

Southern Rivers

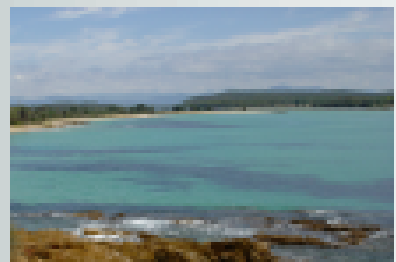
CATCHMENT MANAGEMENT AUTHORITY

Catchment Action Plan



SECTION 6:

Coastal and Marine Program



COASTAL AND MARINE PROGRAM

6.1 INTRODUCTION

The coastal and marine program is a new component of the catchment management brief. It includes all waters to three nautical miles offshore. The coast and marine program has been developed with input from many partners, such as local government, Landcare and Coastcare groups, and builds on the information contained within the blueprints of the South-East and Southern Catchment Boards.



The state of the region's coastal and resources, the continuing pressure on these, and the way the catchment action plan directs effort to improve their condition is described in Table 10.

Discussions have commenced or are pending with new industry partners such as commercial fishers, oyster growers and dive and tourism operators. Many commercial harvesting operators are investigating environmental management systems to mitigate risks on issues such as water quality and sustainable harvest, and to identify potential improvements to their systems and processes that will contribute to achieving overall catchment targets.

The coastal and marine program has strong linkages with aspects of other programs, including the biodiversity program (terrestrial coastal vegetation, weeds and pests), the water program (water quality, riparian works, wetlands), the soil and land capability program (acid sulphate soils and coastal development) and the community and partnership program. The estuarine and marine environments do not exist in isolation, but are very much impacted by what happens in the catchment.

The stand-alone component concentrates on coastlines, estuaries, aquatic/marine biodiversity and sustainable management of aquatic/marine resources and research. The establishment of the Batemans Marine Park is expected to provide protection of biodiversity and critical habitats. The process will also provide a large array of information and management tools that will help provide a framework within which to manage the marine environment.

Sustainable commercial and recreational fishing needs to be achieved for the long term. The current industry adjustment packages being offered by Australian and NSW governments aim to improve the sustainability of commercial fishing within the three nautical mile limit.

6.2 CONTRIBUTORS

The Coastal and Marine Program is supported by the Coastal and Marine Working Group. This group provides the Southern Rivers CMA with expert advice, research and programs advice and funding opportunities, as well as being a creative forum for discussion of coastal and marine ideas. It includes representatives of Southern Rivers CMA, the Department of Natural Resources, the Department of Primary Industries, the Department of Environment and Conservation, the Marine Parks Authority, the Southern Councils Group, Coastcare, Oceanwatch Australia, and the Eden Marine Discovery Centre, as well as representatives from six local government areas.

In addition, through ongoing consultation with industry and local government, input has been received from the oyster industry and council estuary management committees.

6.3 DEVELOPMENT OF TARGETS

Marine ecosystems are less well understood than terrestrial ecosystems. Long-term targets cannot be accurately determined until baseline information is known and consultation with partners has revealed the extent of change possible over time. The research program will focus on determining this basic information, such as indicators of estuary health.

The work of the Coastal and Marine Working Group has identified a need for comprehensive baseline information. To more accurately establish a baseline, work will shortly

commence on an audit of current coast and marine condition. This program will involve consideration of issues such as erosion, access, Aboriginal cultural significance, endangered ecological communities (EECs) and weed eradication.

The CAP includes a commitment to work with local government to implement listed actions within completed estuary management plans in view of the level of investigation and community input that supported the development of those plans. Identified works include protection of EECs, riparian works, protection of remnant vegetation, weed control and improvements to water quality.

It is proposed to continue to develop this program in partnership with local government to identify further estuary and coastal lake works. This complements the report of the Healthy Rivers Commission Inquiry into Coastal Lakes.

Southern Rivers CMA has identified commercial and recreational fishers, as well as the oyster industry, as important emerging long-term partners. Development of these partnerships will help determine these industries' needs in order to establish and maintain sustainable operations.

