

Marine Estate Management Strategy

Annual Report 2024–2025

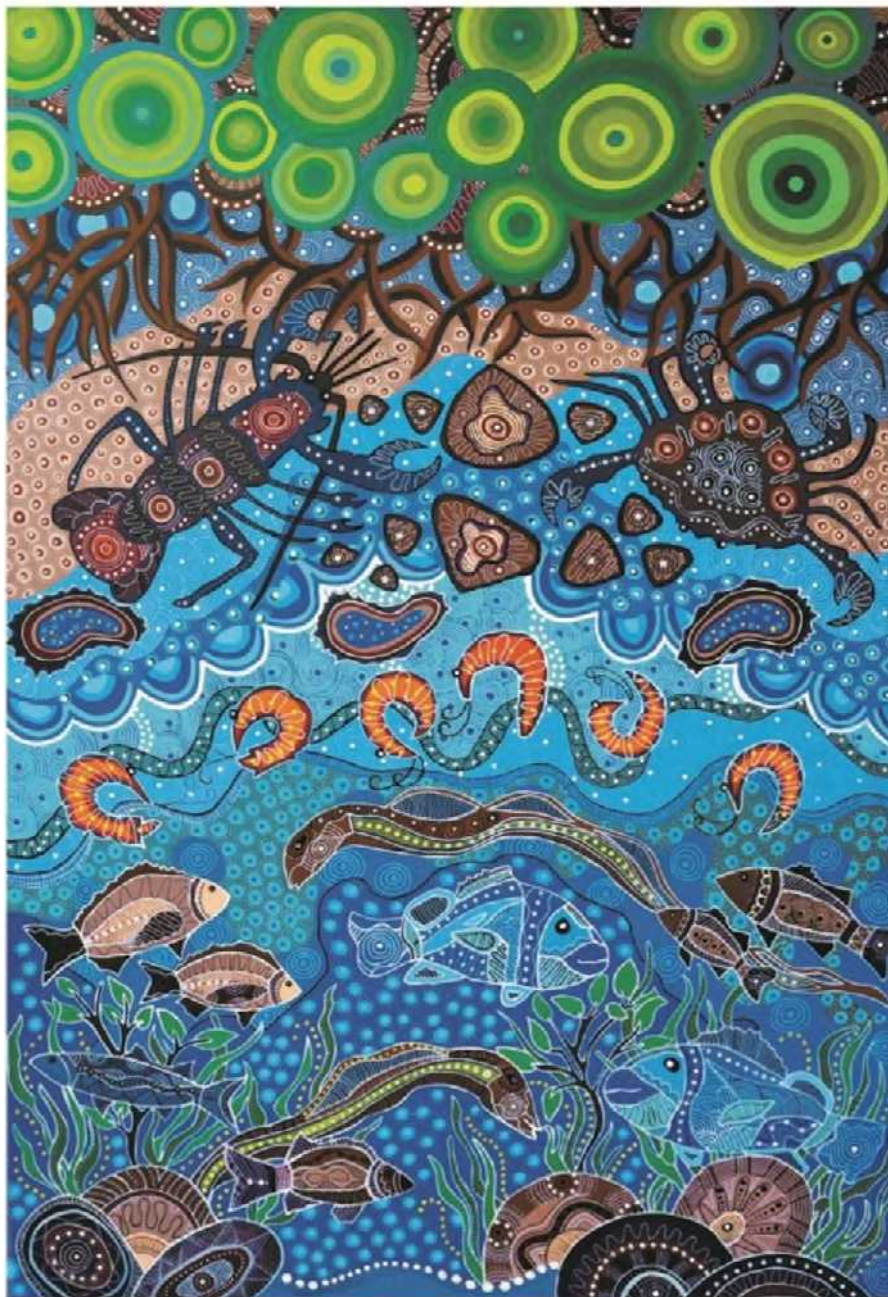
December 2025



Acknowledgement of Country

The Marine Estate Management Strategy acknowledges the Traditional Owners and Custodians of the land on which we live and work, and pays respect to Elders past, present and emerging.

Aboriginal people hold deep cultural and spiritual connections to the land and sea. They have cared for Land and Sea Country for thousands of years, passing on their knowledge and tradition to each new generation. We seek to work collaboratively with Aboriginal people to maintain their social, cultural, economic and spiritual connections to the marine estate, now and into the future.



© Bindarray Maagun (*River Feast*) by Gumbaynggirr artist Lavinnia Inglis

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More information

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- NSW Department of Climate Change, Energy, the Environment and Water – DCCEE
- NSW Department of Planning, Housing and Infrastructure – DPPI-Planning
- Transport for NSW

Cover image: Aerial view of Lake Macquarie entrance looking from Marks Point past Pelican towards Swansea Channel. NSW, Australia. Image by Paul Foley © Lightmoods Photography

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Foreword from the Chair of the Marine Estate Management Authority



The NSW marine estate is a vital natural asset, offering diverse benefits through its coastline, estuaries, wildlife and cultural importance to First Nations people.

Guided by the Marine Estate Management Strategy 2018–2028, the Marine Estate Management Authority continues to advise the NSW Government on sustainable management, supported by expert advice and cross-agency collaboration.

In 2024–25, the Strategy’s seventh year, more than 80 integrated projects were delivered through a \$30 million annual investment. These projects focused on monitoring marine estate values, assessing threats and implementing actions to reduce high-priority risks.

Statewide estuary monitoring was completed, updating ecosystem health grades for 175 estuaries. A new online database has improved public access to this data.

A key achievement was the release of the Guidelines for Erosion and Sediment Control on Building Sites following strong stakeholder engagement throughout the process. The Wagonga Inlet Living Shoreline project has restored native oyster reefs and embedded Aboriginal cultural elements into this award-winning project, delivering benefits for the community and environment.

Ninety-eight per cent of Boating Now round 3 projects have been completed. A new program has been announced to continue supporting safe and equitable access to the marine estate.

With support from the Strategy, NSW published the world-first Marine Heatwave Response Plan, which positions the state as a global leader in climate resilience. Subsequently, an abalone-specific plan integrated climate adaptation into harvest strategies. A new dashboard that tracks marine wildlife interactions by species and region has improved knowledge of species distribution and strengthened incident response capability.

Three new harvest strategies were developed to support ongoing fisheries management: a draft for Mulloway and ongoing work for Snapper and Kingfish.

The Responsible Crab Fishing Program promoted sustainable practices; 350 nets were exchanged for safer alternatives during pop-up events. Fisheries monitoring was redesigned to improve data quality and species identification, particularly to help reduce interactions with threatened species. An updated Key Fish Habitat layer was published to the Fisheries Spatial Data Portal to support regulatory reviews and vegetation strategies.

The cross Government Blue Economy Working Group was established to build the foundations for a Blue Growth Strategy for NSW, including a vision, outcomes, sustainability criteria and industry assessment framework for a blue economy. Sustainable industries were also identified for future engagement. Operational compliance expanded through mobile squads and Operation Osprey. Surveillance technologies supported 116 inspections helping adhere to aquatic reserve management in the Sydney region. A statewide rollout is planned for 2025–26.

With priorities set and funding secured for the remaining 4 years of the Strategy, we remain committed to building a resilient marine estate that supports community wellbeing and ecological

Russell Reichelt AO AFTSE Chair
Marine Estate Management Authority

Contents

Foreword from the Chair of the Marine Estate Management Authority	4
Introduction	6
The Strategy	6
Report structure	6
How we work	7
Adaptive management	7
Strategy evaluation	7
Enhancing and expanding connections	8
Finance	10
Staffing	11
Natural and built environment	12
Initiative 1 – Improving water quality and reducing litter	13
Initiative 2 – Delivering healthy coastal habitats with sustainable use and development	19
Initiative 3 – Planning for climate change	24
Initiative 5 – Reducing impacts on threatened and protected species	29
People, communities and business	32
Initiative 4 – Protecting the Aboriginal cultural values of the marine estate	33
Initiative 6 – Ensuring sustainable fishing and aquaculture	36
Initiative 7 – Enabling safe and sustainable boating	40
Initiative 8 – Enhancing social, cultural and economic benefits	44
Governance and management	48
Initiative 9 – Delivering effective governance	49
Program management, monitoring, reporting, evaluation and engagement	52
Abbreviations and acronyms	55
Appendix A – Communication and engagement	56
Marine estate Instagram: #nsw_marineestate	56
Marine estate newsletter: ‘Connect with us’ (nsw.gov.au)	57
Marine estate website: marine.nsw.gov.au	58

Introduction

This report describes the annual progress of the Marine Estate Management Strategy 2018–2028 (the Strategy). It describes the progress of the Strategy projects and initiatives, risk management and finances for the 2024–25 financial year.

It is informed by the public triannual reports that were published in the past 12 months in line with the current Implementation Plan for 2024–2026.

The Strategy

The Strategy provides the overarching framework for coordinated management of the marine estate to deliver the Authority's vision for **'a healthy coast and sea, managed for the greatest wellbeing of the community, now and into the future'**. It is underpinned by the NSW Marine Estate Threat and Risk Assessment (TARA).

The marine estate comprises 1,750 kilometres of coastline, 826 beaches and 185 estuaries. It includes estuaries, the shoreline, submerged lands, offshore islands, and the waters of the NSW coast from the Queensland to the Victorian border and out to 3 nautical miles offshore. It includes 85% of the NSW population who live along the NSW coastline and the many domestic and international visitors who visit our coast.

The Strategy outlines a series of management actions across 9 initiatives to address the priority threats to environmental assets and social and economic benefits derived from the marine estate. These are highlighted in the 2018–2028 Strategy Snapshot. A final component – program management, communication and education, monitoring, reporting and evaluation – supports the implementation of the Strategy.

The evaluation of the Strategy's performance is guided by the Marine Integrated Monitoring Program (the Monitoring Program), specifically the Integrated Monitoring and Evaluation Framework. Evaluation is scheduled at strategic points throughout the Strategy to enable adaptive management. Progress against short-term outcomes was evaluated after the first 2 years of implementation (in 2020–21) and short- and intermediate-term outcomes assessed after 5 years (in 2023–24) through the mid-term evaluation. A summative evaluation of the 2018–2028 Strategy will take place in 2027.

The Strategy is a genuine commitment from the NSW Government to manage one of our greatest natural assets – the NSW marine estate. More than \$289 million of funding has been allocated for the 10 years of implementation from 2018 to 2028.

Report structure

The report is presented against the 3 overarching areas of change for the Strategy outcomes to deliver on our vision for the NSW marine estate:

- Natural and built environment
- People, communities and businesses
- Governance and management.

The 9 initiatives and 53 actions are reported under those areas of change. The outcomes and initiatives are interrelated: actions in one area of change often support actions in others.

How we work

In 2024–25, the Authority continued to work across multiple agencies and partners during the seventh year of the 10-year Strategy.

We continued to implement more than 80 projects to improve waterway health, engage and consult with communities, provide First Nations training and employment opportunities, and protect important coastal and marine species. This year, several projects were completed, others were merged, renamed or paused. These changes are further explained in the [Implementation Plan for 2024–2026](#).

Key achievements for each of the initiatives this year are presented in this report. Triannual snapshot reports also highlight key work delivered for each initiative throughout the year and are available on the [Strategy website](#).

The Strategy’s unique governance and program management framework, which includes 4 core agencies and several partners, provides a governance structure that gives the Authority oversight of the Strategy projects while working in close collaboration with advisory bodies, initiative working groups, other government agencies and partners. This approach ensures coordination, consistency and transparency across all Strategy projects and enables the Strategy’s progress to be monitored and reported.

The independent Marine Estate Expert Knowledge Panel (the Panel) continues to provide ecological, social, cultural and economic expertise in implementing and evaluating the Strategy.

Adaptive management

Changing government priorities and the need for program resources to support state emergency responses, including the flood recovery program, have reduced our capacity for some initiatives, including on-ground works, however in some instances outcomes have still been achieved due to strong alignment between programs in addressing priority threats to the NSW marine estate.

Despite challenges, key elements of the Strategy have been delivered on time through ongoing adaptive management approaches. Program risk is managed carefully to help reduce the impact of unplanned events on implementation of the Strategy.

Strategy evaluation

After 5 years of the Strategy implementation, the mid-term evaluation was conducted in 2023–24.

The evaluation found that the Strategy is as relevant today as ever. Continuous progress is being made towards the Strategy outcomes, including a substantial improvement in the collection of baseline data. Although the governance framework and updated processes have enabled cross-agency collaboration and improved aspects of Strategy delivery, more is needed to make processes more efficient.

The Statewide TARA 5-year review has now been completed. It was an update rather than a full review of all the threats and risks contained in the 2017 Statewide TARA. The review identified potential changes in known or emerging threats that could require monitoring or management responses in the final years of implementing the Strategy. This process has kept the Statewide TARA relevant and directly informs evidence-based adaptive management via the Strategy.

A 5-year health check of the Strategy has responded to the recommendations from the 5-year TARA review and mid-term evaluation. This has confirmed the priorities and direction of the final 4 years of implementation, ensuring a strong program to meet outcomes and help secure the future of the Strategy beyond 2027–28.

Enhancing and expanding connections

We have continued to work with our partners and stakeholders – the NSW community, Aboriginal peoples, local government, industry and the research community.

