

MARINE ESTATE MANAGEMENT AUTHORITY

NSW MARINE ESTATE EDUCATION STRATEGY



WWW.MARINE.NSW.GOV.AU



Photo by Ian Kerr

Published by the NSW Marine Estate Management Authority

Title NSW Marine Estate Education Strategy

First published December 2022

ISBN: 978-1-76058-599-0

Reference number INT21/179677 | DPI JT18111

More information

Marine Estate Management Authority

marine.nsw.gov.au

Acknowledgments

This Strategy is a deliverable under the NSW Marine Estate Management Strategy.

The Authority acknowledges government agencies, organisations and individuals whose support, collaboration and input has made our work possible. Key contributors include:

- Officers from the following agencies in preparing this Education Strategy:
 - NSW Department of Planning and Environment
 - NSW Department of Primary Industries
 - Transport for NSW
- BMT Group
- Deakin University.

Credits

Icons made by Freepik, Smashicons, Eucalyp, Geotatah, Monkik, Phatplus, Good Ware and Surang from flaticon.com

© State of New South Wales through Department of Regional NSW, December 2022. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Marine Estate Management Authority as the owner.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the author or the user's independent adviser.

ABORIGINAL PEOPLE HOLD A SPECIAL CONNECTION TO SEA COUNTRY THAT HAS REMAINED INTACT FOR THOUSANDS OF YEARS.

IT IS ACKNOWLEDGED THAT ABORIGINAL PEOPLE ARE THE TRADITIONAL KNOWLEDGE HOLDERS AND HAVE AN IMPORTANT AND UNIQUE ROLE AS EDUCATORS OF SEA COUNTRY.

CONTENTS

Executive Summary	01
Introduction	02
The Marine Estate Management Strategy	02
Community Values	04
The value of the Educations Strategy	05
Guiding Principles	06
Building Partnerships For Implementation	08
Local government	09
Schools	10
Marine estate agencies	11
Objectives	13
Objective 1 Build awareness, knowledge and tools	13
Objective 2 Promote the wellbeing benefits of connecting with nature to the community	16
Objective 3 Foster informed decisions and responsible behaviour, through respect for the marine estate's natural values and users	17
Objective 4 Facilitate opportunities for greater participation and involvement in marine estate management	20
Next steps and conclusion	23
APPENDIX 1	24
APPENDIX 2	
Summary of education specific feedback from the community	28
Draft Marine Estate Management Strategy (2017)	28
Draft statewide Threat and Risk Assessment (TARA)	31
Statewide Community Survey	32
APPENDIX 3	
Existing agency and non-agency programs	33



EXECUTIVE SUMMARY

The NSW Marine Estate Education Strategy (Education Strategy) aims to coordinate, develop and deliver education programs that promote the values of our marine estate to the NSW community. It was developed as part of the NSW Marine Estate Management Strategy, which implements a key commitment of the NSW government to coordinate the management of the marine estate over the next ten years.

The overarching vision for the Education Strategy is:

ENHANCED KNOWLEDGE, SUSTAINABLE USE OF AND RESPECT FOR THE DIVERSITY OF VALUES DERIVED FROM THE MARINE ESTATE

Four objectives guide the strategic implementation of this vision:

1. Build awareness, knowledge and tools
2. Promote the wellbeing benefits of the marine estate
3. Foster informed decisions and responsible behaviours, through respect for the marine estate's natural values and users
4. Facilitate opportunities for greater participation and involvement in marine estate management

Effective marine estate education requires a coordinated approach. Partnerships among marine estate agencies, communities, schools, Aboriginal people, local government and other stakeholders are critical to implementing this Education Strategy. Together, we will focus on enhancing resourcing and building on successful programs to ensure meaningful interaction, maximise opportunities for implementation, and avoid duplication of effort.

The Education Strategy creates the foundation to coordinate, develop, and deliver education programs that address priority threats to the marine estate, and establishes an understanding of the social, cultural, and economic benefits the marine estate provides to the community. In addition, it aims to build a sense of custodianship and encourages safe and sustainable use of the marine estate.

The Education Strategy recognises that the people of NSW value the marine estate and the social, cultural and economic benefits it provides. It aims to build a sense of custodianship while shifting attitudes away from behaviours that contribute to priority threats, and instead encourage sustainable use of the marine estate via participation.

