



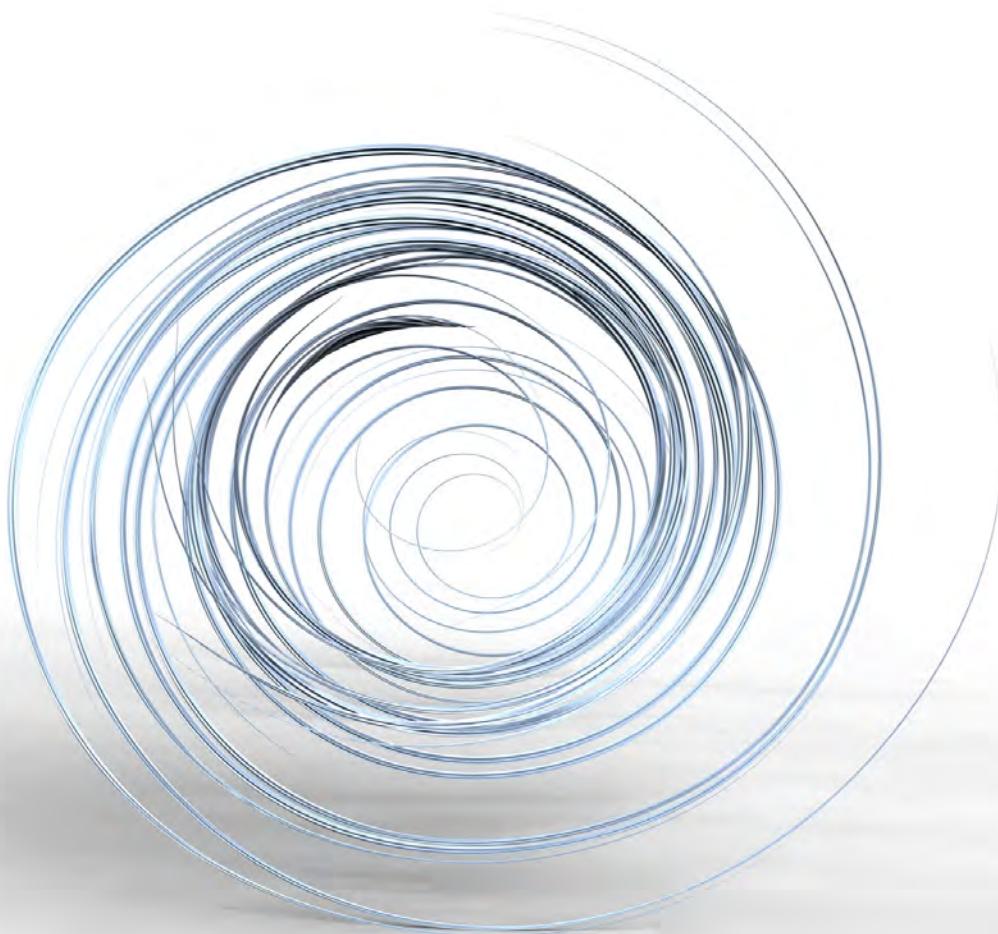
MARINE ESTATE MANAGEMENT STRATEGY

# Quarterly snapshot

Reporting period – Year 2, Quarter 4

MARINE ESTATE MANAGEMENT AUTHORITY

INT20/108783



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# Part A: Strategy snapshot

## Reporting period

| Stage               | Year | Quarter | From         | To           |
|---------------------|------|---------|--------------|--------------|
| Stage 1 (2018-2020) | 2    | 4       | 1 April 2020 | 30 June 2020 |

## Purpose of this snapshot

The purpose of this snapshot is to provide key stakeholders and the community with regular (quarterly) progress updates on the implementation of the Strategy. It includes updates on notable initiative projects (actions) each quarter and what is planned for next quarter. A detailed update for all actions in each initiative is included in the Strategy Implementation Annual Report. This snapshot should be read in conjunction with the [Strategy Implementation Plan](#) and the [Strategy Implementation Annual Report](#).

This is the last report for Stage 1, next quarter will report on the commencement of Stage 2 (2020-2021).

## Delivering long term outcomes

The Strategy's nine initiatives contribute to delivering healthy waterways and coastal habitats, sustainable land use practices, as well as planning for climate change, protecting Aboriginal cultural values of the marine estate, reducing impacts on marine life, delivering sustainable boating and fishing, enhancing social, cultural and economic benefits and delivering effective governance.

Stage 1, the first two years of the 10-year Strategy, has focused on addressing the most severe threats to the health of the marine estate. Particular attention and resources were allocated to improving water quality and reducing water pollution, which was identified as the greatest threat to the marine estate by the NSW community and through an evidence-based threat and risk assessment in 2017.

Implementation of Stage 2 will build on the foundations laid in Stage 1 to protect and enhance the marine estate for the benefit of the community. Collectively, the initiatives will improve water quality, reduce marine litter, improve the health of coastal habitats, reduce threats to marine wildlife, ensure sustainable foreshore development, sustainable fishing and aquaculture, promote safe and sustainable boating, prepare for climate change and protect the Aboriginal cultural values of the marine estate.

## Program highlights this quarter

Of the 53 management actions contained in the Strategy, 41 are under way in Stage 1. Many actions have multiple projects within them, which means approximately 100 projects of varying scale are currently active this quarter. The highlights this quarter for each initiative are numerous; a selection of five highlights illustrating the breadth of work and accomplishments achieved this quarter are below.

| Project   | Highlights  |
|---|---|
| <a href="#">Marine vegetation management strategies</a> |  <p>Refined an approach to display estuarine vegetation, combining future inundation areas, historic distribution and constraints into a management tool for natural resource managers. This enables a more holistic approach to estuarine vegetation management for large areas and can inform the prioritisation of areas for protection or ongoing use.</p> |

| Project  | Highlights   |
|--|--|
| <a href="#"><u>Monitoring priority environmental assets at risk from climate change</u></a>        |  <p><a href="#"><u>Researchers have identified</u></a> three important biological indicators that will act as early warning signs of climate-driven changes to NSW's marine environment. These are the size and spread of kelp and coral habitats; diversity of fish populations; and distribution of sea urchins.</p>  |
| <a href="#"><u>Estuary water quality monitoring</u></a>  |  <p>Commenced collaborative monitoring of bushfire impacts with Councils and provided ongoing advice.</p>   |
| <a href="#"><u>Improve reporting of interactions with marine wildlife – data and reporting</u></a> |  <p>The NPWS online wildlife reporting system, Elements, has been expanded to allow groups that help look after injured marine wildlife to record their data. Dolphin Marine Conservation Park are the first to use the system real-time, to report wildlife being rescued and in care.</p>   |
| <a href="#"><u>Commercial fishing observer program</u></a>   |  <p>Extensive monitoring and sampling continued in quarter four with over 80 observed days at sea. Better understanding of interactions with non-target species, particularly threatened and protected species, is a high priority. Commercial fishers are testing and implementing new methods that could reduce whale and seabird interactions. <a href="#"><u>Research</u></a> to date has found that it is extremely rare for threatened and protected birds to be harmed by commercial trawl fishing operations in NSW.</p> |

## Part B: Initiative summaries

Initiative summaries include updates on notable individual actions each quarter and what is planned for next quarter. A full update on all projects will be reported in the Strategy's Implementation Annual Report. For more information on the location of projects refer to Figures 5-8 in Appendix B.