These are likely to be specific to a particular industry group (eg the mesh-net fishing industry or the whale watching industry) and may also be sub-regionally specific (eg river groupings for oyster production). Until initial discussions are commenced with industry groups, targets cannot be improved nor can indicators be finalised.

Specific information about marine biodiversity in the region is limited. Some information will be forthcoming from survey work through the creation of the Batemans Marine Park, some is available through the Jervis Bay Marine Park, and some other scattered information is available, such as grey nurse shark information from the Department of Primary Industries. Southern Rivers CMA will participate in programs to mitigate threats (such as from marine pests or marine debris), collect more marine biodiversity information from divers, and coastal and marine research in this region.

6.4 MONITORING AND EVALUATION

The objective of this program is to protect and improve the health of coastal, estuarine and marine environments. Information about the current resource condition of the coasts and marine environment is scarce and needs to be developed. Once this information is available the program will have a baseline on which to measure the progress.

Information on works, incentives, number of people involved and the area of land rehabilitated are currently being recorded.

6.5 LINKS BETWEEN TARGETS

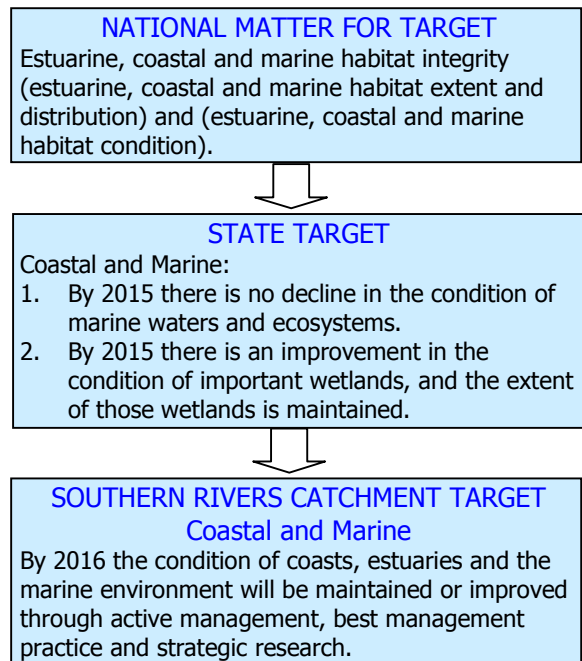


TABLE 10

COASTAL AND MARINE PROGRAM -
Current state and pressures and proposed action plan responses

State of coastal and marine resources in the Southern Rivers region	Pressure on coastal and marine condition	Response of the Catchment Action Plan
<p>Protecting and rehabilitating the coastline The Southern Rivers CMA region's coastline includes cliffs, rock platforms, offshore islands, sandy beaches, large and small entrances to estuaries, creeks and lagoons.</p> <p>Some areas are well vegetated especially in the south. To the north, the vegetation gives way to development</p> <p>Other areas are important to local Aboriginal communities, including sacred sites such as middens, burial grounds, fish traps etc.</p>	<p>Protecting and rehabilitating the coastline Pressure from tourism, sea-changers and residents in the coastal zone for:</p> <ul style="list-style-type: none"> • coastal housing positions with views has resulted in a loss of vegetation (legal and illegal clearing), • uncontrolled multiple access points in some cases over sensitive vegetation such as saltmarsh or over sites of Aboriginal significance • recreational use of beaches, rocky platforms for fishing. 	<p>Protecting and rehabilitating the coastline CM1 By 2016, the condition of coastlines will be improved through the development and implementation of natural resource management plans.</p> <p>This will involve an audit to determine priorities for rehabilitation or protection which will identify locations for:</p> <ul style="list-style-type: none"> • erosion control • controlled access • integrated vegetation management (including weeds and pests) • protection of Aboriginal cultural sites • programs addressing threats to threatened species such as migratory birds • restricted new development (or no development) • targeted education programs • programs to deal with potential future sea-level rise.