This Education Strategy recognises the power of education to enhance:

- awareness, knowledge, sensitivity and understanding of the environment and environmental challenges.
- concern for the environment and motivation to improve or maintain environmental quality
- skills to identify and help resolve environmental challenges
- participation in activities that lead to the resolution of environmental challenges.

Through this Education Strategy, we are committing to working together to ensure our marine estate education effort aligns with yours. We pay tribute to the valuable and varied roles that local stakeholders and NSW educational partners play, and the history of educational initiatives around the marine estate. In recognising these foundations, we encourage you and your organisation to think about further opportunities and roles, building on existing partnerships, which could be expanded to create a healthy and productive marine estate through community education and awareness.

Please contact.us@marine.nsw.gov.au for more information.

INTRODUCTION

The NSW marine estate is highly valued by the people of NSW. It is one of the most significant natural assets in NSW and includes almost a million hectares of tidal rivers, coastal lakes and estuaries and their shorelines, submerged lands, offshore islands, as well as ocean along the NSW coast. The marine estate is important for the overall wellbeing of the NSW community, providing a place for recreational, cultural and commercial activities.

A healthy and productive marine estate is critical to the health, wellbeing and prosperity of NSW. The NSW Marine Estate Management Strategy was developed as a key commitment of the NSW government to coordinate the management of the marine estate. The Marine Estate Education Strategy (Education Strategy) is a key output of this Strategy.

The vision of the Education Strategy is:

**ENHANCED KNOWLEDGE, SUSTAINABLE USE
OF AND RESPECT FOR THE DIVERSITY OF VALUES
DERIVED FROM THE MARINE ESTATE**

THE MARINE ESTATE MANAGEMENT STRATEGY

The Marine Estate Management Strategy sets the framework for the NSW government to coordinate management of the marine estate by:

- providing an overarching, strategic approach to the coordination and management of the marine estate
- identifying management initiatives to address the priority threats of the NSW Threat and Risk Assessment (TARA)
- seeking to balance economic growth, use and conservation of the marine estate

The Marine Estate Management Strategy outlines the nine management initiatives and associated management actions to address priority statewide threats to the environmental assets of the marine estate and the community benefits we derive from it. Of the 7.9 million people living in NSW now, 83% live within 50 kilometres of the marine estate. As the population of NSW doubles over the next 50 years, the pressure on the marine estate is set to increase.

We need to understand how the marine estate supports our way of life and how we can maximise the environmental, social, cultural and economic benefits we all derive. This will allow us to work together to become active custodians and ensure the health of the marine estate for future generations.

The Marine Estate Management Authority (the Authority) brings together the heads of four government agencies and an independent Chair to advise the NSW Government about the management of the NSW marine estate. The four agencies are: NSW Department of Primary Industries (DPI), Department of Planning and Environment – Environment and Heritage Group (DPE-EHG), Department of Planning and Environment Planning (DPE-Planning), and Transport for NSW (TfNSW).