NSW community

Highlights included:

- publishing 3 snapshot reports showcasing Strategy progress and benefits
- releasing the Guidelines for Erosion and Sediment Control on Building Sites to help protect waterways
- launching the Wagonga Inlet Living Shoreline project, which integrates shellfish reefs, saltmarsh and endemic riparian vegetation with Aboriginal cultural elements and community infrastructure
- reaching more than 12,000 people through ‘Don’t be a tosser’ litter campaign pop-ups at major events
- distributing 9 [marine estate newsletters](#) with more than 70 articles to 1,605+ subscribers
- publishing animated videos to support community awareness and understanding of Fisheries harvest strategies
- opening Kamay Wharves at La Perouse and Kurnell for public fishing and berthing access
- completed Wave 2 of the NSW Marine Estate Community Wellbeing surveys, which gathered insights from 3,600+ coastal residents, visitors and youth
- launching a coastal education resource page with videos on marine life and wellbeing.

Our work is published on the marine estate website, and we also engage with the community through media releases and social media. We posted 118 times on Instagram, reaching 2,668 followers. The number of visitors to the marine estate website increased by 32.4% compared to 2023–24.

You can [connect with us](#) to receive our newsletters and see our Instagram posts. Refer to Appendix A for examples of our communication and engagement activities in 2024–25.

First Nations people

Coastal First Nations people have been managing Land and Sea Country for tens of thousands of years. We are grateful to our First Nations partners for sharing their cultural knowledge and practices, and we are working to embed First Nations people in the management of Sea Country in NSW.

Our engagement and connections with our Aboriginal communities in 2024–25 included:

- launching Aboriginal artwork, stories and language at the Wagonga Inlet Living Shoreline project
- delivering 5 Cultural fishing workshops connecting youth with Elders
- developing a community engagement plan addressing the impacts of marine debris on Country and Sea Country
- delivering the Saltwater Sistas program for young Aboriginal women

- commencing a project to assess the effects of large-scale foreshore development on fish populations
- delivering boat licence training to 35 Aboriginal participants.

To find out more about cultural heritage and learn about the connection Aboriginal communities have with Sea Country, read about our work with Aboriginal communities in the Initiative 4 section in this report.

Local government

Local coastal councils are critical Strategy partners. Through a threat and risk-based approach, councils help identify coastal and marine areas that are under threat at a local scale. They are key to addressing these threats, including through coastal management programs. They provide a necessary link to local community and facilitate actions that enhance the benefits we all derive from the marine estate.

Our engagement and connections with our local councils in 2024–25 included:

- supporting ongoing liaison between project leads and local government staff
- establishing a working group to clarify roles in managing diffuse source water pollution
- completing statewide estuary monitoring and updating online report cards for more than 160 estuaries
- releasing a dashboard showing marine wildlife interactions by species and local government area
- hosting a marine wildlife emergency response workshop to improve response capabilities to marine mammal mass stranding events
- releasing 'Bringing Back the Bruns' video, which showcases fish passage improvements made in collaboration with local government in the Brunswick River.

Industry

Economic benefits are a vital focus of the Strategy. Projects contribute to improved viability and sustainability of coastal and marine industries, providing new economic opportunities and supporting industry innovation. Industries involved in Strategy projects include tourism, fishing, aquaculture, agriculture and emerging horticulture industries.

Our engagement and connections with our industry partners in 2024–25 included:

- hosting workshops to help farmers improve fertiliser use, irrigation and land management to mitigate water pollution
- sharing of irrigation assessments to boost farm efficiency and reduce runoff
- developing a microplastics report card for 120 NSW estuaries and published a method for broadscale monitoring
- releasing a world-first [Marine Heatwave Response Plan](#)
- working with Cook Island tour operators, who had signed a Code of Conduct to support marine protection.

Research community

We partnered with CSIRO and universities to better understand the natural assets and systems in the marine estate. To share the results of this work, we published 15 peer-reviewed scientific papers this year. The papers are listed under each initiative and include:

- 3 papers related to improving water quality and reducing litter
- 3 papers related to delivering healthy coastal habitats with sustainable use and development
- 9 papers related to planning and building resilience to climate change.

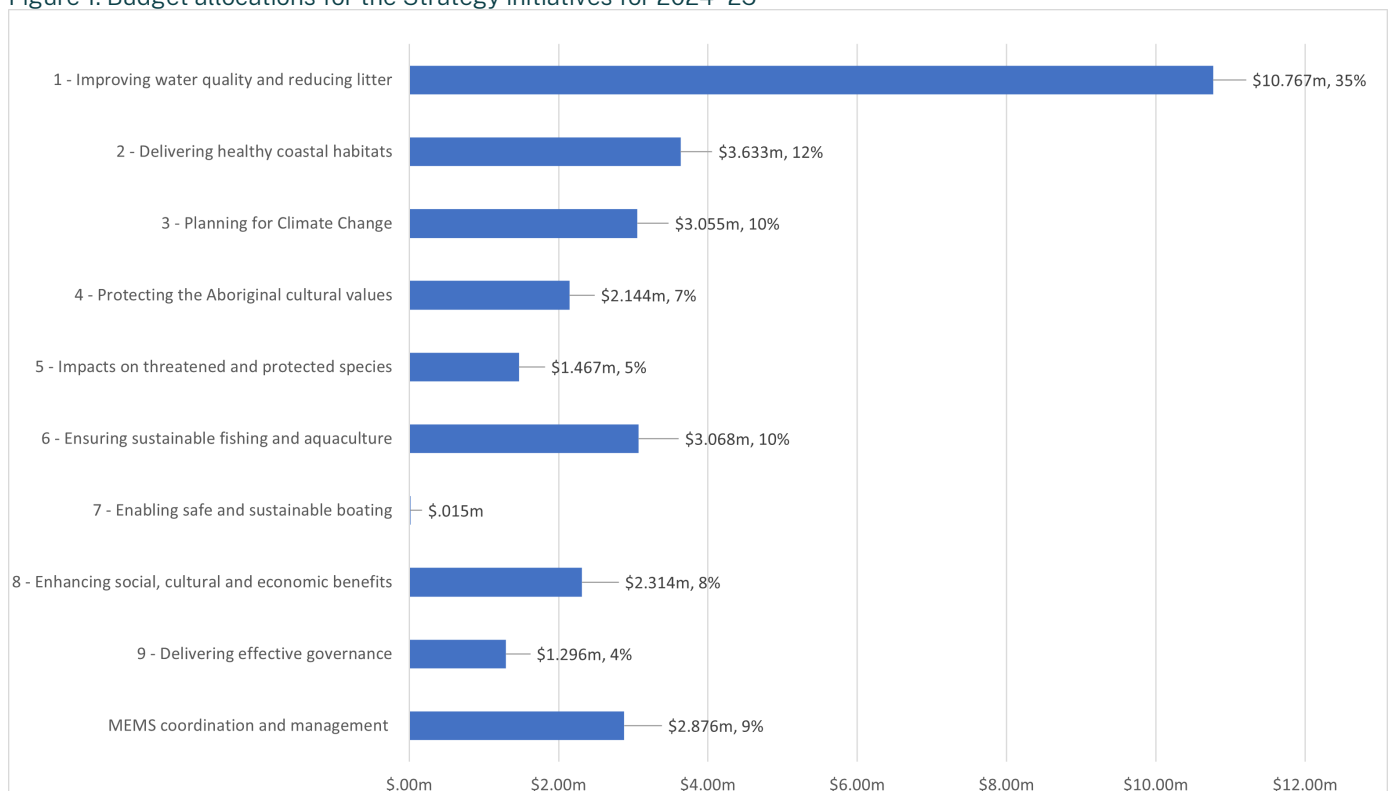
Finance

The NSW Government has invested substantial funding to manage one of our greatest natural assets – the NSW marine estate. More than \$289 million of funding has been allocated to the Strategy over the 10 years of implementation from 2018 to 2028:

- \$45.7 million for Stage 1 – the 2 years from August 2018 to June 2020
- \$58.9 million for Stage 2 – years 3 and 4 of the Strategy from July 2020 to June 2022
- more than \$184 million for Stage 3 – the final 6 years from July 2022 to June 2028, which is equivalent to about \$30 million each year. It should be acknowledged that there is also a large in-kind contribution by Strategy and industry partners and stakeholders in the delivery of the Strategy.

Figure 1: shows the Treasury budget allocation per initiative for 2024–25 and the percentage of the Strategy’s overall budget.

Figure 1. Budget allocations for the Strategy initiatives for 2024–25



Note: Initiative 7 is funded by Transport for NSW except for \$.015m Strategy funding.

Staffing

The Strategy directly employs people in 7 NSW State Government agencies and indirectly through local government and industry. It also engages consultants and researchers through contract arrangements to assist with research projects, on-ground works and community engagement.

The Strategy funds 142 staff in 130.6 full-time equivalent (FTE) positions. The majority of these roles are in regional NSW and 9 of the roles are Aboriginal Identified positions.

Year 7 Strategy-funded positions are as follows:

- DPIRD - Fisheries – 89 roles (83.3 FTE)
- DPIRD - Agriculture – 3 roles (3 FTE)
- Planning – 3 roles (3 FTE)
- Water – 3 roles (2.2 FTE)
- Crown Lands – 2 roles (2 FTE)
- DCCEEW – 31 (29.6 FTE)
- Local Land Services – 11 roles (7.5 FTE).

This collaboration by agencies and partners enables the holistic and coordinated management of the marine estate and facilitates broad benefits to the community. Other ongoing staff from across the government agencies also provide substantial support on an in-kind basis.

Natural and built environment

The marine estate is one of the most significant natural resources in NSW. It includes around one million hectares of estuary and ocean, as well as thousands of kilometres of ocean coastline, beaches, estuaries and coastal lake foreshores.

The marine estate's natural beauty and the clean waters support a variety of unique and abundant Australian marine life. This is highly valued by the community. These values are under threat. For example, much of the water runoff from cities, industries and agriculture in our catchments flows downstream through our waterways and can lead to reduced water quality in rivers, estuaries, wetlands and the marine environment. Structures such as jetties, breakwaters and bridges can impact the condition of the marine estate. Other threats, including rising sea temperatures, ocean acidification and invasive species present longer-term concerns.

The Strategy is working towards achieving the following outcomes for the Natural and built environment:

- Enhanced condition of the marine estate, including its habitats, wildlife and natural beauty, in identified regions and maintained elsewhere
- Improved incorporation of the likely impacts of climate change in planning for and managing the marine estate
- Increased appropriateness of the built environment with reduced risk to the marine estate

The Strategy is designed so that initiatives contribute to multiple program outcomes across the Strategy. The key initiatives contributing to the outcomes above are:

- Initiative 1 – Improving water quality and reducing litter
- Initiative 2 – Delivering healthy coastal habitats with sustainable use and development
- Initiative 3 – Planning for climate change
- Initiative 5 – Reducing impacts on threatened and protected species



Photo 1. Completed restoration works on the Tweed River, stabilising the river channel supporting natural recovery, following devastating floods in 2022. Credit: NSW Soil Conservation Service

Initiative 1 – Improving water quality and reducing litter



Photo 2. Satellite image of the Clarence River and offshore of Yamba-Iluka, NSW North Coast. It shows the plume flowing from the entrance to the Clarence River 21 May 2025. Hi-resolution imagery like this is being used by Strategy 1A (1.5.5) Estuarine Outflows Project to map the extent of river plumes and water quality along the NSW open coast and inner shelf. Owner: European Space Agency, European Union

Initiative objective	
To improve water quality and reduce marine litter for the benefit of marine habitats, wildlife and the community	
Initiative long-term outcomes	
Waterway health in the marine estate aligns with community values	
Reduction in input of litter to the marine estate in alignment with community values	
Maintained or improved biodiversity and marine habitats	
Improved adoption of best-practice land management and compliance with rules and regulations for managing water pollution and litter	
Frameworks, policies and processes for managing water quality are increasingly embedded in agencies’ business-as-usual operations	
Planned budget 2024–25	\$10,767,826

Management challenges and opportunities

Healthy marine and estuarine environments with clean water are highly valued by the NSW community. The statewide TARA identified diffuse source water pollution as the number one threat to marine habitats and wildlife and the many social, cultural and economic benefits provided by the marine estate. Litter is a significant component of water pollution.

The first 7 years of the Strategy have focused on improving water quality through habitat improvements, addressing litter and reducing land-based runoff. This investment reflects the impact of water quality and pollution on other initiatives and the wider marine estate.

Highlights – Improving water quality and reducing litter

Estuaries of northern region of NSW sampled to update estuary report cards, including **44** of **175** estuaries



15.2km roads and tracks improved at **13** sites, preventing **20,300 tonnes** of sediment loss to waterways during each major flood event

12,000 people engaged with 'Don't be a tosser' at stalls at the Taronga Zoo, Ocean Lovers Festival and Royal Easter Show



Update to **Guidelines for Erosion and Sediment Control on Building Sites** published and presented at the Coastal Conference, Environmental Heath Australia Forum, and to over **550** people in a targeted stakeholder information session



118 hectares of native riparian vegetation improved including planting **25,000** trees, fencing off **40** hectares, installing **19** alternative watering sites, and weed maintenance across **58** km

Water quality and sediment sampling completed for the **Bega, Shoalhaven and Macleay** rivers to develop the ability for remote sensing of coastal waters



A monitoring method for **microplastics** pollution in **NSW** estuaries developed from **500** samples

2.42 km of riverbank stabilised at **15** sites, preventing nearly **12,000** tonnes of sediment entering waterways during each flooding event



52 people attended **Fish Friendly** workshops at the Goulburn Mulwaree Council, Queanbeyan-Palerang Council, and Wingecarribee Council

Wagonga Inlet Living Shoreline project launched. It's the first shellfish reef-integrated living shoreline in NSW



Bioreactor research and farm trials show significant **cuts** in **nutrient** runoff from **berries**



Research outcomes promoted through **11** research papers, newsletters to **684** subscribers and more than **40** industry organisations



Trials point the way to **reducing** **fertiliser** use and **erosion** on **macadamia** farms using soil amendment and integrated orchard management methods. **Dairy farms** can **reduce** **phosphorus** without losing yield if there is already enough in the soil

Putting the Strategy into action

In this seventh year of the Strategy, we have continued to improve water quality and reduce marine litter for the benefit of marine habitats, wildlife and the community.