COASTAL AND MARINE PROGRAM -

Current state and pressures and proposed action plan responses (continued)

State of coastal and marine resources in the Southern Rivers region	Pressure on coastal and marine condition	Response of the Catchment Action Plan
<p>Protecting and rehabilitating estuaries Generally our estuaries and coastal lakes are in surprisingly good condition. They are the nursery grounds for a wide diversity of aquatic species, including many harvested commercially. Many estuaries support the production of healthy oysters which are an important industry to the region.</p>	<p>Protecting and rehabilitating estuaries Our estuaries are the receiving point for all land and water catchment inputs. This includes nutrient and sediment inputs from:</p> <ul style="list-style-type: none"> • agriculture • industry • new developments • roads • acid sulphate soil disturbance. <p>Many estuaries are managed by estuary management committees which have developed estuary management plans that attempt to accommodate the competing needs of estuary users, as well as provide facilities to minimise impacts. These plans include riparian vegetation management, infrastructure needs, entrance/dredging management and policy development.</p>	<p>Protecting and rehabilitating estuaries CM2 By 2016, maintain or improve the condition of estuaries through development and implementation of natural resource management plans (including estuary management plans).</p> <p>This target includes actions to improve the natural resource assets of estuaries such as:</p> <ul style="list-style-type: none"> • partnership programs with estuary users • incentive programs to enhance riparian buffers • programs to remove barriers to fish passage • management of acid sulphate soils • strategic water quality monitoring • strategic implementation of actions listed within estuary management plans • sediment and nutrient reduction programs.
<p>Sustainable management of aquatic/marine resources Management of our marine resources is currently the responsibility of the Department of Primary Industries and the Department of Environment and Conservation, together with user groups such as commercial fishers, recreational fishers, the dive industry and the tourism industry.</p> <p>Many fisheries have environmental management systems in place which attempt to ensure the sustainability of the industries.</p> <p>There is a desire by Indigenous communities to set up aquaculture initiatives.</p>	<p>Sustainable management of aquatic/marine resources Pressures on our aquatic/marine resources come from the many user groups. They are predominantly from extractive industries such as fishing (commercial and recreational) and illegal harvesting, with lesser impacts from divers and water-based tourism (eg jetski, whale watching).</p> <p>There are many rules and strategies in place to ensure sustainability of marine species such as bag and size limits, controls on net types, licensing, bycatch reduction measures.</p>	<p>Sustainable management of aquatic/marine resources CM3 By 2016, best management practices have been developed and adopted by aquatic/marine industries</p> <p>This target will involve work with industry groups to:</p> <ul style="list-style-type: none"> • extend successful programs (incentives) • targeted education programs • refine BMP with industry as required. <p>This target aims to work with Indigenous communities to ensure viable Aquaculture initiatives are established in the right locations.</p>

COASTAL AND MARINE PROGRAM -

Current state and pressures and proposed action plan responses (continued)

State of coastal and marine resources in the Southern Rivers region	Pressure on coastal and marine condition	Response of the Catchment Action Plan
<p>Protecting aquatic/marine biodiversity Information about our marine biodiversity is limited. Some species seem to be in decline (such as the grey nurse shark) and others seem to be on the increase (such as the many whale species which were hunted). There is a series of marine parks and reserves with varying restrictions which have only recently been declared in the region.</p> <p>There is limited marine habitat mapping information – much still needs to be collected.</p>	<p>Protecting aquatic/marine biodiversity Aquatic/marine biodiversity is difficult to protect as the majority of people cannot see it. Threats come in many forms – such as human rubbish tangling marine life, marine pests introduced from ballast water, illegal harvesting/hunting of endangered species.</p>	<p>Protecting aquatic/marine biodiversity CM4 By 2016 active management will protect or improve key aquatic habitat areas (including for listed threatened/endangered species and ecological communities) in partnership with relevant authorities and user groups.</p> <p>This target aims to address:</p> <ul style="list-style-type: none"> • protection of marine biodiversity • implementation of a marine pest strategy with partners • marine education • marine habitat mapping • a marine debris survey
<p>Conducting strategic coastal and marine research Southern Rivers CMA's research strategy is in development, it draws on the needs of various partner agencies and research institutions as well as filling information gaps required for measurement against targets.</p>	<p>Conducting strategic coastal and marine research Southern Rivers CMA is under considerable pressure from the Natural Resources Commission and other organisations to research baseline and basic information which will improve knowledge and therefore decision making.</p>	<p>Conducting strategic coastal and marine research CM5 By 2007 a research strategy will be developed to improve the scientific knowledge and understanding of coastal, estuarine and marine environments and processes; to be progressively implemented by 2016. This target will address information gaps including on indicators of poor estuary health (such as harmful algal blooms) and critical habitat mapping.</p>