Marine Estate Management Strategy initiatives



01
**IMPROVING WATER QUALITY
AND REDUCING LITTER**



02
**DELIVERING HEALTHY COASTAL
HABITATS WITH SUSTAINABLE
USE AND DEVELOPMENT**



03
**PLANNING FOR
CLIMATE CHANGE**



04
**PROTECTING
THE ABORIGINAL
CULTURAL VALUES OF
THE MARINE ESTATE**



05
**REDUCING IMPACTS
ON THREATENED AND
PROTECTED SPECIES**



06
**ENSURING SUSTAINABLE
FISHING AND AQUACULTURE**



07
**ENABLING SAFE AND
SUSTAINABLE BOATING**



08
**ENHANCING SOCIAL, CULTURAL
AND ECONOMIC BENEFITS**



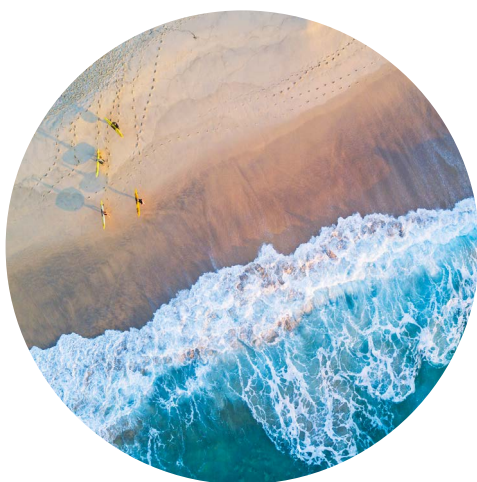
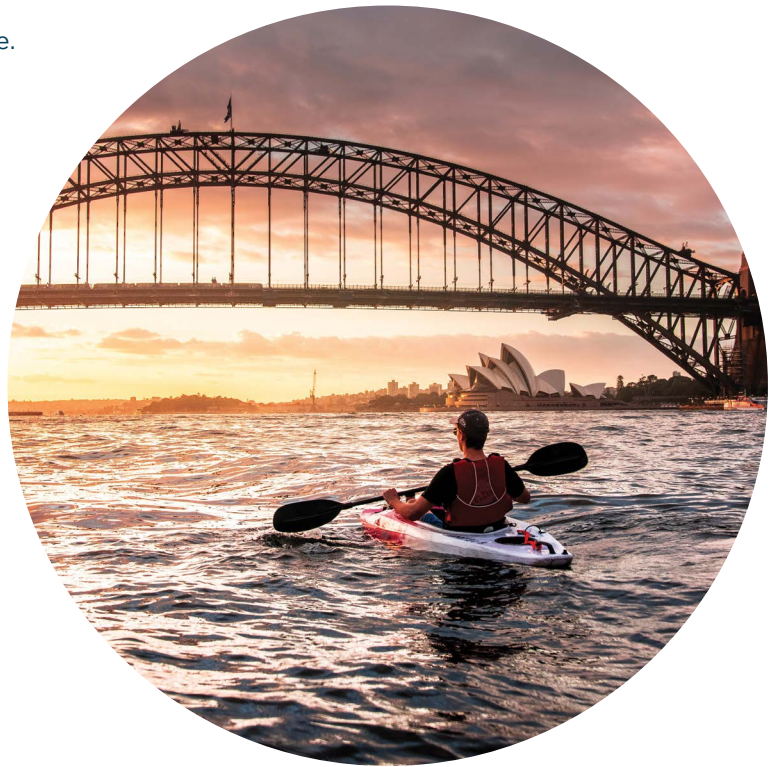
09
**DELIVERING EFFECTIVE
GOVERNANCE**

COMMUNITY VALUES

Three key marine estate reform processes provided community feedback that informed this Education Strategy: a statewide Community Survey, the statewide TARA and broader consultation. More detail and information about these processes are available in Appendix 2.

In summary, the NSW community told us that they wanted:

- improved education about all aspects of marine estate values
- opportunities for education to be linked to priority threats
- enhanced custodianship across the NSW coastline.



THE VALUE OF THE EDUCATION STRATEGY

The Education Strategy recognises the power of education to shape values and beliefs of youth and continue to enhance community knowledge and skills, so they can help reduce priority threats and contribute to custodianship of the marine estate. It provides opportunities and pathways for local government, stakeholders, managers, Aboriginal people, schools, and the community to work together to expand education efforts within existing programs and develop new programs to address knowledge gaps.

The Education Strategy has four objectives:

- Objective 1: Build awareness, knowledge and tools
- Objective 2: Promote the wellbeing benefits of connecting with nature to the community
- Objective 3: Foster informed decisions and responsible behaviour, through respect for the marine estate's natural values and users
- Objective 4: Facilitate opportunities for greater participation and involvement in marine estate management.

Objective 3 lists actions in relation to existing programs under the Marine Estate Management Strategy, which recognise education as a key tool for reducing threats. New actions and proposed programs are threaded throughout all objectives.

The purpose of the Education Strategy is to coordinate, develop and deliver education programs that increase awareness and promote the values of our marine estate to the NSW community and the social, cultural and economic benefits it provides, seek to address attitudes and behaviours that are contributing to priority threats to the values of the marine estate, and encourage a sense of custodianship through enhanced participation and sustainable use.



GUIDING PRINCIPLES

The guiding principles and objectives below show how the vision for the Education Strategy will be achieved by all who have a shared role in marine estate education in NSW.