### Initiative 1 – Improving water quality and reducing litter

Initiative 1 is split into two sections:

- **1a** reports on work led by Department of Planning Industry and Environment–Environment Energy and Science (DPIE-EES) primarily addressing water quality issues in the urban areas of the marine estate, and coordination of marine litter projects
- **1b** reports on the work led by Department of Primary Industries–Fisheries (DPI-Fisheries) which primarily focuses on improving diffuse source water quality in the regions, including on-ground works and coastal floodplain management.

The summary for Initiative 1 is split into 1a and 1b for reporting purposes.

#### 1a – DPIE-Environment Energy and Science

##### Project summary

A wide range of projects are under way to improve water quality and reduce litter entering the marine estate. Water pollution was identified as the greatest threat to the marine estate and is a priority initiative under the Strategy. Two projects have been heavily impacted by COVID-19 restrictions: the Marine Litter Campaign; and the project to build capacity for stakeholders to implement the risk-based framework for waterway health, which was heavily dependent on the community engagement. These projects have been modified and will commence in Stage 2. The remaining projects have achieved their planned outcomes. Projects have been successful engaging with stakeholders and establishing foundational data, which will be built on in Stage 2.

##### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project  | Location                   | Progress   |
|--|----------------------------|--|
| <a href="#"><u>Risk-based framework for waterway health</u></a>              | South Creek Local Councils |  Trials using the Risk-based Framework in urban areas are in their final stages, with the main outcome being a change to planning controls to improve waterway health and stormwater management.  |
| <a href="#"><u>Improved management of diffuse source water pollution</u></a> | Statewide                  |  Review of the <a href="#"><u>NSW Diffuse Source Water Pollution Strategy</u></a> is complete and recommendations provided to Government to effectively manage diffuse source water pollution.    |
| <a href="#"><u>Marine litter campaign</u></a>                                | Statewide                  |  Development of an integrated strategy and new animated works to support the " <a href="#"><u>Don't be a Tosser</u></a> " marine litter campaign has been completed and will be aired in Stage 2. |

| Project  | Location  | Progress  |
|--|-----------|---|
| Marine litter working group                      | Statewide | <p>The University of NSW has commenced a Marine Debris Threat and Risk Assessment. Experts are engaged providing advice on the social, economic and environmental stressors, threats, assets and values.</p>  |
| <a href="#">Estuary water quality monitoring</a> | Statewide | <p>The estuary health monitoring program to provide Councils and the NSW community with information on the <a href="#">water quality in their estuaries</a> has been completed. The data collected supports evidence-based decision making by councils for the management and protection of waterway values.</p> <p>Guidance on use of DNA analysis to help determine water quality suitability for recreational use provided to councils.</p> <p>Commenced collaborative monitoring of bushfire impacts with Councils and provided ongoing advice.</p> |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location    | Anticipated work   |
|--|-------------|--|
| <a href="#">Build capacity to implement the Risk-based Framework</a> | Statewide   | <p>Engage a service provider to synthesise the findings of the consultations with stakeholders (first phase of this project).</p> <p>Develop practice notes to guide stakeholders implementing the Risk-based Framework.</p>   |
| <a href="#">Estuary water quality monitoring</a>                     | Eurobodalla | <p>Finalise the Tilba Tilba Lake video showcasing a successful model for community to assist with water quality monitoring and get it ready for release.</p>   |
| <a href="#">Estuary water quality monitoring</a>                     | Statewide   | <p>Completion of the water quality database with historical estuary monitoring data. Data will be extracted from the database and made publicly available on SEED on a routine basis (i.e. monthly).</p> <p>Website to report information about each NSW estuary launched.</p> |

## 1b – Department of Primary Industries-Fisheries

### Project summary

A wide range of projects are under way to improve water quality and reduce litter entering the marine estate. Water pollution was identified as the greatest threat to the marine estate and is a priority initiative under the Strategy. The final quarter of Stage 1, Year 2 saw the culmination of two years of planning and on-ground works deliver some outstanding project outcomes. Significant progress was made in completing remaining works, with all Local Land Services (LLS) led projects meeting or exceeding their contracted two-year output requirements in riparian revegetation, bank protection and gravel road improvements. Integrated orchard management across 308ha and five demonstration farms under the Clean Coastal Catchment project with the macadamia and blueberry industries have been completed in a collaborative effort between North Coast LLS and DPI Agriculture.

Community engagement challenges due to COVID-19 have impacted some projects, while provided greater participation online in others. Policy related projects, including drainage management, biodiversity offsetting and catchment water quality risk management in the Richmond are all continuing to make significant progress, with ongoing collaboration between agencies and other stakeholders. Most projects are continuing into Stage 2, which enables the completion of any remaining projects (most on-ground expected in July 2020) and maintenance of project momentum, contacts and staff.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project  | Location   | Progress  |
|--|--|---|
| <a href="#">Risk-based framework for waterway health</a> |  Richmond River                      | Final version of Richmond River Water Quality Monitoring Strategy released by DPIE-EES and being implemented by Southern Cross University.  |
| <a href="#">Clean coastal catchments</a>                 |  Lismore, Ballina and Coffs Harbour | The <a href="#">Fertiliser Stewardship Group (FSG)</a> forums moved successfully online with extended interest and additional professionals contributing to the discussion. The <a href="#">May FSG Newsletter</a> was distributed to over 280 professionals. Registered Training Organisation contracted to develop <a href="#">Fertcare</a> accredited course for advisors to the north coast horticultural industry. |
| <a href="#">Erosion and sediment management</a>          |  Statewide                          | Research completed on the current state of erosion and sediment controls utilised by 30 councils across NSW. Gap analysis completed by the Soil Conservation Service evaluating current council controls against industry best practice. Draft model conditions developed by the <a href="#">Soil Conservation Service</a> , including factsheets to aid implementation.  |
| <a href="#">Oyster reef restoration</a>                  |  Statewide; Port Stephens           | Project <a href="#">video</a> on oyster reef restoration project produced. Targeted <a href="#">recreational fishing survey on oyster reef restoration knowledge</a> released. <a href="#">Oyster reef mapping criteria</a> technical fact sheet developed. Development of restoration suitability model for NSW coast in progress.   |