6.6 TARGETS OF THE CATCHMENT ACTION PLAN'S COASTAL AND MARINE PROGRAM

Set out below are the coastal and marine catchment target, five management targets and detail on the intent, performance indicators and examples relevant to each management target.

The coastal and marine catchment targets

By 2016 the condition of coasts, estuaries and the marine environment is maintained or improved through active management, best management practice and strategic research.	
Intent	<p>The objective of this program is to protect and improve the health of coast, estuarine and marine environments.</p> <p>Achieving this requires the co-operation of many institutions, communities and industry groups. Southern Rivers CMA is committed to full engagement with interested parties to facilitate relevant, achievable and practical outcomes and to provide long term protection of coastal and marine environments. This will involve Southern Rivers CMA engaging with current partners, particularly State and local government agencies, but also engaging new partners.</p> <p>These new partners include industry groups with a keen interest in the health of our coast, estuary and marine waters such as the oyster industry and the commercial fishing industry. Other partners to be engaged include the tourism industry (including ecotourism operators), recreation fishing groups, coastal, estuarine and marine community groups and networks, Landcare, the Aboriginal community, non-English speaking groups and land-based industry groups such as the dairy industry.</p> <p>Many aspects of the south coast tourism industry are directly underpinned by the natural assets of the region. Southern Rivers CMA seeks to protect these assets, to not only support the economic viability of south coast towns, but also to enhance natural processes that maintain the ecological integrity of those places.</p> <p>Of equal importance to achieving this objective is raising the awareness, understanding and support of the urban and rural communities in protecting these natural and cultural heritage values.</p>
Performance indicators	<p>Measurement of this catchment target will be achieved through implementation of management targets 1 to 5.</p> <p>Baseline conditions have not been established for coastal, estuarine and marine environments. This will be done through the implementation of catchment activities to achieve the management targets.</p>

TABLE 11

The coastal and marine management targets

Coastal and marine management target CM1 – protecting and rehabilitating the coastline

CM1 By 2016, the condition of coastlines will be maintained or improved through the development and implementation of natural resource management plans

Coastal and marine management target CM2 – protecting and rehabilitating estuaries

CM2 By 2016, the condition of estuaries will be maintained or improved through development and implementation of natural resource management plans (including estuary management plans)

Coastal and marine management target CM3 – sustainable management of aquatic/marine resources

CM3 By 2016, best management practices will be developed and adopted by aquatic/marine industries.

Coastal and marine management target CM4 – protecting aquatic marine biodiversity

CM4 By 2016, active management will protect or improve key aquatic habitat areas (including for listed threatened/endangered species and ecological communities) in partnership with relevant authorities and user groups

Coastal and marine management target CM5 – conducting strategic coastal and marine research

CM5 By 2007, a research strategy will be developed to improve the scientific knowledge and understanding of coastal, estuarine and marine environments and processes; to be progressively implemented by 2016.