The six guiding principles of the Education Strategy are:

ALIGNED

- Coordinating with the Marine Estate Management Strategy's initiatives and actions to address the statewide priority threats to the marine estate or community benefits derived from it that can be improved by education (for example, a lack of understanding, awareness or skills)

INTEGRATED

- Creating partnerships and opportunities to collaborate for collective impact and efficiency in delivering education programs
- Strengthening links with internal and external marine education programs

INCLUSIVE

- Enabling transformative action by building knowledge and opportunities for community and stakeholders to contribute to decision-making
- Facilitating stakeholder and community involvement in program scope, design and delivery
- Bringing the community together to meet their needs in the marine estate

COHESIVE

- Enabling opportunities for state-based and locally relevant place-based education for a range of communities

INNOVATIVE

- Identifying marine education gaps and filling them with innovative programs
- Including innovative marine estate education concepts into existing programs where possible

ADAPTABLE

- Adjusting in response to outcomes of the Marine Estate Management Strategy, shifts in environmental issues, or changes to priorities and community needs
 - Changing in response to resourcing to continue quality education throughout the implementation of the Education Strategy
-

CASE STUDY: MARINE LITTER CAMPAIGN

Marine Estate Management Strategy long-term

outcome: Enhanced condition of the marine estate – including its habitats, wildlife and natural beauty – in identified regions and maintained elsewhere

Initiative 1: Improving water quality and reducing litter

Issue

More than 25,000 tonnes of litter is incorrectly disposed of in NSW each year, with much of it ending up in our rivers, creeks and oceans. Litter is a major threat to the health of our waterways and coastal areas. It severely impacts marine wildlife as they can ingest it, become entangled in it, or be smothered by it. It also disrupts functions and processes in marine habitats. Our enjoyment of the marine environment is affected by debris simply when it is visible, or when we see its harm to flora and fauna.

It is estimated that more than 80% of marine litter originates on land, and most of that is sourced from everyday consumable items. In recent years, we've done a great job of reducing litter on land – with a 43% reduction in litter volume. The challenge now is to draw a connection between litter on land and our waterways, and to raise community awareness that the items we drop on land are likely to end up in our waterways.

Marine Estate Management Strategy implementation

As part of the Marine Estate Management Strategy, funding was allocated to the delivery of a new [marine litter campaign](#) to raise community awareness of the source and impact of marine litter.

The campaign was launched in February 2021 in partnership with Nova FM.

The centrepiece of the campaign is the video of Rocky the lobster and his band, Rage against the Polystyrene, performing their song: 'Don't be a Tosser'. The video features marine creatures calling out people who are littering. It shows how litter dropped on land can flow into and impact the marine environment.

The new campaign, which forms part of the broader Don't be a Tosser! Litter prevention campaign, is a great example of using entertaining digital content to generate effective behaviour change.

The campaign was supported by a public relations strategy that generated engaging local content and promoted some of the broader programs being delivered by the [NSW EPA Litter Prevention Program](#)

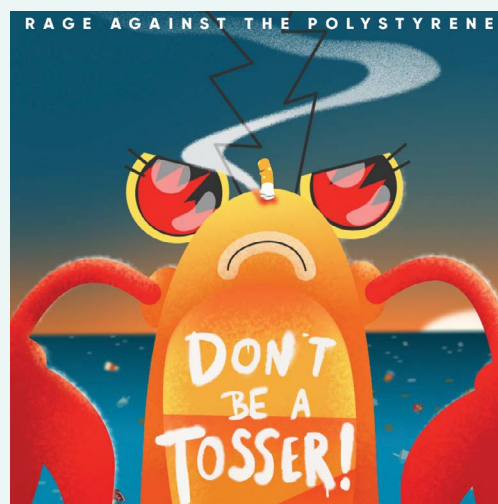
Benefits

While key litter reduction outcomes will take time, the campaign delivered on the targeted short-term outcome: 'greater community awareness of the sources and effects of litter on the marine estate'.

Results included:

- There was a significant increase in community understanding that dropping litter will hurt marine life when littering in residential streets (understanding increased from 53% to 67%), on roads (from 55% to 65%) and at bus stops (from 47% to 57%).
- Campaign recall lifted from 8% to 22% compared to a 2018 pilot marine litter campaign.
- 90% of NSW residents now agree that littering has a negative impact on waterways and beaches.
- The 'Don't be a Tosser' song has had more than 275,000 views, exceeding the target for the campaign by 48%.
- 9 in 10 Nova listeners exposed to the campaign took action after hearing the campaign.
- 69% took online action, such as watching the long form 2.30 minute video or visiting the Don't be a Tosser! Website.
- 48% correctly disposed of rubbish.
- 14% spoke up or reported others for littering.
- 27% minimised wastage or became more mindful of it.