“We were both very impressed overall with the work you and the [Clean Coastal Catchment Research] team are doing. In particular what we found to be most refreshing was the open dialogue, willingness to share findings and your wisdom to incorporate new ideas from external sources to continually improve on your research.”

Zen Knyigos, Crop Science Technologies, and Tim Wolens, QLD Growcom

Statewide estuary water quality monitoring for 2024–25 has been completed, focusing on the North Coast and statewide sentinel sites. The ecosystem health of 79% of these estuaries qualified as good to very good (grades A & B), and 5% were graded as poor to very poor (grades D & E). Estuary report card grades show the ecosystem health of 175 estuaries and data collected through the summer of 2024-25 will soon be available on a searchable online database. This program allows managers to track the condition of estuaries over time to understand where more research is needed and to inform management decisions.

A highlight of the year was the development of a method to cost effectively assess microplastic contamination in surface waters over broad geographic scales. This will help managers track presence and distribution of these contaminants and better guide management interventions.

The final year of a collaboration with CSIRO to map coastal outflows focused on the Bega, Shoalhaven and Macleay River estuaries. The work has now characterised the optical properties offshore of and within the estuaries of 9 NSW rivers in an effort to map water quality from satellites across the marine estate. The collaboration continued with installations of sensor stations at the Iluka breakwater (Clarence River) and in Tuggerah Lake. The aim is to explore satellite remote sensed water quality as a novel tool for more frequent or continuous monitoring of NSW ocean environments and estuaries to detect and, eventually, predict change.

Other water quality monitoring activities included the installation of telemetered water quality monitoring stations at Everlasting Swamp National Park. The aim is to assess the impacts of floodplain drainage on water quality and nutrient and microbial monitoring at a dairy demonstration site. This work will help scientists, managers and landholders understand the impacts of various activities, how they interact with natural processes, and whether water quality is changing for better or worse. Ultimately, it will help them to better manage the impacts of these activities on water quality.

“The floods of 2022 impacted significantly on the Tweed community, especially those living in our hinterland. The completion of the (Tweed River) restoration work was wonderful news, not only for the Uki community but users of Kyogle Road.”

Chris Cherry, Mayor of Tweed

An exciting achievement was the publication of the [Guidelines for Erosion and Sediment Control on Building Sites](#) in October 2024 by the Department of Planning, Housing and Infrastructure (DPHI-Planning). The Guidelines have been promoted at several forums and have been well received by councils and other stakeholders. The updated guidelines will help small-scale builders, certifiers,

stormwater specialists and anyone working on construction sites that are less than 2,500m² apply best practice to prevent erosion and sediment pollution to protect our waterways. One online information session on erosion and sediment control and water quality management attracted more than 550 participants.

Riparian zone and streambank rehabilitation continued with works including riverbank stabilisation, road improvements, and fencing to exclude stock. Targeted revegetation efforts have seen the planting of thousands of native plants to restore riparian zones. Road stabilisation efforts have conserved 1,792 tonnes of sediment-laden runoff into Brou Lake, Corunna Lake and Bermagui River alone.

“The riverbank restoration on our land has not only protected the soil but also brought new life to the landscape – a lasting investment in the health of our farm and environment.”

Craig Woolley, landowner

“I have noticed the creek appears healthier and clearer [following riparian restoration works] and it shows increased resilience during high flow events. Visits from the LLS staff have given me more knowledge around natural resource management.”

Craig Patch Taylor, landowner

Nutrient runoff from farms has been an ongoing challenge for water quality, and research has now shown that reducing nitrogen fertiliser rates to growing substrate of commercial blueberries can reduce nutrient runoff without reducing yields. Researchers are also finding that biochar can improve some substrate properties to further reduce nutrient runoff. Separately, bioreactor trials at the Wollongbar Primary Industries Institute and on-farm at Corindi (Coffs Harbour Local Government Authority), are demonstrating impressive nitrate removal rates from blueberry and raspberry runoff water. The research team is also investigating the effectiveness of dolomite as a filter for capturing excess phosphorus to provide industry with inexpensive, yet accessible and effective options.

“The main thing I learned at today’s workshop was to not put too much phosphorus on the soil. The first thing I’m going to do when I get back to the farm is get a soil test done”.

Landholder, Bega Valley.

A dairy soil testing trial demonstrated the value of soil testing by showing that if there is enough soil phosphorus, adding more phosphorus as fertiliser costs money while providing no yield benefits and risks environmental losses.

Several project teams actively engaged with the community throughout the year through workshops, field days, conferences and public events, including:

- The oyster reef restoration and research team and partners launched the award-winning Wagonga Inlet Living Shoreline project, delivering NSW's first shellfish reef-integrated living shoreline with Aboriginal cultural elements woven throughout.
- The *Bidhiinja: Restoring Our Oyster Reefs* exhibition toured 8 regional venues.

- Fish Friendly workshops were delivered to 52 attendees across 3 councils in the Southern Highlands of NSW. By reaching both the managers and designers who develop projects that could affect waterways, as well as the on-site construction crews who execute them, the workshops helped everyone involved understand their responsibilities under the *Fisheries Management Act 1994* to minimise water pollution and conserve key fish habitat.
- Pop-up stalls for the ‘Don’t be a tosser’ marine litter campaign at Taronga Zoo and events at Ocean Lovers Festival and the Royal Easter Show engaged more than 12,000 people.
- Field days and workshops for dairy, beef and berry farmers gave advice about fertiliser spreader calibration, irrigation efficiency and sustainable farm management practices.

Feedback about these activities included:

“Thank you [Oyster Reef Restoration, Wagonga Inlet Living Shoreline teams] for contributing to the social cohesion of Narooma and surrounds.”

Community member, Narooma

“On behalf of everyone at TA Projects, thank you for inviting us to attend the Fisheries [fish friendly] workshop. The workshop was exceptionally well put together – informative, engaging, and highly relevant to the work we’re involved in.

We all found [fish friendly workshops] incredibly valuable and learned a great deal from the presentations and discussions. It provided excellent insight into current Fisheries priorities, and we really appreciated the opportunity to be part of the conversation.”

Tegan Leisgang, Environmental Planning Specialist with TA Project Services

We are continuing to work with Indigenous community members on the South Coast assessing impacts of marine debris on cultural values, spaces and Sea Country stewardship, through a combination of workshops, On Country days and On Sea Country days. On the mid-north coast, Indigenous Rangers have been, and continue to be, trained to conduct marine debris surveys and can subsequently be involved in local and state-wide marine debris monitoring activities.

Collaborative governance was highlighted when the Richmond River Collaborative Partnership held a stakeholder workshop to identify and map on-ground works and activities related to waterway health across the Richmond catchment to find common ground and overlap in these activities as well as to identify areas where more attention may be needed.

The Diffuse Source Water Pollution Oversight Committee was also established to clarify the roles and responsibilities of the NSW Government in managing diffuse source water pollution.

More information

[Triannual snapshot reports](#) – see actions under Initiative 1

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

[Estuary Report Card Grades](#)

Reports and peer-reviewed papers

Guidelines for Erosion and Sediment Control on Building Sites

Clean Coastal Catchments Research Project Team (2024). 'Highlighting the benefits of Integrated Orchard Management at CCC Macadamia Research Update (26/08/2024)'. Australian Macadamia Society Bulletin, Spring 2024, print and online versions.

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South African Institute for Aquatic Biodiversity (2025) 'International audience reached through special invitation to present at the National Research Foundation, South African Institute for Aquatic Biodiversity Seminar Series' (12 September) <https://saiab.ac.za/category/news-and-events/saiab-seminar-series/>.

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



Photo 3. Aerial image of the jetty and pontoon installed as part of the Wagonga Inlet Living Shoreline Project that was officially launched in February 2025 at Narooma, NSW. Credit: Tideline Productions.

Initiative objective	
To protect coastal and marine habitats and associated species and enhance the health of the marine estate by improving the design, quality and ongoing management of foreshore development, use and waterway infrastructure	
Initiative long-term outcomes	
Improved design and management of foreshore and coastal land use and development, balancing social and economic benefits of development with enhanced coastal and marine habitats	
Maintained or improved biodiversity and marine habitats	
Planned budget 2024–25	\$3,633,004

Management challenges and opportunities

Coastal development and infrastructure provide important social and economic benefits for NSW, provided they are well planned and managed.

Properly planned foreshore development, land-use changes and marine infrastructure provide economic and social opportunities and reduce risks to marine estate habitats and species. For example, properly planned and maintained wharves, boat ramps and breakwalls improve community access and minimise impacts on marine and estuarine plants and animals.

Sustainable use and development require coordination of investment planning, decision-making and management, and collaboration with communities and stakeholders. Our aim is to continue to improve how we collectively manage activities and processes that pose the greatest risks to coastal habitats and species while enabling the greatest benefits from the marine estate, so they align with community values.

Highlights – Delivering healthy coastal habitats with sustainable use and development

Domestic waterfront strategies under development for **4 estuaries**



A comprehensive review of an **active sand extraction licence** resulted in recommendations to reduce its impact

Completed condition assessments and options reports at **Jack Evans Boat Harbour** in the Tweed River, and **Pelican Marina** in Lake Macquarie



125 ICOLL systems (Intermittently closed and open lakes and lagoons) identified from an audit of **187 estuaries and creeks** in NSW



Estuarine fish assemblages surveyed at **400 sites** across **Gamay** and **Jervis Bay**

Prawn and fish sampling in Everlasting Swamp and Sportsmans Creek, investigating the effects of barriers to fish movement and poor water quality on estuarine fish assemblages



Published **'What we heard'**, a summary of feedback to the **Coastal Floodplain Drainage Project**–Options Report, which aims to improve the management of low-lying coastal floodplains

Published the **Key Fish Habitat Offsets: An Ecosystem Services Approach** report and a video with 3 case studies outlining how three different developments are required



Mapping tool for intertidal marine vegetation strategies launched
4 strategy documents published,
3 more underway

Contributed to the **Cooks River catchment management plan** with surveys of the mean high water mark and the location of steel sheet piling in relation to property and reserve boundaries

Diver surveys at 55 sites in the Batemans Marine Park and Jervis Bay Marine Park to monitor shallow reef biodiversity
2 scientific papers published from the data



Putting the Strategy into action

Initiative 2 seeks to improve coastal and marine habitats and the management of foreshore and waterways. This year, initiative staff collaborated across agencies to progress and deliver new policy, fill knowledge gaps, and complete on-ground works.

A highlight for 2024–25 was the recommencement of several projects working collaboratively across agencies to deliver:

- Domestic Waterfront Structure Strategies (DWSS) project – expert advice on strategy drafts for Lake Macquarie, Port Stephens Great Lakes Marine Park, Clarence River and Wonboyn Lake
- Estuary Bank Management Strategies (EBMS) project – a draft Decision Support Tool summary report
- the Intermittently Closed and Open Lakes and Lagoons (ICOLL) management project – an audit of 187 estuaries and creeks in NSW, identifying 125 as known ICOLL systems, of which 60 are actively managed.

The Crown Lands Strategy team has commissioned surveys along the Cooks River where steel sheet piling has been degrading over the past 70 years. Additionally, the team completed condition assessments and options reports at Jack Evans Boat Harbour and Pelican Marina, respectively. All of these activities contribute to coastal management programs and open pathways that ensure infrastructure is properly managed and maintained for the benefits of community members and river stakeholders.

Following Crown Lands' commercial dredging operations audit, DPHI-Planning conducted a review of guidance material relating to approvals of commercial dredging and updated the 'key guidance' webpage to improve clarity and accessibility for stakeholders.

Baited remote underwater video (BRUV) survey data collection and analysis reached important milestones this year. In Gamay (Botany Bay) and Jervis Bay, more than 207 BRUV surveys from 400 sites contributed to a collaborative Australian Research Council grant with the universities of Sydney and NSW (UNSW). The data will be used to quantify the effects of multiple human stressors and natural disturbances in subtidal reefs and in estuarine fishes and their habitats across NSW.

Extensive diver surveys were completed at 55 sites in the Batemans and Jervis Bay Marine Parks to monitor shallow reef biodiversity and inform the Marine Estate Marine Integrated Monitoring Program. These surveys assessed reef biodiversity by measuring the sizes and abundances of various species, including fish and large invertebrates such as lobster, abalone, sea stars and urchins, as well as algae such as kelp and smaller invertebrates.

Further research contributions to Initiative outcomes were progressed when another round of prawn and fish sampling was completed in the Clarence River catchment at Everlasting Swamp and Sportsman's Creek. The data informs the potential impacts of barriers to fish movement and water quality, as well as flood impacts, as the data timeseries includes Tropical Cyclone Alfred.

