involves collecting and analysing information to make judgements and recommendations for future action.

GEODIVERSITY

The range or diversity of geological (bedrock), geomorphological (landform) and soil features, assemblages, systems and processes.

INDICATOR

A measurement that can be repeated over time to track changes in the condition of a resource or environmental asset, a management practice, or a social or economic process.

INTEGRATED NATURAL RESOURCE MANAGEMENT

Natural resource management is complex, spanning multiple issues. An integrated approach addresses natural resource management issues holistically, with coordination across different agencies and organisations, and across different land tenures and geographical areas. Integrated natural resource management should deliver more coordinated, efficient and effective outcomes.

LAND USE

Land use describes the activities that occur on land, such as agriculture, energy production, human settlements, transport, forestry, mining and conservation.

MANAGEMENT ACTIONS

Activities to be undertaken to improve the condition of the Region's natural resources.

MARINE

Areas where the environment is more strongly influenced by the oceans than by the main landmass of Tasmania and its rivers. Mostly refers to the seabed, open waters and more remote offshore islands.

MONITORING

The regular gathering of information in a consistent manner. It may be to keep track of and observe the progress of a project or program. Environmental monitoring is a valuable tool to determine whether the condition of a resource is stable, improving or declining.

NATURAL RESOURCE MANAGEMENT

The management of any activity that uses, develops or conserves 'natural resources'.

NATURAL RESOURCES

The water, land (including soils), air, plants, animals and microorganisms, and the systems they form.

PARTICIPATION

As a concept, participation refers to the number of people engaged in an activity (e.g. public meetings, local governance, landcare groups, adult education, employment).

PLANTATIONS

Intensively managed trees, of either native forest or exotic species, created by the regular placements of seedlings or seed.

RENEWABLE ENERGY

Any source of energy that can be used without depleting its reserves.

RESERVES

Areas of protected landscapes or ecosystems. Reserves can be marine or terrestrial, informal or formal (dedicated statutory reserves).

RESILIENCE

The ability to absorb disturbances, or the ability to recover from or adjust easily to misfortune or change. Resilience can refer to natural systems (i.e. ecosystems or individual species) and human social systems (e.g. local salinity communities).

SALINITY

The accumulation of excessive salts in land and water at sufficient levels to have an impact on human and natural resources (plants, animals, aquatic ecosystems, water supplies, agriculture or infrastructure).

SECTOR

A specific section of the community, such as state government, local government, industry, public land managers, the 'care' community, the Aboriginal community.

SOUTHERN NRM REGION (THE 'REGION')

The area of Tasmania covered by the twelve Southern Tasmanian Councils: Brighton, Central Highlands, Clarence, Derwent Valley, Glamorgan-Spring Bay, Glenorchy, Hobart, Huon Valley, Kingborough, Sorell, Southern Midlands and Tasman. The boundary of the Region approximates to the '62' telephone directory boundary for Tasmania. The Region also includes the adjacent state waters.

STAKEHOLDERS

Agencies, organisations and individuals responsible for managing the Region's natural resources.

SUSTAINABLE DEVELOPMENT

Managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while:

- sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations;
- safeguarding the life-supporting capacity of air, water, soil and ecosystems;
- avoiding, remedying or mitigating any adverse effects of activities on the environment.

TASMANIAN NATURAL RESOURCE MANAGEMENT COUNCIL

A Council established under the Tasmanian Natural Resource Management Act 2002 to advise the Minister on natural resource management issues (such as priorities, accreditation of the regional strategy, consistency and coordination matters).

See www.austlii.edu.au/au/legis/tas/consol_act/nrma2002280/

THREATENED SPECIES

Flora or fauna that is listed in Schedule 3, 4 or 5 of the Threatened Species Protection Act 1995. That is, species or subspecies listed as extinct, endangered, vulnerable or rare.

VULNERABLE

Where threatening processes have caused loss or significant decline in species that play a major role within the ecosystem; or a significant alteration to ecosystem processes.



NOTES

[illegible]

[illegible]