| Project   | Location   | Progress   |
|---|--|--|
| <a href="#"><u>Riparian vegetation rehabilitation</u></a>       | <br>MidCoast, Ballina, Bega Valley, Eurobodalla, Shoalhaven, Kiama and Wollongong council areas | <p>North Coast Local Land Services (LLS) have worked in the Emigrant Creek catchment to deliver bush regeneration works along 23.5km of stream line protecting 42 Ha of riparian area this financial year.</p> <p>South East LLS has completed another 72 ha of protected vegetation along 18.5 km of stream length, plus 22.7 ha of revegetation. Two short videos have been completed promoting <a href="#"><u>works completed in the Crooked River catchment</u></a>.</p> <p>31 projects have been completed by Hunter LLS. Once 2 more sites are completed in July, these will have provided protection of 305 ha of wetlands (270 ha estuarine), 153.2 ha of riparian native vegetation protected, 11.6 ha of riparian native vegetation planted (over 6000 tube stock planted), and 53 kms riparian native vegetation protected or enhanced.</p> |
| <a href="#"><u>Clean coastal catchments</u></a>                 | <br>Lismore, Ballina & Coffs Harbour  | <p>The Wollongbar Blueberry Nutrition Research Facility was commissioned. Water and nutrient monitoring networks are fully operational on 5 demonstration farms (3 blueberry farms and 2 macadamia farms). Farming technology trials on 2 blueberry demonstration farms fully commissioned. Incentive program of 50 macadamia farms for integrated orchard management to reduce erosion over 308ha completed. 5 blueberry farms received grants to complete on-farm works to improve water, nutrient and erosion management.</p>   |
| <a href="#"><u>Estuary bank protection works</u></a>            | <br>Bega Valley, Eurobodalla, Shoalhaven, MidCoast, Ballina                                   | <p>North Coast LLS have completed an 800m bank protection project in Emigrant Creek. It is estimated that over 600 tonnes of bank material will be conserved annually because of these works.</p> <p>South East LLS have completed two bank protection projects of 530m and 10m in the Bega and Shoalhaven Catchments. An additional 10m of bank protection was contracted on Wapengo Creek.</p> <p>Completed 355m of rock fillets and 65m of revetment in the Wallamba River. This site also included 370 m of fencing plus planting 2,000 native tube stock.</p>   |
| <a href="#"><u>Reducing erosion from roads &amp; tracks</u></a> | <br>MidCoast,   | <p>4.7km of road was surfaced with a substantial number of rock check dams installed and drains rock lined and re-configured on The Branch Lane.</p>   |

## What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location   | Anticipated work  |
|--|--|---|
| <a href="#">Fish friendly workshops</a>                  | Statewide<br>                           | Completion of audits for all remaining North Coast Local Government Area regions. Postponed workshops, dependent on COVID-19 restrictions. Key contacts made with priority Local Government in Central and South region.  |
| <a href="#">Clean coastal catchments</a>                 | Lismore, Ballina and Coffs Harbour<br>  | Fertiliser Stewardship Webinars planned for July, August and September and Newsletter in August. Draft report on findings of Clean Coastal Catchments social marketing approach aiming to change farmer behaviours, to reduce fertilisers (nutrients) leaving the farm. Finalise and pilot Fertcare accredited course for horticultural advisors. |
| <a href="#">Erosion and sediment management</a>          | Statewide<br>                          | Undertake consultation on model Council erosion and sediment control conditions, seek input and refine proposed conditions. Finalise model conditions in preparation for publication.   |
| <a href="#">Oyster reef restoration</a>                  | Statewide<br>                         | Complete the NSW Oyster reef and restoration planning and implementation guide. Receive the historical study report and communicate findings. Close recreational fisher survey, collate results and communicate to the stakeholder community. Deliver additional promotional products.  |
| <a href="#">Wetland restoration</a>                      | Bellingen, Mid-coast, Shoalhaven<br>  | Begin remediation options assessment at Jones Island, Lansdowne River.  |
| <a href="#">Reducing erosion from roads &amp; tracks</a> | Ballina, Shoalhaven, Bega Valley,<br> | North Coast LLS - sealing last outstanding 550m in Emigrant Creek catchment; Ginn St, Erowal Bay; and new site Currumbene. Plan for Stage 2 works.  |

## More information

More information on Initiative 1 projects are on the marine estate web site: [strategy-implementation/water-quality-and-litter](#).

## Initiative 2 – Delivering healthy coastal habitats with sustainable use and development

### Project summary

Initiative 2 seeks to improve marine habitats as well as foreshore and waterway management through various projects. A multiagency and local government collaborative effort is underway to prioritise rehabilitation works and funding, while providing strategies that facilitate streamlined approvals.

Overall delivery of Initiative 2 has tracked very well with several policies, management strategies and key on-ground works now nearing completion. The increasing cross agency collaboration and coordination has enabled the endorsement of the statewide policy for the Management of Coastal Crown Lands by the Crown Lands Commissioner and the NSW Coastal Design Guidelines prepared for consultation. Significant progress on the Jerrys Plains Fishway and Cookes Weir removal has occurred as well as completion of key macrophyte mapping, sea-level rise modelling and offsetting policies which now enables linkages to be developed with other projects. Minor delays to the completion for some projects are attributed to the initial delay in project commencement and actual recruitment, further compounded by bush fires, fish kills and COVID-19 restrictions providing limited travel and inspection opportunities.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project   | Location                                       | Progress   |
|---|--|--|
| <a href="#">Coastal design guidelines review</a>        | Statewide                                      | Extensive consultation undertaken with councils along the NSW coast with Draft Coastal Design Guidelines now developed for internal consultation.  |
| <a href="#">Coastal Crown Lands policy development</a>  | Statewide                                      | Draft statewide policy for the management of coastal Crown Lands endorsed by Crown Lands Commissioner. Guidelines developed to accompany the policy for interpretation and implementation.   |
| <a href="#">Bank management strategies</a>              | Statewide / Tweed and Brunswick Rivers         | A decision support tool to inform best management practice in bank erosion developed. Two priority estuaries in NSW have been piloted including Tweed River and Brunswick River.   |
| <a href="#">Marine vegetation management strategies</a> | Statewide                                      | Refined an approach to display estuarine vegetation, combining future inundation areas, historic distribution and constraints into a management tool for natural resource managers. This enables a more holistic approach to estuarine vegetation management for large areas and can prioritise areas for protection or ongoing use. |
| <a href="#">Catchment and floodplain management</a>     | Statewide with current emphasis on North Coast | Review of current catchment and flood plain management legislation and approval pathways for a number of scenarios have been identified. The information has informed the development of several options for an improved regulatory framework.   |
| <a href="#">Macrophyte mapping</a>                      | Statewide                                      | Macrophyte maps completed for Minnamurra River and Jervis Bay. Extent of 2019/2020 bushfire impacts to mangroves and saltmarshes completed for all affected estuaries mapped.  |