The Reconnecting Fish Habitats 'Bringing Back the Bruns' educational video was released. The video highlights the successful partnership between DPIRD Fisheries and Byron Shire Council in improving fish passage in the Brunswick River. This collaborative project was funded by the Recreational Fishing Saltwater Trust's Flagship Habitat Action Program and the Strategy. It contributes to DPIRD

Fisheries efforts to open access to 25 kilometres of fish habitat in the lower catchment by constructing 5 bridges and removing 3 causeways.

Feedback about the ‘Bring back the Bruns’ project included:

“The success of this project relied on strong collaboration between the private landholder, the council, the Department of Fisheries, and Crown Lands. From a safety perspective, the council is focused on improving these crossings, but this also brings environmental benefits by enhancing fish passage.”

Chloe Dowsett, Byron Shire Council’s Coast, Biodiversity and Sustainability Coordinator

Progress continued on several other fish passage activities, including:

- Currowan Creek, where a causeway is being replaced with a small bridge structure
- Mullet Creek (Lake Illawarra), for which a geotechnical report has assessed the site’s suitability for a potential fishway structure
- Liverpool Weir fishway refurbishment, allowing for fishway cleanout and survey in the first quarter of the next financial year as the Crown Land licence has been executed.

Furthermore, Initiative 2 teams published information that assists local governments and land managers to reduce high-priority threats to the marine estate. These include:

- 4 Intertidal Marine Vegetation Strategies and a desktop mapping tool
- the [What We Heard report](#) on the public consultation from the Coastal Floodplain Drainage project’s Options report
- the [Key fish habitat offsets: an ecosystem services approach](#) report
- a video featuring 3 case studies on development activities requiring Key Fish Habitat offsets, and
- a report, with researchers from Charles Sturt University, on the impacts of drought, bushfires and floods on estuarine fishes using eDNA.

Feedback about the Marine Vegetation Strategies included:

“Wow, I’ve got to say I’m impressed by the volume and detail of work you have put into the IMVS document for Tweed River Estuary. This type of document for any of Kiama’s estuaries will certainly help form a solid base of information for our upcoming Estuaries coastal management plan.”

Luke Lister, Environmental Sustainability Officer, Kiama Municipal Council

Presentations to workshops, conferences and forums, social media posts and newsletter contributions further informed key stakeholders of these outputs.

More information

[Triannual snapshot reports](#) – see actions under Initiative 2

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

Intertidal marine vegetation strategies

[Key Approaches to Mitigate Risk and Support Adaptation](#)

[Tweed River Estuary IMVS](#)

[Integrated Landscape and Seascape Conservation](#)

Reports and peer-reviewed papers

Harrison AJ, Henderson B and Glamore WC 2023, Key fish habitat offsets: an ecosystem services approach, WRL Technical Report No. 2021/16, Water Research Laboratory, School of Civil and Environmental Engineering, UNSW Sydney, prepared for NSW DPI Fisheries, August 2023.

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Initiative 3 – Planning for climate change



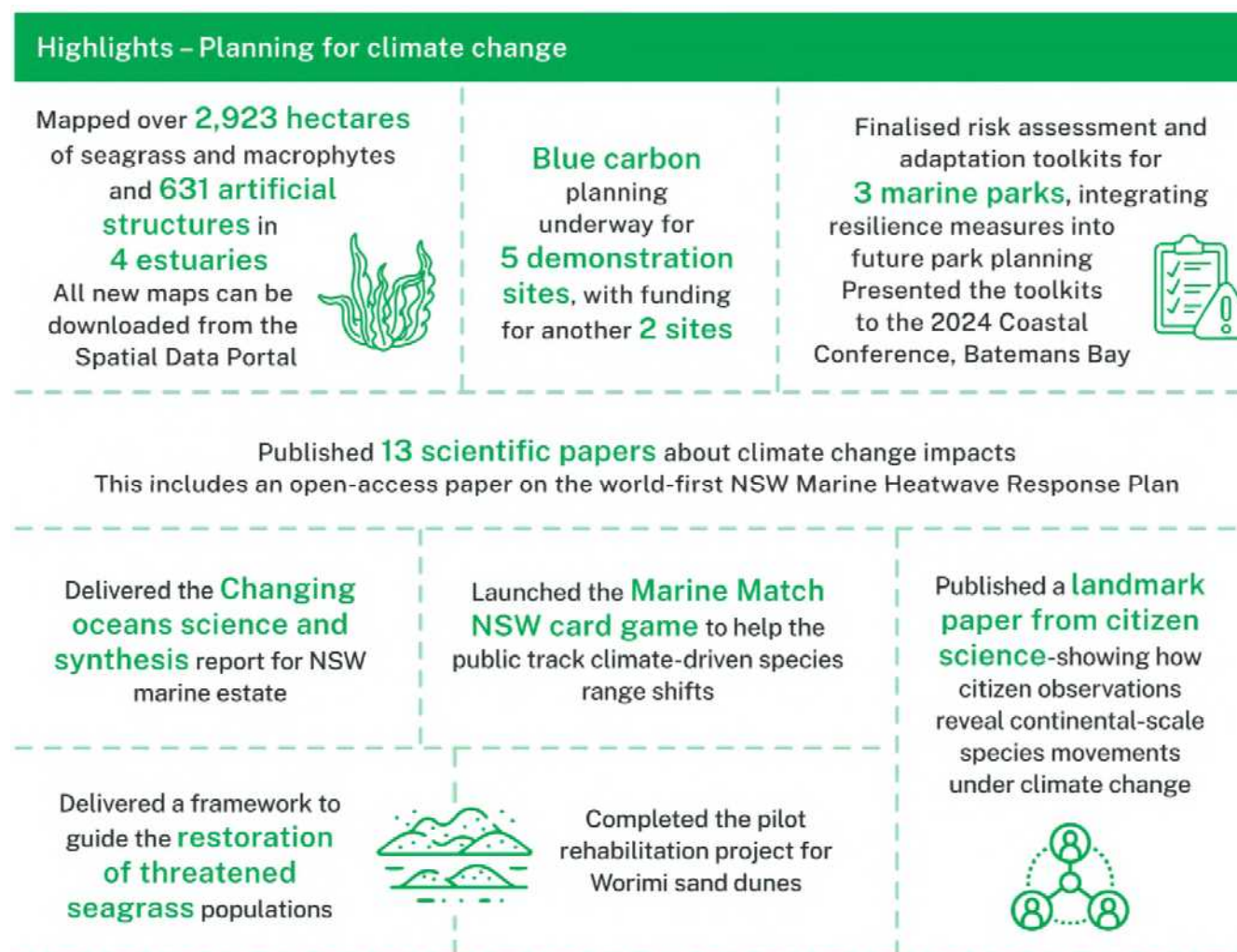
Photo 4. Site inspection of the Everlasting Swamp project area by the project team. Credit: CPHR (Conservation Program, Heritage and Regulations) division of DCCEEW.

Initiative objective	
To understand, adapt and increase resilience to help mitigate the impacts of climate change on the NSW marine estate	
Initiative long-term outcomes	
Adaptation planning strategies and decision-making across the marine estate incorporates the likely future impacts of climate change	
Improved capacity of coastal and marine managers and communities to anticipate climate impacts and identify adaptation pathways	
Planned budget 2024–25	\$3,055,028

Management challenges and opportunities

Understanding the effects of climate change on the marine estate is critical to enable informed planning and management. Climate change stressors are complex, and understanding the likelihood and consequences of climate change is important to support evidence-informed decision-making and prioritisation.

There are many knowledge gaps that need to be filled so that we can build resilience and find solutions to mitigate the impacts of climate change on the NSW marine estate, while urgent action to reduce emissions and limit global warming comes into effect.



Putting the Strategy into action

Initiative 3 is working to improve our knowledge of climate change impacts and incorporating this knowledge into adaptation planning to increase the ecosystem resilience of the NSW marine estate.

This year, we continued to advance our understanding of climate change impacts on the marine estate through expanded habitat monitoring, climate change risk assessments, and blue carbon initiatives. We started work on the Blue Carbon Research Prospectus, which will outline the NSW Government's research agenda to enhance understanding of blue carbon landscapes. Leading blue carbon scientists and managers are actively engaged in shaping this agenda.

We made significant progress in estuarine habitat monitoring and threat assessment. Macrophyte and disturbance mapping was completed across 4 estuaries, documenting 2,923 hectares of macrophytes and 631 artificial structures. All maps were made publicly available through the [DPIRD Fisheries Estuarine Habitat Dashboard](#) and the [Spatial Data Portal](#). These resources have been widely used by the general public, consultancies and governmental agencies (3,900 page views; 254 data downloads for 2024–2025). The maps have been used to inform the DPIRD Intertidal Marine Vegetation Strategies and Domestic Waterfront Strategies. They have also been used by councils for Catchment

Management Plan development and by Transport for NSW to inform the placement and relocation of boat moorings.

Additionally, patterns of estuarine macrophyte change in NSW estuaries were interpreted for the 2024 NSW State of Environment Report. Research outputs included descriptions of DPIRD's newly developed habitat mapping methods, findings on *Zostera* seagrass tolerance to 3°C warming in estuaries, and insights into how sediment microbes may enhance nutrient cycling and carbon storage as water temperatures rise. We also collaborated on a review of the potential role of sediment microbes in improving seagrass restoration.

Our knowledge of climate change threats to mangrove and saltmarsh communities was advanced with the development of a process-based, region-wide assessment of vertical resilience for NSW estuarine wetlands. The assessment compared modelled catchment sediment yields with both projected rates of sea-level rise and empirically derived vertical accretion rates for mangrove and saltmarsh intertidal wetlands. We found that potential future sediment delivery in NSW coastal catchments is unlikely to assist intertidal wetland accretion to keep pace or exceed sea-level rise.

Field work continued at Towra Point Nature Reserve, Forster and at 2 Swansea sites where data from more than 4,000 floristic survey points was collected. The field work also incorporated 6 months of continuous data collection from monitoring equipment. Development of an eco-morphodynamic wetland response model progressed, enabling local-scale simulation of mangrove and saltmarsh responses to sea level rise to 2100.

As part of the NSW Blue Carbon Strategy this year, research at the Everlasting Swamp Blue Carbon Demonstration site advanced with completion of initial studies on fish, waterbirds, vegetation and hydrology, while water quality monitoring established baseline conditions. Information about blue carbon concepts, key project benefits and project progress has been published on a dedicated webpage on the marine estate website. Lessons learned from the site are being applied to assist the delivery of legislative reform, research for carbon markets and development of other demonstration sites.

Associated with this, we have investigated 5 alternative blue carbon demonstration sites that could progress to registration with the Clean Energy Regulator. Detailed hydrological studies began at one of the identified sites, Tuckean Nature Reserve, to clarify available restoration options. Funding was secured to commence the delivery of 2 additional blue carbon demonstration projects for 2025–27.

A major achievement in 2024–25 was to finalise the draft risk assessments and adaptation toolkits for Cape Byron, Jervis Bay and Batemans Marine Parks. A presentation at the 2024 Coastal Conference in Batemans Bay provided valuable exposure for the Marine Estate Management Strategy as well as an opportunity to discuss ways of integrating the project into coastal management.

The Climate Change Citizen Science Project continued to help people connect personally with the changes occurring in their environment by linking climate change impacts to everyday observations. The immense value of marine citizen science observations for tracking species movements around the Australian continent has been demonstrated through the publication of a significant piece of citizen science research: 'Continental-scale assessment of climate-driven marine species range extensions using a decade of citizen science data' in the international journal *Diversity and Distributions*. This work

reveals that nearly 40% of the 200 marine species investigated were spotted beyond their historical range limits.

The project also developed educational materials for the community, including the recently released 'Marine Match NSW' card game, which features vibrant illustrations of 14 iconic marine species and bite-sized facts and descriptions curated by marine experts.

The Climate Change Research project has published a world-first Marine Heatwave Response Plan in the peer-reviewed journal *Ocean and Coastal Management* and also communicated widely to stakeholders. The plan positions NSW as a world-leader in responding to marine heatwaves. This was followed up by a specific plan for the abalone industry, which will be utilised during the development of harvest strategies this year.

Key NSW abalone industry representatives have been involved in the development of the NSW abalone industry marine heatwave response plan. These stakeholders have been integral to the provision of knowledge contained in the plan and have effectively worked with researchers throughout this process. One industry representative noted:

“[The Strategy] has provided practical and supportive guidance to the NSW Abalone & Sea Urchin Fishery in providing assistance in the interpretation of recent warm ocean and the potential effects on marine environments. Warming ocean events forecast and experienced this summer has delivered significant ocean temperature warming, the effects on south coast abalone populations and marine environment are not truly apparent as yet.

Having access to scientific experts like Melinda Coleman, who have knowledge and expertise in this area, is critically important to our industry and the others on the south coast”

Greg Finn, Ministerial Fisheries Advisory Council Member, Commercial Fishing

The Climate Change Monitoring Project continued fieldwork throughout 2024–25. Baseline data from more than 650 towed video transects and 30 dive surveys was collected from 2019 to 2024. The data will allow us to identify future habitat changes, particularly in kelp communities along the NSW coast, enabling the detection of negative impacts and facilitating management actions to address these. We also completed internal reports for towed video (2019–2024), Crayweed (2019–2023) and Bull kelp (2021–2024). This project has produced foundational data on the distribution of key habitats and species throughout the NSW marine estate that is now being utilised by the Fisheries Resource Assessment team in environmental risk assessments to manage the marine resources of NSW more sustainably under current legislation.