Details on coastal and marine management target CM1 – protecting and rehabilitating the coastline

<p>Management target CM1:</p> <p>By 2016 the condition of coastlines will be maintained or improved through the development and implementation of natural resource management plans.</p>	
<p>Intent</p>	<p>This target aims to facilitate the management or protection of the unique coastline features of the region, including beaches, dunes, headlands and intertidal rocky reefs, through working with landholders, land managers and responsible authorities to develop and implement natural resource management plans. An audit will be completed, identifying the prioritised list of actions for works and will cover improved management of features, rehabilitation of erosion hotspots, education and awareness programs, retention of cultural significance, enhancement of coastal habitat, etc.</p> <p>In view of the lack of coastal condition data, improvements to resource condition will focus on development and implementation of natural resource management plans as a surrogate mechanism.</p>
<p>Performance indicators</p>	<ul style="list-style-type: none"> • audit completed of existing natural resource management plans and other information sources • natural resource management plans developed and implemented • improvement as measured by comprehensive coastal assessment • output indicators from completed projects within these plans.
<p>Examples of catchment activities that would support this target</p>	<p>Facilitate and implement activities (within natural resource management plans) that may include the following: erosion control program for eroding headlands (including provision of safe access points); integrated vegetation management program for coastal reserves (including protection of sensitive dune vegetation); education programs to protect rocky shores from over-exploitation; programs which work with developers to protect dunes and estuaries with adequate buffers for new development; programs in partnership with indigenous communities to protect coastal features of Aboriginal significance; programs which provide enhanced coastal habitat for migratory birds and aquatic species.</p>
<p>Related targets</p>	<p>C1, C3, B1, B2, W1</p>

Details on coastal and marine management target CM2 – protecting and rehabilitating estuaries

<p>Management target CM2: By 2016 the condition of estuaries will be maintained or improved through development and implementation of natural resource management plans (including estuary management plans).</p>	
<p>Intent</p>	<p>This target aims to facilitate the involvement of local and state governments and the community in planning for the future protection and enhancement of estuaries. This will be achieved by using the current knowledge and studies to improve the condition of estuaries in partnerships with estuary users and through the use of targeted incentives.</p>
<p>Performance indicators</p>	<ul style="list-style-type: none"> • maintain or improve ratings of estuaries within <i>the National Land and Water Resources Audit Classification</i> and or other condition indexes as developed • number/size of listed estuary management plan actions completed • number of landholders engaged in measures to protect estuary • number of new partnerships with estuary users • extent of riparian habitat improved/maintained (not further degraded) • extent of habitat improved for fish • number of fish barriers removed
<p>Examples of catchment activities that would support this target</p>	<p>This will be achieved by using the current knowledge and studies to improve the condition of estuaries and may include:</p> <p>Plans and strategies</p> <ul style="list-style-type: none"> • reviewing and incorporating the Coastal Lakes Inquiry classification into plans of management • supporting landholders in protection and rehabilitation of estuaries through incentives and best management practice <p>Capacity building and information</p> <ul style="list-style-type: none"> • working with communities to ensure the protection of Aboriginal cultural heritage values • working in partnership with estuary users (oyster farmers, commercial fishers, recreational fishers, etc) to protect estuaries and promote sustainable practices (eg through EMS, fisheries management strategies, etc) <p>Develop and implement projects</p> <ul style="list-style-type: none"> • supporting estuary users (eg oyster farmers) in attempts to remediate water quality issues • protecting and improving fish habitat (seagrass, saltmarsh, mangroves) and removing barriers for fish passage (weirs, road crossings, flood gates) • reducing sediment and nutrient input into estuaries • management of acid sulphate soils • management of riparian vegetation • ongoing estuary health indicator monitoring program • implementation of estuary and coastal lakes incentives program for priority estuary management plan-listed actions (includes coastal waterbodies not covered by an EMP but covered by a natural resource management plan) • nutrient reduction program – working with land-based industry to minimise nutrient entry into priority water bodies from urban, industrial, and agricultural land uses.
<p>Related targets</p>	<p>C3, W1, W2, SLC1</p>

Details on coastal and marine management target CM3 – marine industry best practice