## What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project   | Location                                       | Anticipated work   |
|---|--|--|
| <a href="#">Training wall enhancements</a>                      | Statewide                                      |  Multi-Use and Eco Features Conceptual Guideline completed, including a world-wide literature review and the audit of existing breakwater structures across NSW.  |
| <a href="#">Commercial dredging audit</a>                       | Statewide                                      |  Commercial dredging audit report and recommendations reviewed by internal and external stakeholders and finalised.   |
| <a href="#">Coastal Crown Lands policy development</a>          | Statewide                                      |  Draft reviewed and endorsed by NSW Coastal Council. Draft Coastal Crown Lands Policy and Guidelines endorsed by Deputy Secretary DPIE-Lands and distributed to relevant Ministers for their respective review and endorsement. |
| <a href="#">Estuary domestic foreshore structure strategies</a> | Ballina and Byron Shire LGAs                   |  Domestic Foreshore Structure map made available online and booklet for the Richmond River to Coraki and Brunswick River estuary ready for endorsement by the inter-agency working group.                                      |
| <a href="#">Marine vegetation management strategies</a>         | Statewide                                      |  Commencement of consultation with authorities regarding the draft marine vegetation safety clearance code. Provision of written report to compile the marine vegetation strategy aims, objectives and, methods document.     |
| <a href="#">Catchment and floodplain management</a>             | Statewide with current emphasis on North Coast |  Engagement with key stakeholders is expected to resume in Stage 2 in accordance with relevant COVID-19 restrictions.   |
| <a href="#">Restore fish passage</a>                            | Singleton                                      |  Jerrys Plains Weir fishway design complete; tender process held and contractor procured.   |
| <a href="#">Estuarine disturbances mapping</a>                  | Statewide                                      |  Draft interactive webpage showing changes in macrophytes in each NSW estuary ready for internal distribution.  |

## More information

More information on Initiative 2 projects are on the marine estate web site: [strategy-implementation/delivering-healthy-coastal-habitats-with-sustainable-use-and-development](#)

## Initiative 3 – Planning for climate change

### Project summary

Key projects underway are mapping vulnerable estuarine ecosystems and monitoring rocky reefs, to increase resilience and mitigate the effects of climate change. Data to examine change in rocky reef biota (animal and plant life of rocky reefs) has been collected for a second year to provide a robust baseline from which to measure change. Additional monitoring was completed to examine the role of periodic cold-water “upwelling” as climate refugia (area of improved survival of cooler water species). Models of current wetland distribution were completed for 110 NSW estuaries. Future sea level rise vulnerability assessments for three scenarios have been completed for all estuaries with significant wetlands north of Sydney.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project  | Location  | Progress   |
|--|---|--|
| <a href="#">Model intertidal wetlands at threat from future sea level rise</a>       |  Tweed River to Sydney                   | Predicted distribution of estuarine wetlands under three sea level rise scenarios completed for all major estuaries north of Sydney.   |
| <a href="#">Monitoring priority environmental assets at risk from climate change</a> |  Statewide<br>Cape Byron/<br>Smoky Cape | Monitoring of NSW habitat distributions for 2020 has been completed and reporting on any distributional changes commenced.<br><br><a href="#">Paper on identified biological indicators</a> that will act as early warning signs of climate-driven changes to NSW's marine environment published.<br><br>Data collection on potential refugia for kelp completed and analysis of data commenced. |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location  | Anticipated work   |
|--|---|--|
| <a href="#">Model intertidal wetlands at threat from future sea level rise</a>       |  Statewide | Final estuarine community maps will be made publicly available via the NSW Government's central resource for <a href="#">Sharing and Enabling Environmental Data (SEED)</a> by Dec 2020.   |
| <a href="#">Monitoring priority environmental assets at risk from climate change</a> |  Statewide | Complete reports on any changes to NSW marine habitats, from 2019-2020, and upwelling sites as refugia.<br><br>Develop species distribution model examining drivers behind current kelp distributions and examining potential distributional changes driven by climate change. |

### More information

More information on Initiative 3 projects are on the marine estate web site: [strategy-implementation/planning-for-climate-change](#)

## Initiative 4 – Protecting the Aboriginal cultural values of the marine estate

### Project summary

There are high-risk threats that cumulatively affect Aboriginal cultures and cultural heritage associated with Sea Country. There are also significant knowledge gaps relating to Aboriginal cultural values. Aboriginal people and their cultural values are not yet appropriately represented or engaged in management of the marine estate. Initiative 4 aims to increase the broader community's understanding of Aboriginal Sea Country values. It also aims to increase the economic opportunities and employment for Aboriginal people, as well as increase their ownership and active involvement in managing the marine estate.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project  | Location   | Progress  |
|--|--|---|
| <a href="#">Aboriginal management of Sea Country – cultural values</a> |  Shoalhaven and Eurobodalla | Online curriculum developed for Sea Country School education project (including video series). This will enable primary school students remote access and increase opportunity to learn about Aboriginal culture and values of the marine estate. |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location  | Anticipated work  |
|--|---|---|
| <a href="#">Aboriginal management of Sea Country – participation</a>                     |  Statewide<br>Shoalhaven and Eurobodalla | Commence scoping and implementation of the Aboriginal Engagement Framework for the marine estate. Finalise second round of coxswains training in Southern region.   |
| <a href="#">Aboriginal management of Sea Country – cultural values</a>                   |  Byron Bay & Coffs Harbour               | Develop Arakwal cultural interpretation signage with Cape Byron Marine Park.<br>Develop Yaegl cultural interpretation signage with Solitary Islands Marine Park.  |
| <a href="#">Aboriginal management of Sea Country – cultural values and participation</a> |  Coffs Harbour                           | Deliver Sea Custodians project with the Gumbaynggirr people and <a href="#">Dolphin Marine Rescue Centre</a> to document local Aboriginal cultural protocols for responses to marine wildlife events such as whale stranding, and to build Aboriginal people's capacity to participate in wildlife responses. |
| <a href="#">Aboriginal management of Sea Country – management</a>                        |  Kempsey Shire<br>Statewide              | Delivery of South West Rocks Sea Country regeneration project. Implement Stage 2 of the Safe and Sustainable Sea Country Harvest of Bivalve Shellfish for Cultural purposes project.  |

### More information

More information on Initiative 4 projects are on the marine estate web site: [strategy-implementation/protecting-the-aboriginal-cultural-values-of-the-marine-estate](#)

## Initiative 5 – Reducing impacts on threatened and protected species

### Project summary

Taking action to protect threatened and protected species in the marine estate (for example Humpback whales) by working with the community, partners, industry and government partners to share information and resources to respond to marine wildlife events, undertake monitoring programs and ensure people using the marine estate minimise interactions with threatened and protected marine species.

Preparedness for emergencies continued this quarter with the commencement of the whale migration and increasing numbers of seals. Seven Humpback whale entanglements as well a number of endangered Southern Right Whales coming into coastal embayments this quarter has kept response teams on high alert. Additional seal signage, dolphin rescue slings and carriers were all produced and delivered to priority coastal locations. COVID-19 restrictions provided opportunity to explore more online and digital content. Dolphin Marine Conservation Park were actively involved online reporting through Elements.