Other projects completed in this reporting period included:

- a pilot rehabilitation project for Worimi sand dunes
- the Changing Oceans Science and Synthesis Report for the NSW marine estate
- a framework to guide the restoration of threatened seagrass populations
- the Reef Adapt webtool, achieving global impact in supporting marine adaptation planning
- publication of several research papers.

More information

Triannual snapshot reports – see actions under Initiative 3

2022–24 Marine Estate Management Strategy Implementation Plan

Reports and peer-reviewed papers

NSW Marine Heatwave Response Plan

Coleman MA, Nimbs MJ, Champion C (2025) *Marine heatwave response plan for the NSW abalone industry*. New South Wales Department of Primary Industries and Regional Development.

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Initiative 5 – Reducing impacts on threatened and protected species



Photo 5. Practicing techniques for the return and release of cetaceans at sea at Exercise Gurruuja, Coffs Harbour September 2024. ©NSW NPWS

Initiative objective	
To understand and mitigate threats to threatened and protected species in NSW	
Initiative long-term outcomes	
Reduced threats to threatened and protected marine species in NSW	
Increased NSW contribution to national conservation of targeted threatened and protected species	
Planned budget 2024–25	\$1,467,496

Management challenges and opportunities

NSW is home to many threatened and protected species. The cumulative impacts of climate change, fishing, litter, and recreational activities such as boating, as well as land-based and industrial activities, pose a cumulative threat to these species in the marine estate.

This management initiative seeks to reduce the cumulative risks to wildlife and to ensure the continued social, cultural and economic benefits from the biodiversity of the marine estate by:

- improving partnerships between government agencies and non-government organisations
- improving existing wildlife conservation programs
- expanding community and industry education on the impacts of human activities.

Highlights - Reducing impacts on threatened and protected species

115 participants attended a mass stranding workshop in Coffs Harbour to boost readiness of responders

Newsletters promoting industry best-practice were welcomed by commercial whale watch operators

Created 6 educational videos on large-whale euthanasia and post-mortem techniques to improve welfare and scientific outcomes



Marine mammal approach stickers were distributed to over 13,000 recreational boaters

Historic hawksbill turtle records collated and uploaded to BioNet to support national listing

Trained observers monitored 55 fishing days across Ocean Trawl and Trap-and-Line fleets to record interactions with threatened species



8 green and loggerhead turtles tagged with satellite tags between Sydney and Coffs Harbour to track their habitat use



Reporting dashboard for marine wildlife incidents has been viewed over 400 times by over 270 users since its launch in November 2023

Putting the Strategy into action

Initiative 5 aims to understand and mitigate threats to threatened and protected species in NSW. This will help to improve or maintain the conservation status and health of targeted threatened and protected species in the wild. This year has seen advances in marine wildlife protection through enhanced monitoring and education, strategic partnerships, and research initiatives.

A key achievement in 2024–25 was the release of a public-facing Power BI dashboard showing marine wildlife interactions by species and local government area. This dashboard improves our ability to track and respond to emerging patterns and supports public engagement with the marine estate.

Our species monitoring efforts expanded our understanding of humpback whale behaviour, as research contributed to knowledge of their calving ranges. These findings were shared with whale watch operators to support compliance and conservation outcomes. We also completed the in-person component of our engagement program with operators, who can now report unusual marine mammal sightings through a data upload system. Educational newsletters for commercial whale watch operators promoted industry best practices, and survey results show that all responding operators found these resources valuable. This approach enhances industry compliance and promotes best-practice while encouraging participation in citizen science.

Preparedness for marine wildlife emergencies was strengthened through training initiatives. A mass stranding workshop in Coffs Harbour brought together government staff and non-government agencies to improve response capabilities. A consultant has been selected to conduct environmental assessments for the marine wildlife carcass burial that will establish environmentally sustainable and culturally appropriate burial sites. Six educational videos to improve animal welfare and outcomes from marine fauna events are now in their final review before publication in late 2025.

Research and monitoring activities increased our knowledge of threatened species health and habitat this year. Water quality assessments investigated potential pollution sources in 4 estuaries associated with sea turtle stranding events. A collaborative satellite tagging program applied 8 tags to green and loggerhead turtles between Sydney and Coffs Harbour, generating habitat data while enabling health status assessments of these animals. Supporting conservation efforts, historical hawksbill turtle sighting records were collated and uploaded to BioNet to assist with species listing processes in NSW.

Feedback from Turtle Summit participants included:

“The partnership between ORRCA and the NPWS is a vital alliance in safeguarding NSW’s threatened marine species.

By combining ORRCA’s specialist knowledge and experience with government expertise and resources, we can respond faster, rescue more effectively and protect vulnerable wildlife. Together, we ensure these species have a fighting chance for survival in our oceans.”

Ashley Ryan , ORRCA President

Fisheries monitoring programs were enhanced to improve data collection and species identification. A complete redesign of the onboard monitoring program for fish and prawn trawl sectors aims to ensure representative, statistically robust sampling for estimating total catch and recording interactions with threatened, endangered and protected species. Scientific observers monitored 55 fish days during the most recent reporting period. Analysis continued on estuary general fishery mesh net data to generate fleet-wide estimates of fishing methods and discard rates.

Risk assessment capabilities were strengthened through completion of seabird bycatch assessments for NSW Ocean Trap and Line and Ocean Trawl fisheries, analysing observer data to evaluate risks posed by commercial fishing operations. Work also continued with stakeholders across all fishing sectors to develop operational procedures and physical mitigation measures, including presentations on whale entanglement gear identification and recovery techniques.

More information

[Triannual snapshot reports](#) – see actions under Initiative 5

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

Reports and peer-reviewed papers

McPhee-Frew, J., Dedden, A. V., Pirotta, V., Marshall, A., Waples, K., Raudino, H. C., & Rogers, T. L. (2025). [Humpback whales \(*Megaptera novaeangliae*\) continue migration after giving birth in temperate waters in Australia and New Zealand. *Frontiers in Marine Science*, 12, 1545526.](#)

People, communities and business

The marine estate is a central part of Australia's heritage and culture. Almost 6 million people live within 50 kilometres of the NSW coastline, including the people of 11 coastal Aboriginal nations who are intimately connected to their Land and Sea Country.

Experiences in, and associations with, the marine estate through the generations have established a contemporary coastal and marine culture that crosses many sectors. It offers the opportunity for activities such as diving, swimming and fishing while providing a livelihood for many, particularly as a hub for international and domestic trade and tourism through its ports, nature-based tourism and seafood related industries.

The Strategy is working towards achieving the following outcomes for People, communities and business:

- Sea Country supports improved wellbeing for Aboriginal communities
- Greater community appreciation and enhanced sustainable experiences of the marine estate in identified regions, and maintained elsewhere
- Enhanced coastal and marine opportunities

The Strategy is designed so that initiatives contribute to multiple program outcomes across the Strategy. The key initiatives contributing to the outcomes above are:

- Initiative 4 – Protecting the Aboriginal cultural values of the marine estate
- Initiative 6 – Ensuring sustainable fishing and aquaculture
- Initiative 7 – Enabling safe and sustainable boating
- Initiative 8 – Enhancing social, cultural and economic benefits



Photo 6. A surfer paddles over a large wave at Letitia Spit, North Coast, NSW. Credit: T. Byrnes © Tommy Byrnes

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



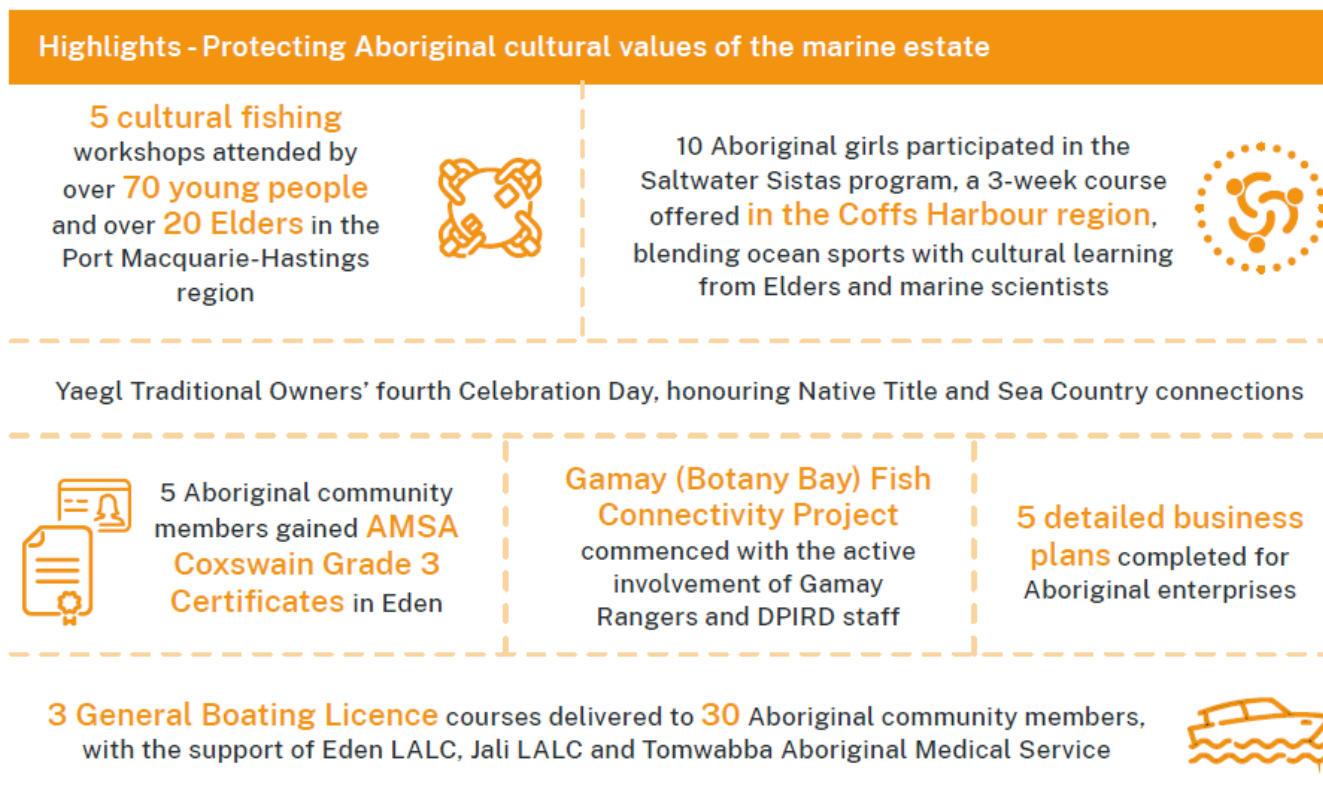
Photo 7. Saltwater Sista’s program – Women surfing on Gumbaynggirr Country Northwall learning about culture and marine science, North Coast NSW. Credit: Jay Black

Initiative objective	
To work with Aboriginal communities in the management of Sea Country to reduce threats and risks to Aboriginal cultural heritage	
Initiative long-term outcomes	
Improved Aboriginal satisfaction with Sea Country management	
Reduced threats to Aboriginal cultural heritage and use in the marine estate	
Aboriginal people derive greater economic benefit from the marine estate	
The broader NSW community has a greater appreciation of the significance of Sea Country for Aboriginal people	
Planned budget 2024–25	\$2,144,003

Management challenges and opportunities

Sea Country is central to the overall health and wellbeing of Aboriginal people, their cultural practices and their traditions. Aboriginal people and their cultural values are not yet appropriately represented in the management of the marine estate, and there are still significant knowledge gaps relating to Aboriginal cultural values.

There are also many high-risk threats that cumulatively affect Aboriginal cultural heritage associated with Sea Country. Involving Aboriginal people will help identify cultural values and improve how we manage Sea Country and address threats.



Putting the Strategy into action

Initiative 4 aims to work with Aboriginal communities in the management of Sea Country to increase broader community understanding of Aboriginal Sea Country values, enhance economic opportunities and employment for Aboriginal people, as well as increase active involvement in managing the marine estate. In this reporting period, the focus has been to expand cultural connection and marine skills development across Aboriginal communities within the marine estate.

Cultural fishing workshops remained a cornerstone activity with Strong Spirit services delivering 5 workshops in the Port Macquarie-Hastings area. The workshops provide important cultural understanding and knowledge and link younger generations with local Elders and senior groups to support awareness of responsible fishing alongside cultural connection with local waterways.

Additional cultural fishing workshops were held in Tweed and Ballina with the Office of the Advocate for Children and Young People Recovery Youth Support Service, specifically involving Aboriginal children affected by the Lismore floods who are residing in the Pod Villages.

Cultural immersion and interpretation programs delivered in 2024–25 included a 3-week Saltwater Sisters program in Coffs Harbour region. Ten Aboriginal women aged 10 to 18 years old had the opportunity to learn from Elders, marine scientists and community members while engaging in ocean sports and water activities.

Support was provided to the Yaegl Traditional Owners Aboriginal Corporation for their fourth Yaegl Celebration Day event, which shares the cultural, social, and economic aspirations of the Yaegl people

for Sea and Country and recognises the formal recognition of Native Title established through Consent Determinations made in 2015 and 2017.