The next phase of the campaign is expected to launch in early 2022 to continue raising awareness and driving behaviour change.



BUILDING PARTNERSHIPS FOR IMPLEMENTATION

NSW local government, Aboriginal people, community, schools and other stakeholders are partners with the marine estate agencies in marine estate education. We are committed to working closely with our partners to ensure that marine estate education is aligned to assist the community, industry, and schools to deliver positive action.

These partnerships are critical for coordinating and delivering programs strategically and effectively. They will fill gaps, avoid duplication of effort, and have the scope to add value to, and build on, existing marine estate programs.

Our commitment to partnerships

TO WORK WITH LOCAL GOVERNMENT, ABORIGINAL PEOPLE, THE COMMUNITY, AND SCHOOLS TO BUILD ON EXISTING PROGRAMS AND DEVELOP NEW PROGRAMS WHERE KNOWLEDGE GAPS EXIST TO TACKLE PRIORITY THREATS TOGETHER.

Education is most effective when combined with other tools, such as research, planning, policy, compliance and on-the-ground actions. Therefore, education is integral to all nine management initiatives of the Marine Estate Management Strategy.

The Education Strategy aims to provide opportunities for marine estate stakeholders, including Aboriginal people and communities, to form partnerships around the specific actions that best suit their own needs, expertise and experience.



LOCAL GOVERNMENT

By developing and enhancing our relationship with local government, we can improve collective education efforts to support effective marine estate management. We will work together to build on existing local government programs so that we expand our reach and avoid duplication of effort.

The benefits of partnerships include the following:

- Council Coastal Management Programs (CMPs) are strongly aligned with improving outcomes for the marine estate. CMPs are required to support the objectives of the [Marine Estate Management Act 2014](#).
- Meaningful integration maximises opportunities for implementation of the Education Strategy and CMPs and avoids duplication of effort.
- In-kind contributions to the education components of CMP brings broader marine estate knowledge together with localised knowledge to provide holistic marine estate education in local government areas (e.g. supply of education materials, identifying priorities for actions, in-kind support, review of key messages).
- Contribute to CMPs by providing marine estate key messaging and identifying scope for alignment of CMP's to actions in the Education Strategy.
- Local government have existing programs that are fit for purpose to address localised priority threats. Program reach can be extended using marine estate communication platforms.
- Local government is invited to contribute to the Marine Estate Education Working Group (MEEWG), ensuring consideration of local government marine education programs in future planning.
- Aligning CMP actions and Education Strategy actions.

Related actions in the Education Strategy

1.1, 1.2, 1.5, 1.6, 1.11, 1.12, 2.1, 2.2, 3.1, 3.2, 3.3, 3.5, 3.7, 3.11, 3.15, 4.1, 4.2, 4.14

Practical steps for local government in establishing partnerships with the MEEWG as part of the implementation of the Education Strategy

- Enable coast-wide engagement of membership, so that different coastal regions of the state are represented as far as practicable (e.g. One Joint Organisation of Council nominee from each of the three regions—northern, central and southern).
- Use the Education Strategy to identify where there is strategic alignment with CMPs or with other existing local government programs. The synergies or gaps that are identified can be raised with the MEEWG as opportunities for existing program support or new program development.
- Policies that affect local and state government partnerships may be reviewed in light of the Education Strategy including Priority 3 in the [Future Directions Statement for the NSW Coastal and Estuary Management Program](#).
- Local governments can initiate discussions to canvass partnership opportunities with others, such as community groups, not for profits, schools and existing local networks who have an interest in the marine estate. This will provide opportunities to investigate other initiatives in your region: is the issue localised or does it have a statewide context?
- Following initial conversations, develop a project plan together:
 - On acceptance of the plan, the programs may be grown in partnership using expertise, networks, tools and pathways available.
 - Evaluate the program and provide lessons learned for further partnership opportunities.

SCHOOLS

Partnerships between schools and marine estate agencies, facilitated by the implementation of this Education Strategy, have the opportunity to bring marine education into more NSW primary and high school classrooms, while supporting schools with resources and access to funded programs.