The observer-based monitoring program continues to describe the total number and circumstances of interactions (including the life status at the time of the interaction) between the line fishing sector of the NSW Ocean Trap and Line Fishery and protected, threatened and endangered species. During 80 observed fishing trips from the ports of Brunswick Heads, Ballina, Evans Head, Coffs Harbour, South West Rocks and Forster, no interactions with threatened, endangered or protected species have been recorded.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project   | Location    | Progress   |
|---|-------------|--|
| <a href="#">Protect and conserve marine wildlife – strategic planning</a> | North Coast | Ongoing <a href="#">monitoring of turtle nests and hatching events</a> with community citizen science program under the <a href="#">Saving Our Species</a> program.  |
|   | Statewide   | Continued improvements to the Marine Wildlife Management Manual (internal) to guide operational responses to marine wildlife interactions.   |
| <a href="#">Protect and conserve marine wildlife – strategic planning</a> | Statewide   | Information on <a href="#">management of deceased whales</a> is now publicly available.  |
| <a href="#">Protect and conserve marine wildlife – partnerships</a>       | Statewide   | Purchased two alternative satellite tracking buoys for large whale entanglements to trial.<br>Review of gear shortages along the coast resulted in the fabrication of dolphin rescue mats and turtle slings.<br>Training to improve response to wildlife strandings and entanglements were held in Greater Sydney and North Coast NSW.<br>Digital training materials were developed on seal haul outs and shared with key partners and responders. |

| Project   | Location   | Progress  |
|---|--|---|
| <a href="#">Improve reporting of interactions with marine wildlife – data and reporting</a> |  North Coast / Statewide              | The NPWS online reporting system, Elements, has been expanded to allow groups that help look after injured marine wildlife to record their data. The first group, are now using the system real time to report wildlife being rescued and in care.  |
| <a href="#">Commercial fishing observer program – ocean trap and line</a>                   |  Brunswick Heads to Forster           | 80 sampling trips completed, totalling 140 to date, from the ports of Brunswick Heads, Ballina, Evans Head, Coffs Harbour, South West Rocks and Forster. No interactions with threatened, endangered or protected species recorded during observed handline and setline fishing trips.  |
| <a href="#">Commercial fishing observer program – reducing threats</a>                      |  Forster to Batemans Bay<br>Statewide | Partnered with <a href="#">OceanWatch Australia</a> to assist NSW fish trawl vessels develop vessel specific seabird management systems to limit interactions.<br>Working alongside <a href="#">OceanWatch Australia</a> and <a href="#">Professional Fishers Association</a> to trial modified gears in the NSW Ocean Trap Line Fishery as a first step to minimising interactions between whales. |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project   | Location  | Anticipated work   |
|---|---|--|
| <a href="#">Protect and conserve marine wildlife – strategic planning</a>                   |  Statewide | <a href="#">Saving Our Species</a> annual reporting for threatened marine species completed.   |
| <a href="#">Protect and conserve marine wildlife – partnerships</a>                         |  Statewide | First meeting of Marine Wildlife Working Group including initial review of revising Marine Wildlife Management Manual and Memorandum of Understanding with Marine Rescue and DPI-Fisheries.  |
| <a href="#">Protect and conserve marine wildlife: species education</a>                     |  Statewide | Delivery and review of draft online training modules in marine wildlife rescue.  |
| <a href="#">Improve reporting of interactions with marine wildlife – data and reporting</a> |  Statewide | Two additional agreements completed with key partners, providing training and access to the Elements marine wildlife emergency response database and reporting system.<br>Review the trials with partners on the use of the Elements database so far and provide access to other partners. |

| Project   | Location   | Anticipated work   |
|---|--|--|
| <a href="#"><u>Commercial fishing observer program – reducing threats</u></a> |  Statewide<br>Brunswick Heads to Batemans Bay | Draft observer prioritisation to inform future observer priorities. This ensures future sampling designs are representative, effective and statistically robust.<br><br>Analyses of bycatch (non-target species) data collected from the NSW Ocean Prawn Trawl observer program to address threats to Fish assemblages (harvest and bycatch stressors) in the Central and Northern Bioregions. |

### More information

More information on Initiative 5 projects are on the marine estate web site: [strategy-implementation/reducing-impacts-on-threatened-and-protected-species](#)

## Initiative 6 – Sustainable fishing and aquaculture

### Project summary

Ensuring viable recreational, Aboriginal and commercial fisheries now and into the future. Enhancing fishing opportunities with fish stocking and installing artificial structures, ensuring best practice across DPI-Fisheries through policy reviews and education programs, and exploring new business opportunities.

Projects under initiative 6 produced meaningful results this quarter despite uncertainty in funding and COVID-19 restrictions. Draft Harvest Strategy Policy and Guidelines have been developed and are the subject of consultation with Ministerial advisory councils, while the team progressed monitoring and assessment research components. Customer focused fishery and aquaculture measures included providing data to prospective aquaculture ventures and stock enhancement. Sustainable harvest improvements included research into seagrass friendly aquaculture and collaborative work with partners to reduce pollution.

Communications and stakeholder relationships remains a high priority across initiative projects and several [website project profile pages](#) were created to assist this effort going forward.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project   | Location              | Progress   |
|---|-----------------------|--|
| <a href="#">Harvest strategies (fishing)</a>      | Statewide             | <p>Draft Harvest Strategy Policy and Guidelines have been developed and presented to Ministerial advisory councils. Stakeholder working groups are being formed to guide the development of harvest strategies.</p> <p>An inventory of all recreational fishing data sources available to service harvest strategy development in NSW has been completed.</p> <p>New research collaborations to support harvest strategy development with <a href="#">Commonwealth Scientific and Industrial Research Organisation</a> (CSIRO) and University of Tasmania.</p> |
| <a href="#">Oyster aquaculture: best practice</a> | Port Stephens         | <p>Desktop and fieldwork on <a href="#">research project</a> led by University of NSW examining the impacts of how shading and bio-deposition processes from different oyster infrastructure can affect important seagrass habitat determine how to minimise potential impacts.</p>  |
| Seafood industry training                         | Statewide             | <p>OceanWatch Australia launched a social media campaign in April, contributing to multiple efforts to promote the Master Fisherman Program and the successful graduates.</p> <p>Master Fisherman Program training modules and assessment materials updated to align with most recent NSW Ocean Trap and Line Fishery <a href="#">Code of Practice</a> for Reducing Whale Entanglements to inform best practice in the field to reduce whale interactions.</p>   |
| Mobile Compliance Squad                           | Greater Sydney Region | <p>Officers from the Greater Metropolitan Mobile Squad conducted at least 400 inspections of recreational fishers and shellfish collectors resulting in the issue of 95 written warnings, 62 penalty notices, initiated 8</p>  |

| Project | Location | Progress   |
|---------|----------|--|
|         |          | prosecution actions and seized 3460 fish including invertebrates and 17 items of fishing gear. |