Feedback from the Wallaga Boardwalk Construction Sea Country Rangers included:

“This is an important headland to the Wallaga Lake Indigenous Community as back in the day it was a ceremonial area.

There are bunan rings out here as well as burial areas. Also there are women's areas over on the southern side of the headland.”

Dan Morgan, Aboriginal Project Officer

The Gamay Fish Connectivity Sea Country Project continued throughout the year, with Gamay Rangers actively involved alongside DPIRD staff. This project aims to quantify the effects of large-scale foreshore development on fish populations and their connectivity by developing a quantitative understanding of critical ecological processes within Gamay (Botany Bay). As foreshore development has been rated as a high-priority threat for NSW estuaries, this project addresses these effects in areas of Gamay that have been heavily modified while protecting others that remain relatively natural and serve as important nursery habitats.

Marine skills training this year included delivery of:

- an Australian Maritime Safety Authority Coxswain Certificate Grade 3 course with Eden LALC
- General Boat Licence courses in partnership with Eden LALC, Jali LALC and the Tomwabba Aboriginal Medical Service in Forster.

Five Aboriginal community members successfully obtained their maritime coxswain licence, thereby enhancing employment opportunities and improving commercial business viability within maritime, aquaculture and marine industries.

“What we learnt along the way was adapting a different learning style for Indigenous people, we've delivered this training that has an Indigenous cognitive approach combined with practical skills. We have now developed a program that we can roll out right across the state.”

Noel Webster, Aboriginal Community Support Officer

Thirty Aboriginal participants successfully completed the General Boat Licence courses and now have the skills and knowledge to promote responsible boating practices and become involved in waterway and boating initiatives.

Business plans were completed with the support of a consultant for 4 local Aboriginal businesses, including Mudjavy Gammay, Saltwater Sistas, Figtree Descendants, and Thunghutti LALC. These business plans are an important tool that documents a corporation's commercial aspirations within the marine estate. Five additional business plans were coordinated for local Aboriginal businesses on the north and mid-north coast.

More information

Triannual snapshot reports – see actions under Initiative 4

2022–24 Marine Estate Management Strategy Implementation Plan

Initiative 6 – Ensuring sustainable fishing and aquaculture



Photo 8. Stocking dusky flathead fingerlings into Burrill Lake, Conjola and St Georges Basin on South Coast of NSW. NSW DPIRD Fisheries Marine Stocking Program.

Initiative objective	
To ensure fishing and aquaculture is managed in a way that is consistent with ecologically sustainable use while providing for the health, heritage and social benefits of fishing and seafood consumption	
Initiative long-term outcomes	
Improved ecological sustainability, economic viability and community wellbeing of fishing and aquaculture in the marine estate	
Planned budget 2024-25	\$3,068,297

Management challenges and opportunities

Sustainable fishing and aquaculture bring many benefits for the NSW community. It also generates millions of dollars and creates thousands of jobs across NSW.

These activities need to be managed to reduce threats to the environmental assets of the marine estate.

This initiative will support significant social and economic benefits for the people of NSW and cultural benefits to Aboriginal people.

Highlights - Sustainable fishing & aquaculture

3 new harvest strategies being developed for the Mulloway, Snapper and Kingfish fisheries

The **Trawl Whiting** harvest strategy used to increase the **total allowable catch to 1,980 tonnes** (from 1,066 tonnes)



350+ crab traps/nets exchanged for eco-friendly gear at 3 gear swap events in Sydney and Gwandalan

500 blunt tools developed to improve survival of undersized abalone.



An underwater survey and cleanup removed marine debris from **14** recreational fishing 'hotspots' in northern NSW



8 clean-up events found that between 80-90% of the debris collected was recreational fishing marine waste

Construction contract awarded, design completed and permits lodged for new **artificial reefs at Coffs Harbour and Ballina**



Fish for Life/Keep it Clean project held 30 clean-up events, **removing 7,590kg of rubbish** from fishing locations



'Keep it Clean' campaign reached **1.37 million** users with **2.7 million** impressions on social media and thousands of website visits

Study and factsheet published showing that **NSW aquaculture contributed \$224 million** to Gross State Product, up from \$219.7 million in 2021-22

Putting the Strategy into action

Initiative 6 aims to deliver programs supporting the ongoing sustainable management of healthy recreational, Aboriginal and commercial fisheries resources; and a strong aquaculture industry now and into the future.

In 2024-25, we developed 3 new harvest strategies to provide the transparent and evidence-based framework necessary for sustainable management of NSW fisheries. The draft Mulloway Harvest Strategy has been released for consultation. Strategies for the Snapper and Kingfish fisheries are being developed by the Line and Trap Harvest Strategy Working Group. This working group is also considering an overarching strategy structure for these complex fisheries.

Feedback from the Mulloway Harvest Strategy project and associated work included:

"I think the harvest strategy will help recreational fishermen, especially understand why we have limitations on catch."

Mark Corbin, Member of Mulloway Harvest Strategy Working Group

These strategies continue to deliver real benefits to fisheries management. Following consultation on total allowable catch (TAC) determinations for 2025–26, the Trawl Whiting Harvest Strategy informed the Total Allowable Fishing Committee’s decision to increase the TAC from 1,066 tonnes to 1,980 tonnes. To improve community awareness and understanding of harvest strategies, a video animation series has been produced and made available on the NSW Fisheries website.

“I’ve seen some underwater footage of the development of the Forster artificial reef. The complexity of the new designs and their interaction with the current has enabled them to develop quickly and hold heaps of fish including a key target species in Mulloway.

Every time my boat passes over it the sounder shows plenty of fish activity. It’s a great spot to fish, I have heard plenty of people having success with Mulloway and other species.”

Phil Gogerly, Fishing Charter Operator

In 2024–25, the underwater marine debris survey and clean-up pilot project targeted recreational fishing hotspots in coastal areas of northern NSW. Between 80% and 90% of debris collected was identified as recreational fishing waste, most of which was snagged and lost tackle from reef-based areas. This finding highlights the importance of targeted interventions at high-use locations where gear loss is concentrated. There is the potential to expand similar programs across other coastal regions.

Broader marine debris reduction efforts, delivered through the Keep it Clean campaign in collaboration with Fish for Life and OzFish, removed 7,590 kilograms of litter from fishing locations across 30 on-ground clean-up events. The associated engagement campaign, including a micro-influencer component, reached 1.37 million people across Instagram and Facebook, with 2.7 million impressions. These clean-up events remove litter from fishing hotspots while fostering positive behavioural change and maintaining social licence for recreational fishing. This approach strengthens community stewardship of the marine estate while addressing a significant source of pollution.

An environmental assessment cultural report was finalised and presented to the Aboriginal Fishing Advisory Committee. It provided the groundwork for the Recreational Fisheries Management Strategy to develop appropriate management responses that will ensure resource management also supports cultural use of the resource.

Significant progress has been made in improving the recreational fishing environment and fostering positive behavioural change among the fishing community. The Responsible Crab Fishing Program promoted ways to minimise the environmental impact of crab fishing gear. Pop-up exchange events held during peak crabbing season resulted in 350 nets and traps being exchanged for environmentally safer alternatives, providing face-to-face engagement opportunities for fishers to learn and discuss responsible techniques.

New initiatives have also been introduced to reduce marine debris and improve fish survival at key sites. The hook and line bin initiative, developed with councils and community groups, has installed tackle bins and educational stickers in coastal areas to encourage proper disposal of fishing waste. Additionally, a specifically designed blunt tool has been developed and manufactured to improve survival rates for undersized abalone that are returned to the water; 500 units are ready for distribution alongside an educational program. These tools support more sustainable fishing practices across the recreational sector.

Design work for artificial reef projects in Coffs Harbour and Ballina has been finalised. Sea dumping permits have been approved by the Commonwealth Department of Climate Change, Energy, Environment and Water. Construction of the reefs is now underway.

Research into aquaculture's socio-economic contribution to NSW was calculated to be \$224 million in gross state product in 2023–24, highlighting the sector's growing importance.

More information

[Triannual snapshot reports](#) – see actions under Initiative 6

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

[Draft Mulloway harvest strategy options paper, consultation webpage](#)

Initiative 7 – Enabling safe and sustainable boating



Photo 9. Top view photo of boats on ocean, Sydney, NSW. Credit: Mudassir Ali, Pixels.

Initiative objective	
To balance protection of coastal and marine habitat and species with ongoing access and safe and sustainable boating	
Initiative long-term outcomes	
Boating provides increased social and economic benefits for NSW communities while supporting sustainable social, economic, cultural and environmental benefits of the marine estate	
Planned budget 2024–25	Initiative 7 is funded by Transport for NSW

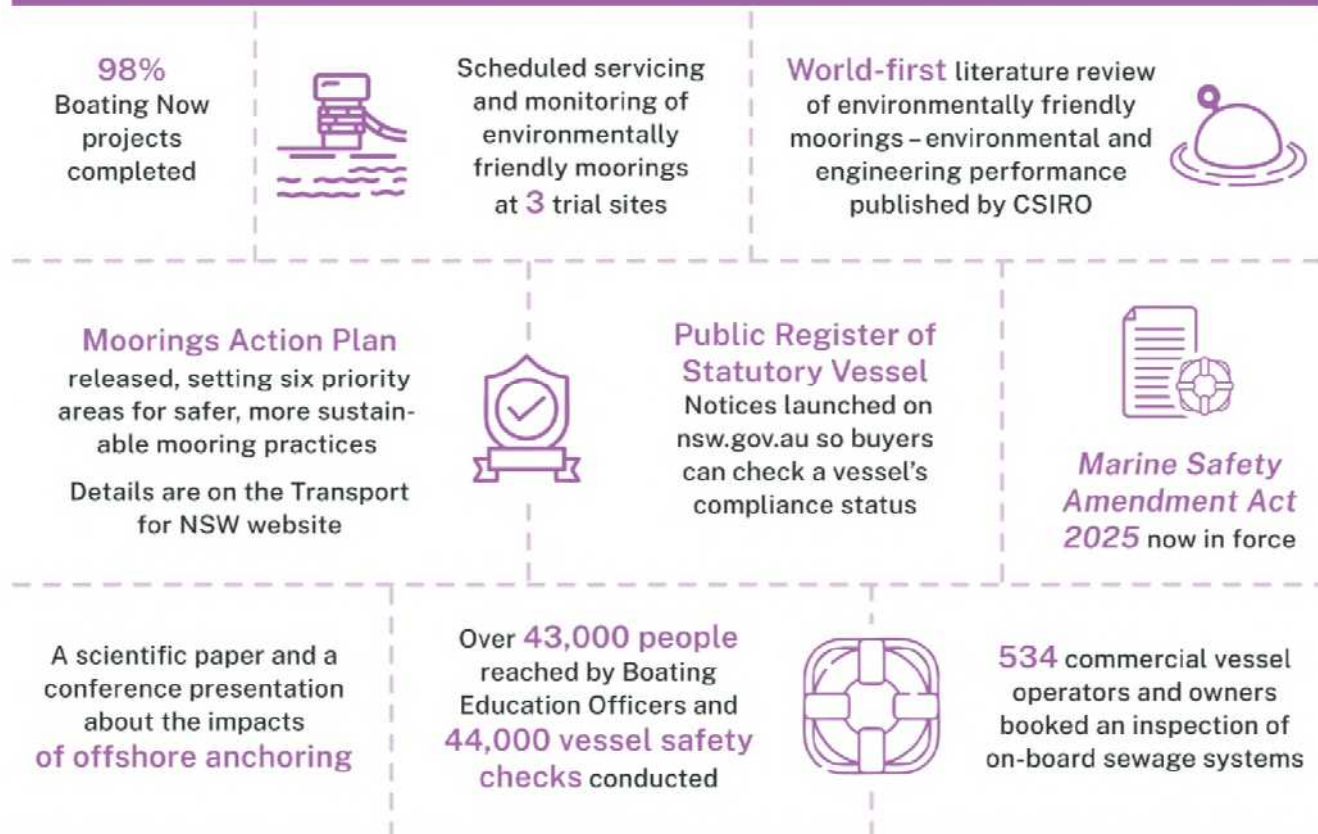
Management challenges and opportunities

Recreational and commercial boating brings significant economic and social benefits to the NSW community, but those benefits rely on adequate infrastructure such as boat launching ramps, moorings and marinas.

Boating activity will increase as vessel ownership continues to grow. We need to accommodate this increase while maintaining the social, economic and environmental benefits of the marine estate.

This initiative is largely funded by Transport for NSW. The Strategy contributes an additional \$15,000 funding allocated to the DPIRD-led Review of Offshore Anchoring project.

Highlights - Enabling safe & sustainable boating



Putting the Strategy into action

Projects delivered as part of Initiative 7 continue to improve the safety and sustainability of boating, improve infrastructure (including boat ramps and navigational aids), and deliver compliance enforcement and education campaigns. Much of the work in this initiative is delivered under the Maritime Infrastructure Plan, which is currently being reviewed to inform a new plan in late 2025.

Out of 67 projects initiated under the Boating Now Round 3 Program, 66 have been successfully completed. These projects aim to improve maritime infrastructure and facilities across NSW so that boaters have improved access to the marine estate. The new \$44 million Boating Infrastructure and Dredging (BID) Scheme was launched with \$28 million funding for 3 grant programs, including support to repair boating infrastructure damaged by natural disasters and severe weather events.

Comment on the new Boating Infrastructure and Dredging (BID) Scheme:

“Transport for NSW Maritime has taken this opportunity to improve our grants programs, with a renewed focus on safety and accessibility for boaters of all ages and abilities.