Using marine estate resources in the school environment can help teachers deliver a highly informed and engaging curriculum to young people. Funded programs include curriculum linkages, activities, associated resources and teachers guides. For a list of available programs, please contact.us@marine.nsw.gov.au

The benefits of partnerships include the following:

- There will be a reduction in teachers' workloads and preparation time to develop and deliver marine estate education with curriculum-based resources that have been developed for their use.
- Teachers can obtain access to expertise and diverse information to deliver a more engaging curriculum.
- Marine estate curriculum-based education programs are evaluated and improved by teachers and students using the resources.
- Students gain an understanding of marine estate values, threats and knowledge on ways to become effective custodians of the marine estate.

Related actions in the Education Strategy

1.2, 1.12, 3.3, 4.10, 4.9, 4.11, 4.12

Practical steps for schools in establishing partnerships as part of the implementation of the Education Strategy

- Identify the marine estate curriculum-based program you would like your school to participate in.
- Approach the principal to promote participation in the program.
- Contact marine estate staff to register your interest and discuss what support that you might need with one of our education managers.
- Implement the program in your school.
- Fill in the evaluation of the program online to assist with ongoing improvements. Programs are intended to run yearly for six years, and beyond. Your input into improvement is highly valued.
- Promote your school's involvement using #nsw_marineestate, ensuring that you have required photographic permission before posting.



MARINE ESTATE AGENCIES

The success of this Education Strategy depends on the four marine estate agencies (DPI, EHG, DPE-Planning and TfNSW) working together to implement the Marine Estate Management Strategy. This Education Strategy outlines programs that these four agencies will lead to address priority threats where education has been identified as the most appropriate tool.

There are already partnerships between agencies, but all marine estate education programs need to be incorporated into this Education Strategy to adequately evaluate education efforts. Marine estate agencies will form the governance structure for the Education Strategy as part of the MEEWG. This forum is the place to raise knowledge gaps and identify existing programs that can be incorporated into subsequent revisions of the Education Strategy so that it remains current.

Related actions in the Education Strategy

- All - the four marine estate agencies contribute to all actions in the Education Strategy

Practical steps in establishing MIMP outcomes into marine estate program planning

- Review Marine Estate Management Strategy outcomes to identify how they relate to the proposed education program and how it will be evaluated as a result. The case studies included in this Education Strategy show how this could be done.



CASE STUDY: SEA COUNTRY PRIMARY SCHOOL EDUCATION PROGRAM

Marine Estate Management Strategy long-term

outcome: Enhanced condition of the marine estate, including its habitats, wildlife and natural beauty, in identified regions and maintained elsewhere.

Initiative 4: Protecting the Aboriginal Cultural Values of the Marine Estate

Issue

Learning about Sea Country helps school students discover Australia’s Aboriginal heritage and cultures. It also teaches students to respect the environment and each other by giving them a better understanding of the strong connection between people and the world in which they live. The program resources are designed for both Aboriginal and non-Aboriginal students in upper primary school. The content can be used either to improve learning through a school excursion or as a replacement for a field trip. These materials are made freely available to schools across NSW.

Marine Estate Management Strategy implementation

As part of the Marine Estate Management Strategy, funding was allocated to the delivery of a new primary school cultural program – the Sea Country School Education Program – to raise community awareness of the cultural values of the marine estate.

While the initial program was targeted to On Country activities that primary schools could do with local Aboriginal groups in person, the Covid-19 pandemic saw the program shift to online delivery.

The success of this activity was based around curriculum mapping and providing teachers with lesson plans as well as a series of seven short videos of cultural stories that are relevant to their locality.

Benefits

The Sea Country School Education Program will continue to be a key learning aid for primary school children to increase their understanding and appreciation of Aboriginal cultural values. The program first commenced in 2019 with approximately 200 students in the South Coast region who have participated in the program.

Funding has been sourced to expand the program to the North and Central Regions.

The online Sea Country resource has been very popular with the schools. There were 2,145 views of the resource during NAIDOC week in 2021.



OBJECTIVES

The Education Strategy has four objectives. These objectives are the basis for the high-level actions in the following pages. Actions can relate to more than one objective; however, each has been placed under the most suitable objective. The relevant outcomes of the Marine Estate Management Strategy are also listed under each objective. For more information, see the [Marine Integrated Monitoring Program \(MIMP\)](#).