## What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project   | Location  | Anticipated work   |
|---|-----------|--|
| <a href="#">Harvest strategies (fishing)</a>                      | Statewide | <p>Public consultation on Draft Harvest Strategy Policy and Guidelines.</p> <p>Formation of harvest strategy working groups for priority species and progress development of harvest strategies.</p> <p>Progress development and analysis of potential harvest strategies using <a href="#">Fishpath</a> and involving external expert consultation.</p> |
| Recreational fishing environmental assessment and review of rules | Sydney    | A new TAngler bin project in Sydney with Transport for NSW and a number of Sydney Councils will result in new installations in key fishing locations next quarter.   |
| <a href="#">Fisheries enhancements</a>                            | Tweed     | Continue preparations to have <a href="#">Tweed offshore artificial reef</a> ready for deployment by end of 2020.  |

## More information

More information on Initiative 6 projects are on the marine estate web site: [strategy-implementation/ensuring-sustainable-fishing-and-aquaculture](#)

## Initiative 7 – Enabling safe and sustainable boating

### Project summary

Projects are achieving safer and sustainable boating by developing new mooring technology to minimise seagrass impacts, improving infrastructure including boat ramps and navigational aids, and delivering education campaigns to reduce environmental impacts.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project   | Location  | Progress  |
|---|---|---|
| <a href="#"><u>Safe and sustainable boating</u></a> |  Statewide | Assessment of applications received for round three of the <a href="#"><u>Boating Now Program</u></a> has been completed. |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders. The below list is not exhaustive.

| Project   | Location   | Anticipated work   |
|---|--|--|
| <a href="#"><u>Safe and sustainable boating</u></a> |  Statewide | Announcement of successful projects from round three of the <a href="#"><u>Boating Now Program</u></a> totalling up to \$28 million. |

### More information

More information on Initiative 7 projects are on the marine estate web site: [strategy-implementation/enabling-safe-and-sustainable-boating](#).

## Initiative 8 – Enhancing social, cultural and economic benefits

### Project summary

This initiative has a major research and monitoring component, working with research institutions and government agencies to increase understanding of how we all use and value the marine estate, to maximise community benefits. A monitoring and evaluation framework has been developed to measure the effectiveness of the Strategy as it aims to achieve better social, cultural, economic and environmental outcomes for the community.

### Quarterly progress and highlights

A breakdown of progress is outlined below

| Project  | Location  | Progress  |
|--|-----------|---|
| <a href="#">Marine education strategy</a>                    | Statewide | Marine Estate Education Strategy drafted and reviewed internally.   |
| <a href="#">Community wellbeing monitoring program</a>       | Statewide | Community wellbeing framework illustration completed. Final draft of coastal resident and visitor questionnaire to undergo cognitive testing. Cultural and heritage working group conducted and data for cultural indicators collected in accordance with the <a href="#">Marine Integrated Monitoring Program (MIMP)</a> . |
| <a href="#">Resource use management and activity mapping</a> | Statewide | Marine Estate Activity Mapping (MEAM) metadatabase and data portal specifications completed to capture data on human uses in the marine estate.   |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location  | Anticipated work  |
|--|-----------|---|
| <a href="#">Marine education strategy</a>              | Statewide | Targeted consultation with key local government educators, Aboriginal organisations and other relevant environmental educators to review the draft NSW Marine Estate Education Strategy.  |
| <a href="#">Community wellbeing monitoring program</a> | Statewide | Draft Public Community wellbeing framework and community wellbeing indicator report. Community wellbeing data for coastal residents, visitors, and marine estate agency staff collected. Complete community consultation for the Aboriginal people's survey. Seek ethical clearance for the Sea Country (marine estate) community wellbeing survey. |

### More information

More information on Initiative 8 projects are on the marine estate web site: [strategy-implementation/enhancing-social,-cultural-and-economic-benefits](#)

## Initiative 9 – Delivering effective governance

### Project summary

This initiative ensures good governance and project management processes are in place, enabling a coordinated approach to deliver the range of projects under way in the Strategy. Initiative 9 has made significant progress during quarter 4, with an increase in adoption of systems and process for project and risk management and reporting. Work has now also commenced to formally close Stage 1 projects and systems and processes established to prepare for commencement of Stage 2 implementation.

### Quarterly progress and highlights

A breakdown of progress is outlined below.

| Project  | Location  | Progress  |
|--|-----------|---|
| <a href="#">Strategy governance and project management</a> | Statewide | <p>Ongoing project management support provided across all Strategy agencies. Risk assessments, rescheduling and reprioritising in response to impacts of extreme events (fires, floods, drought, COVID-19).</p> <p>Released Strategy <a href="#">Quarter 2 and 3 snapshots</a> via Marine estate website.</p> <p>Preparation of project management and reporting for Stage 2.</p> |

### What's next?

Work that is planned to occur in the following quarter is reported below, although unexpected changes to scheduling can occur and will be communicated to affected stakeholders.

| Project  | Location  | Anticipated work  |
|--|-----------|---|
| <a href="#">Strategy governance and project management</a> | Statewide | <p>Update communications and engagement material for Stage 2.</p> <p>Finalise the Stage 2 Strategy Implementation Plan.</p> |

### More information

More information on Initiative 9 projects are on the marine estate web site: [strategy-implementation/delivering-effective-governance](#)

## Appendix A – List of abbreviations

| Abbreviation    | Definition   |
|-----------------|--|
| Authority       | Marine Estate Management Authority   |
| COVID-19        | Coronavirus  |
| CSIRO           | Commonwealth Scientific and Industrial Research Organisation                       |
| DPI-Agriculture | Department of Primary industries - Agriculture                                     |
| DPI-Fisheries   | Department of Primary Industries – Fisheries                                       |
| DPIE-EES        | Department of Planning, Industry and Environment – Environment, Energy and Science |
| DPIE-Lands      | Department of Planning, Industry and Environment – Crown Lands                     |
| DPIE-Planning   | Department of Planning, Industry and Environment – Planning and Assessment         |
| DPIE-Water      | Department of Planning, Industry and Environment – Water                           |
| FSG             | Fertiliser Stewardship Group   |
| GIS             | Geographic Information System  |
| Knowledge Panel | Marine Estate Expert Knowledge Panel   |
| LGA             | Local Government Area  |
| LLS             | Local Land Services  |
| MASC            | Marine Estate Agency Steering Committee  |
| MEAM            | Marine Estate Activity Mapping   |
| MEMS            | Marine Estate Management Strategy  |
| MIMP            | Marine Integrated Monitoring Program   |
| MoU             | Memorandum of Understanding  |
| NPWS            | DPIE- EES: National Parks and Wildlife Service                                     |
| NSW             | New South Wales  |
| RRWQMS          | Richmond River Water Quality Monitoring Strategy                                   |
| SEED            | Sharing and Enabling Environmental Data  |
| SEPP            | State Environmental Planning Policy  |
| Strategy        | Marine Estate Management Strategy  |

| Abbreviation | Definition                 |
|--------------|----------------------------|
| TARA         | threat and risk assessment |
| TfNSW        | Transport for NSW          |
| WRL          | Water Research Laboratory  |
| QLD          | Queensland                 |

## Appendix B – Key actions the Strategy will deliver



Figure 1. Map illustrating the spatial extent of the Strategy projects by local government area.