We’ve listened to the feedback from the boating community, which highlighted the need for continued investment to support maintenance of local boating infrastructure.”

Mark Hutchings, Executive Director, NSW Maritime

Kamay Wharves at La Perouse and Kurnell opened to the public, providing improved facilities for boating, fishing and recreational activities. The project recognised the rich culture and ongoing importance of the area to Aboriginal people, with feedback from the community and stories of

Country helping to guide the design. A 10-year Marine Biodiversity Offset Strategy includes restoration of *Posidonia australis* seagrass, provision of seahorse hotels, and improvements to existing moorings to reduce impacts on *Zostera* and *Halophila* seagrass and macroalgae.

A new dredging and sand transfer infrastructure at Swansea Channel has improved access to Lake Macquarie; this multi-agency initiative was the first in NSW to involve Commonwealth, NSW State and local governments.

The environmentally friendly moorings (EFMs) research program entered its final stage in 2024–25. This stage involves monitoring of EFM performance, biodiversity surveys and carbon sampling at the 3 trial sites: Balmoral, Port Stephens and Jervis Bay. CSIRO researchers are collecting and analysing data. The final report and communication of findings are scheduled for 2026 after all results are collected and analysed.

A comprehensive new approach to mooring management was implemented through the Moorings Action Plan (MAP), which replaced the previous Moorings Reform Program. The MAP addresses strategic and operational priorities across 6 core areas to foster sustainable, safe and environmentally friendly boating and mooring policies. Mooring audits continue to be conducted annually between March and September. Each mooring is audited once every 2 years, supplemented by regular informal and risk-based audits.

Transport for NSW continued to educate recreational boaters to ensure they follow environmental regulations. This education effort includes targeted social media posts highlighting vessel maintenance, fire prevention and whale distance requirements, Maritime's bi-annual newsletter, outreach at boat ramps, and community event attendance.

Key educational initiatives included:

- Operation Get On Board, a 2-day statewide safety and education blitz to help boaters prepare for the months ahead on the water
- Operation Sapphire, focusing on pollution prevention
- campaigns about Little Penguins at Manly
- publication of the *Boating in Cabbage Tree Bay* factsheet to remind boaters of ways to protect the sensitive marine environments in this popular aquatic reserve.

Transport for NSW continued to improve the regulatory framework for managing end-of-life vessels through:

- the *Marine Safety Amendment Act 2025* (commenced on 2 March 2025), which strengthens regulatory powers for effective management of end-of-life vessels, including an amended definition of 'unsafe vessel' to encompass derelict and former vessels, and registration requirements for vessels over a certain size regardless of operational status
- Public Register of Statutory Vessel Notices, which was published on the nsw.gov.au website in April 2025, allowing second-hand vessel buyers to check for statutory notices against vessels.

Transport for NSW continued to work closely with industry and vessel owners to support implementation of the Marine Pollution Regulation 2024 and the Sewage Pollution Prevention Certificate Scheme requirements. To help operators meet the new requirements, NSW Maritime facilitated inspections of on-board sewage systems.

More information

[Triannual snapshot reports](#) – see actions under Initiative 7

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

[Public Register of Statutory Vessel Notices](#)

[Factsheet - Boating in Cabbage Tree Bay](#)

[Kamay wharves – Deep dive: Posidonia and seahorse protection, February 2025](#)

[Moorings Action Plan \(MAP\)](#)

Initiative 8 – Enhancing social, cultural and economic benefits



Photo 10. The community deeply values the NSW marine estate for the significant social, cultural, environmental and economic benefits it provides. ©DPIRD

Initiative objective

To improve the social, cultural and economic benefits that the NSW community derives from the marine estate by responding to priority threats

Initiative long-term outcomes

Improved or maintained social, cultural and economic benefits of the marine estate that contribute to the wellbeing of the NSW community

Increased community adoption of safe and sustainable use of the marine estate

Planned budget 2025–24

\$2,313,679

Management challenges and opportunities

To better inform decision-making, there is a need to continue to build our understanding of the social, cultural and economic use and benefits of the marine estate, including its intrinsic value. There is also a need for greater awareness and understanding among the community of the benefits of the marine estate and how their actions may affect these benefits.

Highlights - Enhancing social, cultural & economic benefits



Economic reporting dashboard shows 5-year data trends

A pilot **natural capital account** built for the blue carbon ecosystems in the Clarence estuary.



2 meetings of the Marine Education & Engagement Community of Practice held, attended by **52 marine practitioners**

Developing an interactive **Community Wellbeing Dashboard** to combine social, cultural and economic data for public use



Blue carbon pilot account for mangroves, saltmarsh and seagrass in the Clarence estuary delivered



10 videos about unique NSW temperate marine life

8 videos on the health and wellbeing benefits of the coast

Available on the Community Education Resource page on the marine estate website

Began Wave 2 **Connections to Sea Country** - Aboriginal People of Coastal NSW survey



Wave 2 community wellbeing survey responses:

2,058 coastal residents

1,001 visitors

574 youth

Finalised technical and summary reports comparing Wave 1 and 2 data to identify trends

Wave 1 findings were included in the NSW State of the Environment 2024 report for the first time.

Released the **Economic Contribution and Market Insights** report and incorporated selected data into the NSW Community Wellbeing Framework

Putting the Strategy into action

Initiative 8 strengthens community awareness and knowledge about the marine estate by working with government agencies, communities and institutions. It delivers education, research, and monitoring programs aiming to reduce priority threats and enhance social, cultural, and economic outcomes. Projects in other initiatives complement these efforts by protecting environmental assets that underpin community benefits and values.

We continued to build our understanding of the community benefits of the NSW marine estate through Wave 2 of the NSW Marine Estate Community Wellbeing surveys. The surveys sought the views of more than 3,600 coastal residents, visitors and youth. The findings from these latest surveys are being compared to the baseline data collected in Wave 1 to identify trends and address critical social knowledge gaps identified in the Statewide TARA. The Wave 1 results were shared with government agencies and coastal councils and are also included in the NSW State of the Environment 2024 report for the first time.

A highlight this year was the integration of the economic data and community wellbeing survey data. The 'economic dimension' of the Community Wellbeing Framework is currently informed by the Economic Contribution and Market Insights report. This dimension is being further developed to capture economic benefits provided by the marine estate across a wide range of attributes and

themes. It will also assist to fill key economic knowledge gaps identified in the statewide Threat and Risk Assessment.

The community wellbeing surveys provided valuable insight into our coastline from coastal residents, youth and visitors:

“I live in a coastal suburb and enjoy the beach, the waterways and our coastal environments and animals who inhabit them on a daily basis. Being near the water improves my mental health significantly.”

NSW coastal resident participant

“NSW coast contributes to my life as I go to relax away from the distractions such as school and work. My friend and I often go to the beach to swim, watch sunrise and look at the marine life. It makes up a part of who I am and I could not live without the beach/coast.”

NSW coastal youth participant

“The NSW coast greatly enhances the quality of the life through its natural beauty, outdoor activities and calming environment”.

NSW coastal visitor participant

A pilot natural capital account for blue carbon ecosystems (mangroves, saltmarsh, and seagrass) in the Clarence River estuary was built using the UN-endorsed System of Environmental Economic Accounting framework. The accounts include ecosystem extent, ecosystem condition (i.e. landscape fragmentation and water quality), and selected ecosystem services measured in biophysical and monetary terms to support effective management, address resource-use conflicts and access to the marine estate.

The year also saw the development of 2 new, interactive dashboards to give the public access to data over time.

- An economic dashboard with 5 years of data was released this year and is available on the marine estate website.
- The NSW marine estate community wellbeing dashboard is under development. It will include data collected in the economic benefits domain, including the NSW marine estate economic contribution and market insights report, as well as survey data from the Wave 1 and 2 of the community wellbeing surveys.

Two new working groups were established in the 2024–25 reporting period: the Blue Economy Working Group and the NSW Marine Estate Education Working Group.

The Blue Economy Working Group, with members across Government agencies, held an initial workshop to draft the core foundations of the Blue Growth Strategy, including the vision, outcomes, sustainability criteria and industry assessment framework. The working group also produced a shortlist of industries to progress to assessment and engagement in Phase 2 of the project.

The NSW Marine Estate Education Working Group (MEEWG) has met 5 times since it was established in July 2024; half of the 16 members are from coastal councils. A presentation from the Environment Protection Authority on the NSW Litter Prevention Strategy was given to group members as it was an identified knowledge gap.

MEEWG also identified the need for better connections among the various marine education and engagement efforts taking place along the NSW coast. In response, a Marine Education and Engagement Community of Practice (COP) was established. The COP is open to all education and engagement practitioners based in NSW and aims to foster collaboration among those participants. The first session attracted 51 practitioners with a presentation on Great Southern Reef Education Programs, and the second on Waterways Education Programs was attended by 39 participants.

The Marine Education and Engagement Community of Practice is a valued forum for education and engagement practitioners. They told us:

“Being part of the Marine Education & Engagement COP has been professionally enriching. It’s a vibrant and supportive space where I’ve built strong connections with other coastal councils, government bodies and organisations working in marine education and engagement.

The shared knowledge, tools and collective passion have directly enhanced our council’s marine education programs and inspired new approaches to community engagement.”

Ashley Kelly, Senior Science Communicator, Central Coast Council

An Initiative 8 webinar for councils attracted 65 participants. It highlighted the NSW Marine Estate Education Strategy, marine estate economic valuation and benefits monitoring and findings from the (Wave 1) community wellbeing survey including coastal residents, visitors, youth and Connections to Sea Country – Aboriginal people of coastal NSW. The session aimed to raise awareness of the social, cultural and economic benefits that the NSW community derives from the marine estate and provide councils with resources and data to support decision-making.

A Community Education Resource page was launched. It features information and resources about safe and sustainable coastal activities that had been developed by marine estate management agencies. The resource also features 10 videos showcasing NSW's unique temperate marine life and 8 videos promoting coastal health and wellbeing benefits. We released a blue health video series, in which NSW community members share how coastal environments enrich their lives.

More information

[Triannual snapshot reports](#) – see actions under Initiative 8

[Initiative 8 – Enhancing social, cultural and economic benefits – webpage](#)

[2022–24 Marine Estate Management Strategy Implementation Plan](#)

[Economic Contribution and Market Insights \(ECMI\) report](#)

Governance and management

Management of the marine estate is shared across all levels of government: local, state and Commonwealth. Government departments and agencies have diverse interests and responsibilities. They also have some overlap in jurisdictional boundaries.

As a result, all levels of government need to work together closely so that legislation, policy and programs are efficient and effective and support management of the marine estate in its entirety. , Improving the governance of marine protected areas is a focus of this initiative as is supporting the delivery, engagement, monitoring and reporting of the Strategy.

Good governance and management are essential for the Strategy to achieve its vision for ‘a healthy coast and sea, managed for the greatest wellbeing of the community, now and into the future’.

The Strategy is working towards achieving the following outcomes in Governance and program management:

- Improved coordination, transparency, inclusiveness and evidence-based decision-making in managing the marine estate
- Improved efficiency and effectiveness in managing the marine estate

The Strategy is designed so that initiatives contribute to multiple program outcomes across the Strategy. The key initiatives contributing to the outcomes above are:

- Initiative 9 – Delivering effective governance
- Program management, monitoring, reporting, evaluation and engagement



Photo 11. Hanging off mooring after hydrophone recovery MPA SIMP, Solitary Island Marine Park. Credit: H Malcolm. Â© State of New South Wales.

Initiative 9 – Delivering effective governance



Photo 12. District Fisheries Officer, operating a fisheries compliance drone for a habitat investigation at Palm Beach, NSW.
Credit: Joel Cox.