Management target CM3: By 2016 best management practices will be developed and adopted by aquatic/marine industries.	
Intent	Reduce the impacts from a range of industry-specific activities through development of best management practices to maintain a viable and sustainable marine industry (eg commercial and recreational fishing, tourism, aquaculture), and minimise the impact of these activities on the long-term sustainability of marine biodiversity.
Performance indicators	<ul style="list-style-type: none"> • number of industry members engaged in best management practice • number of targeted incentive programs developed and implemented • number of education and awareness programs delivered
Examples of catchment activities that would support this target	<p>Research, monitoring and evaluation</p> <ul style="list-style-type: none"> • each industry to develop and implement a risk management based approach to their use of and impact on natural resources • the provision of fish measuring stations for recreational fishermen to use to ensure fish caught are of legal size. • research into alternate commercial fishing gear to reduce commercial by-catch. • targeted research programs <p>Plans and strategies</p> <ul style="list-style-type: none"> • develop and implement industry engagement strategy (including forums/partnerships) • develop and implement Aboriginal aquaculture strategy with Indigenous partners which recognises cultural harvesting practices and rights and explores new sustainable aquaculture initiatives
Related targets	C5

Details on coastal and marine management target CM4 – protecting aquatic/marine biodiversity

Management target CM4: By 2016 active management will protect or improve key aquatic habitat areas (including for listed threatened/endangered species and ecological communities) in partnership with relevant authorities and user groups.	
Intent	<p>This target aims to reduce the effects of human impact on marine biodiversity (terrestrial and aquatic). This will be undertaken in partnership with government (including Marine Park Authorities), industry and the community and will include education and awareness, active management, identification of threats and programs to address threats.</p>
Performance indicators	<ul style="list-style-type: none"> • number of hectares under active management that protects or improves • development of marine species maps – critical habitat areas • number of marine biodiversity initiatives implemented.
Examples of catchment activities that would support this target	<p>Capacity building and information</p> <ul style="list-style-type: none"> • activities which promote education/awareness/understanding of the causes of species decline in partnership with the community • formation of a coastal working group with representatives from the Southern Rivers CMA, six coastal councils, State Government and industry groups formed to address threats to marine biodiversity • development and implementation of a marine education program targeting threats to biodiversity and the causes of species decline. <p>Develop and implement projects</p> <ul style="list-style-type: none"> • support for active management of key marine habitat areas (active/adaptive management measures may include threatened species, and may include use of marine protected areas, marine parks, marine reserves, etc). This may include identification of important/critical marine habitat. • activities which maintain sustainable populations of fish. <p>Plans and strategies</p> <ul style="list-style-type: none"> • activities which support relevant authorities in implementation of pest management strategies for priority pest species (and ensuring current levels of infestation are not exceeded) • development and implementation of a marine pest strategy together with relevant authorities • research, monitoring and evaluation • marine mapping project which identifies key habitat areas of threatened species • marine debris survey
Related targets	B4

Details on coastal and marine management target CM5 – conducting strategic coastal and marine research

<p>Management target C5: By 2007 a research strategy will be developed to improve the scientific knowledge and understanding of coastal, estuarine and marine environments and processes, to be progressively implemented by 2016.</p>	
Intent	Increase knowledge of coastal and aquatic environments and human impacts on them, particularly in sensitive and high conservation value areas to improve the quality of decision-making and management. Disseminate this knowledge to all coast and marine partners including local communities.
Performance indicators	<ul style="list-style-type: none"> • adoption of research strategy • number of research and management programs implemented in line with the strategy.
Examples of catchment activities that would support this target	<p>Research, monitoring and evaluation</p> <p>The initial research priorities will target basic (baseline) knowledge of coastal and aquatic systems to measure system change over time. This includes indicators of estuary and marine health, as well as new outbreaks of pest species and immediate threats to biodiversity.</p>
Related targets	W5

6.7 RISK TO TARGET ACHIEVEMENT

Low level of community and landholder acceptance and involvement

The degree of which targets are achieved will often rely on the level of community, industry and/or stakeholder acceptance and/or involvement.

Targets at risk: All

Response: Provision of variable incentive programs developed with partners and the provision of human resources, ie the coast and marine staff. Southern Rivers CMA is responding to this potential risk through an engagement and partnership strategy that will identify changes in community needs, methods of improving engagement and partnership opportunities.

Climate Change

Targets at risk: CM1, CM2, CM4

Response: Raise the level of community awareness regarding the potential impacts of climate change and the need for region-wide adoption of more sustainable land management practices.