Figure 2. Map illustrating the spatial extent of the Strategy projects in the Greater Sydney area.

| ACTIONS BY LOCAL GOVT AREA  |   | Initiative  | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
|    | <b>Risk-based framework for waterway health</b><br>Local and State government are applying the Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land use Planning Decisions to support stormwater management in urban catchments. |    | <b>Estuary domestic foreshore structure strategies</b><br>Developing estuary wide domestic foreshore structure strategies to guide and streamline future applications for domestic developments along foreshores (such as pontoons and boat ramps).                 |   |   |   |   |   |   |   |   |
|    | <b>Coastal floodplain management</b><br>Improving our knowledge of floodplain issues, improved management of floodplain infrastructure, reconnecting coastal floodplains and the development of drainage management plans.                                  |    | <b>Estuary bank management strategies</b><br>Developing estuary wide bank management strategies to streamline bank protection work proposals and optimise rehabilitation opportunities.   |   |   |   |   |   |   |   |   |
|    | <b>Clean coastal catchments</b><br>Providing help to farmers in intensive coastal agricultural industries to reduce their impact on water quality while maintaining long term economic and environmental sustainability.                                    |    | <b>Marine vegetation management strategies</b><br>Develop marine vegetation management strategies that maximise resilience, accommodate sea level rise, address key threats (clearing and drainage, four-wheel driving) and encourage rehabilitation opportunities. |   |   |   |   |   |   |   |   |
|    | <b>Fish friendly workshops</b><br>Delivery of a targeted education program to local council staff and key external industries that is tailored to the conservation of fish and fish habitats and associated common council works program in each region.    |    | <b>Restore fish passage</b><br>Fish passage is being restored at priority weir and road crossings, giving fish the opportunity to migrate.  |   |   |   |   |   |   |   |   |
|   | <b>Oyster reef restoration</b><br>Restoring natural oyster reefs improves water quality and provides other benefits. This project includes a pilot restoration site, community education and future site planning.  |   | <b>Estuary mapping of seagrass, saltmarsh &amp; mangrove</b><br>Enhance mapping of estuarine communities (such as saltmarsh and mangroves) to identify those communities most at threat from sea level rise expected under climate change scenarios.                |   |   |   |   |   |   |   |   |
|  | <b>Riparian vegetation rehabilitation</b><br>Delivering on-ground works to rehabilitate degraded riparian areas helps filter run-off from the land, prevents erosion by stabilising river banks and provides biodiversity benefits.                         |  | <b>Aboriginal management of Sea Country</b><br>A Sea Country ranger program will include training and employment of Aboriginal people in marine estate industries, providing their cultural expertise in Sea Country management.                                    |   |   |   |   |   |   |   |   |
|  | <b>Estuary bank protection works</b><br>River bank erosion is being addressed through environmentally friendly bank stabilisation works. Bank stabilisation improves water quality by reducing sediment entering rivers through erosion.                    |  | <b>Seal interaction plan</b><br>Education and compliance campaigns for targeted marine species to improve protection and conservation.  |   |   |   |   |   |   |   |   |
|  | <b>Wetland restoration</b><br>On-ground work on the coastal floodplain to reduce impacts of wetland drainage that degrades marine estate values at the site and for downstream users and habitats.  |  | <b>Promoting the community benefits of fishing</b><br>Multiple projects to promote the consumption of fresh seafood in the community, supporting the fishing industry.  |   |   |   |   |   |   |   |   |
|  | <b>Reducing erosion from roads &amp; tracks</b><br>Sediment enters waterways from gravel roads and tracks. This is being reduced through remediation works such as road sealing on priority roads and tracks.   |  | <b>Safe and sustainable boating</b><br>The NSW Boating Now program continues to improve access to waterways through the provision of funding for maritime infrastructure.   |   |   |   |   |   |   |   |   |
|  | <b>Estuarine water quality monitoring</b><br>Water quality and ecosystem health is being monitored and reported on so that poor water quality is detected early and benefits of management are confirmed.   |  | <b>Marine education strategy</b><br>A Marine Education Strategy for primary schools will help children learn about physical & mental health benefits of connecting with nature, & the skills they need to become environmental stewards of the marine estate.       |   |   |   |   |   |   |   |   |
|   |   |  | <b>Governance framework pilot</b><br>A new governance structure is being developed at a pilot scale in the Richmond catchment to improve river health outcomes.   |   |   |   |   |   |   |   |   |