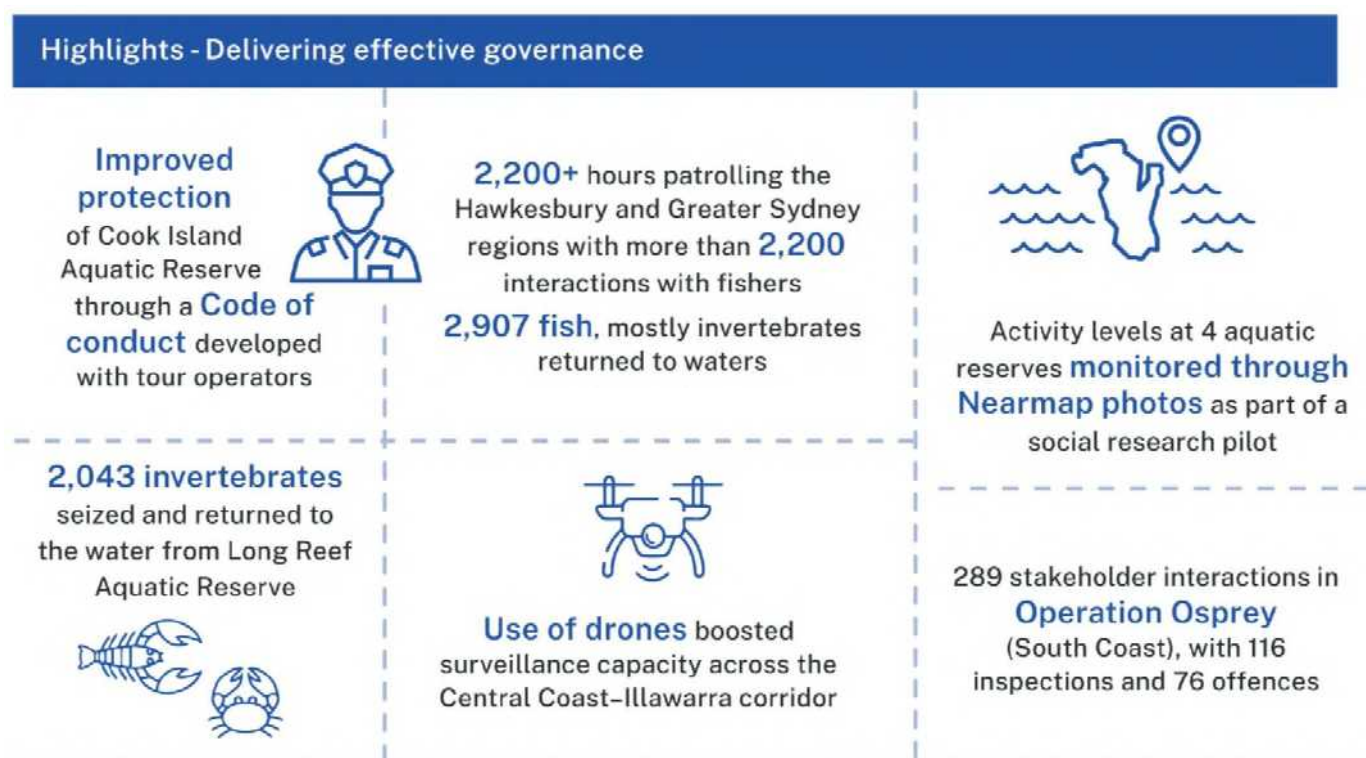
Initiative objective	
To improve governance arrangements across the marine estate to support coordinated, transparent, inclusive and effective decision-making	
Initiative long-term outcomes	
Improved coordination, transparency, consistency and inclusiveness of managing the marine estate	
Improved efficiency and effectiveness in managing the marine estate	
Planned budget 2025–24	\$1,295,863

Management challenges and opportunities

Improved governance will support integrated management of the marine estate over the life of the Strategy.

Complex governance arrangements and overlapping jurisdictions can lead to unclear roles and responsibilities, inconsistencies, duplication and inappropriate regulation. Governance arrangements that are simpler and easier to understand will provide for effective and efficient management of the marine estate and deliver social, cultural, economic and environmental benefits.

The Strategy enhances interagency coordination and streamlining of agency effort, especially at the NSW State Government level. It also tests contemporary approaches to regulation and compliance and seeks to actively involve stakeholders and communities in managing the marine estate.



Putting the Strategy into action

Initiative 9 includes projects that are critical to the delivery of NSW Government commitments and community expectations for the delivery of holistic governance for the NSW marine estate.

This year strengthened governance across the NSW marine estate through enhanced protected area management and expanded fisheries compliance activities. The initiative remains central to delivering NSW Government commitments and community expectations for governance of our marine environment.

The Authority continued to scope the approach and draft terms of reference for a 10-year review of management rules (regulations) required by the *Marine Estate Management Act 2014*.

The foundational actions for the implementation of the Mainland Marine Park Network Management Plan were progressed. Key activities included developing governance arrangements to support implementation, creating an accessible online version of the Plan, preparing climate change risk assessments for each marine park to inform planning and mitigation, and initiating stakeholder mapping to guide communication, education and engagement planning for marine parks and aquatic reserves.

The Cook Island Aquatic Reserve Code of Conduct was signed by all Cook Island tour operators this year. The network of tour operators now supports protection efforts by adhering to the Code. Tour operators report issues and contribute photos and videos to a dedicated website for the reserve. The operators' commitment extended to practical conservation action following a yacht wreck near Cook Island – they provided reports on the wreckage and removed some of the debris found underwater. With support of the operators, a voluntary speed limit of 4 knots is also helping to avoid marine life

strikes and improve the safety of snorkellers and divers. The Code of Conduct for Cook Island Aquatic Reserve has been in effect for a year. Feedback from tour operators taking dive and snorkel tours to the Reserve has been positive and includes:

“As a direct result of being involved in developing the Code of Conduct, tour operators have enhanced the environmental awareness briefings provided to customers. Customer feedback has been extremely positive saying it’s good to learn how they can enjoy the Reserve with the least impact to marine flora and fauna. The next step is to provide information to people who access the reserve by private boats.”

Peter Comerford, Owner Tweed Sea Sports

To understand and manage our aquatic reserves, a social research pilot project using high-resolution Nearmap imagery analysed visitor activities across 4 aquatic reserves. The research revealed the following differences in use patterns:

- Cabbage Tree Bay and Bronte-Coogee were found to be extremely popular, with visitors engaging in various activities across beaches, rocky reefs and deeper waters.
- Towra Point Aquatic Reserve in Botany Bay, dominated by mangroves, attracted fewer visitors but was popular for boat-based activities.
- Boat Harbour Aquatic Reserve is popular with four-wheel-drive users.

This research fills an important gap in available information for aquatic reserves and will inform management needs.

In 2024–25, marine compliance efforts focused on protecting invertebrate biodiversity through targeted enforcement, habitat investigations, education and improved signage. Mobile squads supported operations across districts, identifying threats to sensitive ecosystems and promoting awareness through signage and materials. Drone technology enhanced surveillance in hard-to-reach areas, strengthening biodiversity protection and informing future statewide rollout.

Feedback about using drones includes:

“Drones enhance surveillance for marine protection. They can easily access hard-to-reach locations, capturing important images and data without disturbing marine life. Drones enable us to monitor and take action when needed.”

Kelie Clarke, Fisheries Compliance Program Leader

The Greater Sydney Metropolitan Mobile Fisheries Squad conducted more than 2,200 inspections, which detected 397 offences for an 86% compliance rate. More than 3,900 seized fish (mostly invertebrates) were returned to the water. The squad added 2,200 patrol hours to normal operations. Temporary mobile squads expanded efforts into Batemans and Jervis Bay Marine Parks, where Operation Osprey led to 289 stakeholder interactions, 116 inspections and 76 offences. These initiatives combined enforcement and education to protect marine biodiversity and will be rolled out statewide in 2025–26.

More information

Triannual snapshot reports – see actions under Initiative 9

2022–24 Marine Estate Management Strategy Implementation Plan

Program management, monitoring, reporting, evaluation and engagement



Photo 13. Four teenagers wade in the ocean towards the sun rising. Image © State of New South Wales.

Objective

To improve governance, monitoring, evaluation and reporting across the marine estate to support coordinated, transparent, inclusive and effective decision-making (related to Initiative 9)

Long-term outcomes

Improved coordination, transparency, consistency and inclusiveness of managing the marine estate (contributes to Initiative 9 outcomes)

Improved efficiency and effectiveness in managing the marine estate (contributes to Initiative 9 outcomes)

Improved coordination and implementation of the Marine Integrated Monitoring Program for the marine estate

Planned budget 2025–24

\$2,875,804

Management challenges and opportunities

To ensure coordinated management of the Strategy, a governance structure and program management framework have been implemented to support the Strategy's delivery across agencies in NSW. For more information about the Strategy's governance, please refer to the [Agency's annual report](#).

The framework provides the community and stakeholders assurance that the Strategy is being implemented in a coordinated, integrated and transparent way.

Highlights – Program management, monitoring, reporting, evaluation and engagement



Continued support for the implementation of over **80** projects implemented

6 MOUs between DPIRD and partner agencies

Published **3** public **Snapshot Reports** and an annual report



Published **9** newsletters, more than **70** articles to more than **1,605+** subscribers
An increase of **14%** in subscribers from last year

Updated the Key Fish Habitat layer into the **Fisheries Spatial Data Portal**



Published the **Strategy Implementation Annual Report for 2023-24**

Putting the Strategy into action

This component of the Strategy is related to supporting the Strategy's delivery across agencies and across NSW. At a strategic level, we are delivering:

- continuous improvement of governance structures and the program management framework to ensure collaboration and coordination across all agencies
- monitoring, reporting and evaluation projects to measure success.

3 Public Snapshot Reports and the Annual Implementation report were produced to communicate the achievements and benefits of the program to the NSW community. In addition, information on program performance was provided to MEMA on a Trimester basis, along with targeted training to MEMS staff in key business areas.

Triannual snapshot reports tell a very positive story of hard work and achievement on the Marine Estate Management Strategy.

Chair, Dr Russell Reichelt – Marine Estate Management Authority

A major achievement for the year was the development of the internal Marine Integrated Monitoring Program (MIMP) Data Platform. It provides a centralised repository for monitoring data, across the Strategy. It will enable automated outcome reporting from 2026.

As part of the geographic information systems project, an update to the Key Fish Habitat layer was published to the Fisheries Spatial Data Portal. This dataset informs several Strategy initiatives, particularly Initiative 1 (the coastal floodplain regulatory review) and Initiative 2 (marine vegetation strategies and domestic foreshore structure strategies).

A comprehensive range of activities including website updates, newsletters and webinars has continued our work to build meaningful stakeholder relationships and connect the public to outcomes of the Strategy. Targeted newsletters reached over 1,500 subscribers with 49.5% engagement rates, and a coordinated communications calendar for 2025 was developed to guide strategic engagement across all Strategy channels.

A coordinated social media campaign encouraged staff to share their favourite coastal places and activities in NSW. The campaign aimed to inspire community enjoyment and appreciation of the marine estate while fostering positive community sentiment.

More information

Triannual snapshot reports – see actions under Program Management

Marine Estate Management Strategy Implementation Plans

2023–24 Marine Estate Management Strategy Implementation Annual Report

Environmental Condition Framework report (October 2023) is available on the Marine Integrated Monitoring Program webpage.

- Environmental Condition Framework – Full report (158 pages)
- Environmental Condition Framework – Summary (4 pages)

Abbreviations and acronyms

Abbreviation	Full name
Authority	Marine Estate Management Authority
BID	Boating Infrastructure and Dredging
BRUV	Baited remote underwater video
CMP	Coastal management program
CSIRO	Commonwealth Science and Industrial Research Organisation
DPIRD Fisheries	NSW Department of Primary Industries and Regional Development – Fisheries
COP	Community of Practice
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
DPHI-Planning	NSW Department of Planning, Housing and Infrastructure
DPIRD	Department of Primary Industries and Regional Development
DWSS	Domestic Waterfront Structure Strategies
EBMS	Estuary Bank Management Strategies
EFM	Environmentally friendly moorings
FTE	Full-time equivalent
ICOLL	Intermittently Closed and Open Lakes and Lagoons
LALC	Local Aboriginal Land Councils
MAP	Moorings Action Plan
MEEWG	Marine Estate Education Working Group
Monitoring Program	Marine Integrated Monitoring Program
NPWS	National Parks and Wildlife Service
NSW	New South Wales
Strategy	Marine Estate Management Strategy
TAC	Total allowable catch
TARA	Threat and Risk Assessment
TfNSW	Transport for NSW

Appendix A – Communication and engagement

Marine estate Instagram: #nsw_marineestate

2,668 followers, increased by 18.8% compared to 2023–24

118 Instagram posts

Top posts by engagement (likes): 1 July 2024 to 30 June 2025

Image

Caption and analytics



Peg roots help mangroves breathe at low tide and at high tide provide shelter for fish. Lots of fish. Healthy mangrove systems improve fisheries.

4,359 views

159 interactions

145 likes (boosted post)

[Instagram post](#)

Mangrove reel



There's nothing like being under the water. Being present in the moment. For me personally it takes me out of the everyday.

2,346 views

175 interactions

133 likes

[Instagram post](#)

The snorkeller – part of our Blue Health video series



Every winter, Port Jackson sharks migrate to NSW for their annual breeding season.

They come from southern waters, swimming up to 750 kilometres.

2,396 views

118 interactions

94 likes

[Instagram post](#)

Port Jackson shark – part of our endemic species video series

Marine estate newsletter: ‘Connect with us’ (nsw.gov.au)

Subscribers increased by 14% during the year
from 1,408 subscribers at 1 July 2024
to 1,605 subscribers at 30 June 30, 2025

Top stories: based on how many times readers clicked to the story

Image	Title and opens
	Mapping microplastics in 120 NSW Estuaries 133 opens September newsletter 2024 Visit: Mapping microplastics in 120 NSW Estuaries
	Water sampling at Everlasting Swamp 113 opens January / February newsletter 2025 Visit: Water sampling at Everlasting Swamp
	Protecting NSW’s riverbanks – a high-tech approach 105 opens March / April newsletter 2025 Visit: Protecting NSW’s riverbanks – a high-tech approach

Marine estate website: marine.nsw.gov.au

Visitor traffic to the website is increasing

780,843 page views (11% increase from last year)

22,917 active users (31% increase from last year)

Most viewed pages

1. Marine estate management strategy:
4,350 views were generated by 2,427 active users
4% decrease in engagement
2. Reporting progress:
1,268 views were generated by 418 active users
4% increase in engagement
3. Threat and risk assessment
1,198 views were generated by 620 active users
6% decrease in engagement

Most viewed Project pages

1. Pipi harvest
1,847 views were generated by 1,513 active users
Increase of 193% in engagement
2. Domestic waterfront structure strategies
1,740 views generated by 1,027 active users
Increase of 31% in engagement
3. Oyster reef restoration and research
1,275 views generated by 772 active users
Increase of 198% in engagement

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