**Figure 3. Strategy project icons that are being implemented in specific areas.**

| STATEWIDE ACTIONS   | Initiative  |
|---|---|
| <b>Biodiversity offsets</b><br>Protecting biodiversity through coordinated improvements to delivery of aquatic biodiversity offsets and working with private landholders to conserve environmentally significant coastal habitats.  |  1 2 3 4 5 6 7 8 9 |
| <b>Marine litter campaign</b><br>A new campaign is being developed in collaboration with marine users to target marine litter.  |                    |
| <b>Risk-based Framework for Waterway Health</b><br>Providing tools and guidance material to build local government capacity to use the framework in land use planning and stormwater management decisions.  |                    |
| <b>Dredging audit</b><br>The nature of commercial dredging in estuaries is under review. Ways to improve environmental outcomes during and after dredging will be identified and recommendations will be made.  |                    |
| <b>Coastal design guidelines review</b><br>Improving the design of our coastal cities and towns and promoting environmentally sustainable infrastructure in coastal urban areas.  |                    |
| <b>Estuary training wall enhancements</b><br>Develop plans for design features that can be built into maintenance works undertaken at existing estuary training walls to improve environmental and recreational opportunities.  |                  |
| <b>Vulnerability of tidal wetlands to sea level rise</b><br>Identify estuarine wetlands (saltmarsh and mangroves) most at threat from future sea level rise and prioritise areas for protection.  |                  |
| <b>Monitoring reefs at risk from climate change</b><br>Monitoring the resilience and condition of rocky reef habitats will detect impacts of climate change, indicate likely shifts in species' distribution and inform future management.  |                  |
| <b>Protect and conserve marine wildlife</b><br>Education and compliance campaigns for targeted marine species to improve protection and conservation.   |                  |
| <b>Improve reporting of interactions with marine wildlife</b><br>External web portal for key stakeholders to report marine wildlife interactions and emergencies to improve conservation outcomes for targeted marine species.  |                  |
| <b>Commercial fishing observer program</b><br>Expansion of the commercial fishing observer program will inform future fishing practices, reduce bycatch and help to better manage interactions with threatened and protected species.   |                  |
| <b>Harvest strategies (fishing)</b><br>Harvest strategies are being developed for two target fisheries. They seek to maintain fish stocks at environmentally sustainable levels, while providing fishers with more reliable resource access.  |                    |
| <b>Recreational fishing environmental assessment and review of rules</b><br>An environmental assessment and associated fishery management plan will identify key environmental threats and risks and develop a management framework to address and mitigate those risks. Recreational fishing rules will be periodically reviewed to improve fish stocks and address environmental risks as necessary.                            |                    |
| <b>Application of Marine Aquaculture Strategy</b><br>The Marine Waters Sustainable Aquaculture Strategy guides implementation of new marine aquaculture ventures.   |                    |
| <b>Application of Oyster Aquaculture Strategy</b><br>Best practice guidelines for seagrass protection are outlined in the NSW Oyster Industry Sustainable Aquaculture Strategy. These guidelines are being applied in oyster farms across the state.  |                    |
| <b>Fisheries enhancements</b><br>Fish stocking programs and the development of fishing infrastructure will enhance recreational fishing opportunities.  |                    |
| <b>Seafood industry training</b><br>Partnering with OceanWatch, the Master Fisherman Program has expanded its training to commercial fishermen to raise awareness of the threats to the marine estate.  |                  |
| <b>Boat based contamination compliance and education</b><br>Continue compliance and education programs for boat based contamination from commercial and recreational vessels.   |                  |
| <b>Improved mooring management</b><br>Threats to seagrass from vessels are being reduced through improved regulation, administration, education, new mooring technologies and delivery mechanisms.  |                  |
| <b>Community wellbeing surveys</b><br>Monitoring the wellbeing of communities as they relate to the NSW marine estate will improve our understanding of the human dimensions of the NSW marine estate; the diversity of values and benefits, and how they may be impacted (e.g. positive or negative) by environmental change and different management approaches.  |                  |
| <b>Resource use management and activity mapping</b><br>A comprehensive spatial mapping tool is being piloted, detailing current use, supporting infrastructure, access and trends to support evidence-based management of the marine estate.  |                  |
| <b>Marine Integrated Monitoring Program</b><br>The Marine Integrated Monitoring Program monitors the condition of the marine environmental assets and community benefits against established baselines, providing critical information needed to fill current knowledge gaps and to evaluate the effectiveness of the Marine Estate Management Strategy initiatives. This will guide adaptive management throughout the Strategy. |                  |

**Figure 4. Statewide Strategy projects that are not specific to an area.**

## Appendix C – Communication and engagement

Communication and engagement with a wide variety of stakeholders and the community about the Strategy was challenged this quarterly reporting period due to COVID-19 restrictions. A number of engagement activities and their related projects have been delayed into Stage 2 as a result. Key communication and engagement activities are listed below:

**Table 1. Communication and engagement with stakeholders during the quarter 1 April – 30 June 2020**

| Date  | Stakeholder   | Activity           | Initiative | Communication and engagement   |
|-------|---------------|--------------------|------------|--|
| April | NSW community | Media release      | 1          | <a href="#">Shellfish Reef Restoration Survey Recreational Fishing Community</a>                           |
|       | NSW community | Media release      | 4          | <a href="#">Applications Close Soon - Support for Aboriginal cultural fishing and economic development</a> |
|       | NSW community | Media release      | 1          | <a href="#">Blueberry trials soon to expand into new greenhouse site</a>                                   |
|       | NSW community | Marine estate news |            | <a href="#">eNewsletter - Marine Estate Management Authority - April 2020-2020</a>                         |
|       |               |                    | 5          | <a href="#">Five-star seahorse hotels open in Sydney</a>   |
|       |               |                    | 4          | <a href="#">Marine estate benefits from Aboriginal knowledge and expertise</a>                             |
|       |               |                    | 1          | <a href="#">Looking for new life on artificial oyster reefs</a>  |
|       |               |                    | 2          | <a href="#">Brains trust meets to discuss breakwaters</a>  |
|       |               |                    | 1          | <a href="#">Farm projects help create a cleaner water catchment</a>  |
|       |               |                    | 1          | <a href="#">Volunteers remove tonnes of waste from Dowadee Island</a>                                      |
|       |               |                    | 5          | <a href="#">Successful rescue operation saves a shark's eyesight</a>                                       |
| May   | NSW community | Media release      | 7          | <a href="#">Environmental win worthy of celebration: YM Efficiency container retrieval success</a>         |
|       | NSW community | Media release      | 1          | <a href="#">Oyster Reef Restoration Pilot Builds One Hectare of Habitat</a>                                |
|       | NSW community | Media release      | 6          | <a href="#">Calls for applications for Total Allowable Fishing Committee</a>                               |
|       | NSW community | Media release      | 7          | <a href="#">NSW coastal communities on high alert for debris and containers</a>                            |
|       | NSW community | Media release      | 7          | <a href="#">Five shipping containers wash ashore near Norah Head</a>                                       |
|       | NSW community | Media release      | 6          | <a href="#">Six illegal fishers apprehended on NSW Central Coast</a>                                       |

| Date | Stakeholder   | Activity           | Initiative | Communication and engagement  |
|------|---------------|--------------------|------------|---|
| June | NSW community | Media release      | 7          | <a href="#">Scale of container clean up expands</a>   |
|      | NSW community | Newsletter         | 1          | <a href="#">Fertiliser Stewardship Group Newsletter</a>   |
|      | NSW community | Media release      | 8          | <a href="#">NSW 'living museum' celebrates milestone achievement (Long Reef Aquatic Reserve)</a>          |
|      | NSW community | Media release      | 6          | <a href="#">Harvest strategies to drive NSW fishing management decisions</a>                              |
|      | NSW community | Media release      | 7          | <a href="#">Hazardous weather impacts NSW coastline but does not hamper clean up effort</a>               |
|      | NSW community | Media release      | 6          | <a href="#">Fishing in Sanctuary Zones not tolerated</a>  |
|      | NSW community | Media release      | 7          | <a href="#">Coastal flights to determine effects of this week's wild weather on containers and debris</a> |
|      | NSW community | Media release      | 5          | <a href="#">Two hundred sea turtle hatchlings cause for shellebration</a>                                 |
|      | NSW community | Media release      | 5          | <a href="#">Critically endangered shorebirds at risk from off-leash dogs in Byron Shire</a>               |
|      | NSW community | Media release      | 6          | <a href="#">\$9 million to support NSW Seafood Industries</a>   |
|      | NSW community | Marine estate news | 5          | <a href="#">eNewsletter - Marine Estate Management Authority - June 2020</a>                              |
|      |               |                    | 2          | <a href="#">Research finds NSW commercial fishing is seabird-friendly</a>                                 |
|      |               |                    | 3          | <a href="#">Restoring natural water levels to Tomago Wetlands</a>   |
|      |               |                    |            | <a href="#">Researchers find climate change indicators</a>  |