OBJECTIVE 1 BUILD AWARENESS, KNOWLEDGE AND TOOLS

Purpose: The actions in this objective will highlight the values of the marine estate and the associated threats and risks. They will build the knowledge, understanding and skills that are related to the values of the marine estate and threats. This includes tools to identify and help resolve conflict and engender custodianship and management.

Outcomes from the MIMP

- Enhanced condition of the marine estate, including its habitats, wildlife and natural beauty, in identified regions and maintained elsewhere (long-term, 5-10 years)
- Greater community appreciation and enhanced sustainable experiences of the marine estate in identified regions, and maintained elsewhere (long-term, 5-10 years)
- A healthy and thriving Sea Country supports improved wellbeing for Aboriginal communities (long-term, 5-10 years)

Action plan for Objective 1

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
1.1	Work with marine estate staff to ensure consistency in implementing existing Marine Estate Management Strategy education programs, with key messaging around raising awareness of values and threats. (e.g. Initiative 5, action 5.3, includes an education component to 'Develop and deliver education campaigns to increase community awareness of marine wildlife issues').	DPI	Local Government Community groups	5-10 years
1.2	Use digital technologies such as apps and webinars to increase the reach of statewide education initiatives to showcase marine estate values and build community knowledge and appreciation.	DPI	Schools Community	5-10 years
1.3	Add new components to existing programs to enhance understanding of natural values of the marine estate and the benefits they provide (Appendix 3 lists possible programs).	DPI	Community Local Government	5-10 years
1.4	Ensure education strategies for Marine Protected Areas are consistent with this Education Strategy.	DPI EHG	Community Stakeholders	5-10 years
1.5	Provide opportunities for community input into the design and development of programs to foster custodianship. Ensure program development targets local as well as statewide marine estate threats.	DPI	EHG Local Government	2-5 years 5-10 years
1.6	Educate the community about their decision-making and management role to encourage responsibility and ownership of the marine estate. Use digital technology to expand the reach (e.g. EHG delivery of digital portal and water quality report cards).	DPI EHG	Local government DPE-Planning	2-5 years
1.7	Promote Aboriginal custodianship of Sea Country, utilising education networks to expand the reach of Sea Country education within the community as well as building further awareness of Aboriginal values and key threats to those values.	DPI	Aboriginal communities and organisations	5-10 years

Action plan for Objective 1

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
1.8	Integrate the opportunity for culturally and linguistically diverse (CALD) communities to participate using appropriate resources (e.g. investigate partnerships for the marine litter campaign to translate materials or develop culturally relevant materials for different groups).	DPI	EHG CALD community leaders	5-10 years
1.9	Investigate incentives (e.g. awards or certificates) to be used to celebrate marine estate education achievements within the community.	DPI	Community leaders	5-10 years
1.10	Continue to participate in community events and conferences to increase awareness of marine estate management, ensuring information communication that fosters custodianship of the marine estate and sustainable behaviour.	DPI EHG	Community	2-5 years 5-10 years
1.11	Investigate the use of suitable technologies to enhance knowledge of values and threats, and ways the community can actively reduce their impacts on the marine estate (e.g. a marine estate app that highlights a value and a threat, and shows what activities could lessen that specific threat).	DPI	EHG Local government	2-5 years 5-10 years
1.12	Provide opportunities for those involved in research and management of the marine estate to share their knowledge via digital technologies (e.g. meet the scientist online workshops and videos).	DPI EHG	Industry Local Government Schools	5-10 years
1.13	Conduct a needs analysis and identify suitable channels for a targeted education campaign that builds awareness of maritime heritage values and key threats to those values in the marine estate.	DPI	Heritage NSW	2-5 years 5-10 years
1.14	Deliver presentations and webinars (on request) about marine estate management to enhance students' understanding.	DPI	Various	2-5 years 5-10 years
1.15	Provide local and regional training to increase the number of Aboriginal people that have the skills to gain employment in the marine estate.	DPI	TfNSW Aboriginal communities and organisations	2-5 years 5-10 years
1.16	Provide vocational training to increase participation, access, and management of the marine estate by Aboriginal communities.	DPI	TfNSW Aboriginal communities and organisations	2-5 years 5-10 years

OBJECTIVE 2

PROMOTE THE WELLBEING BENEFITS OF CONNECTING WITH NATURE TO THE COMMUNITY

Purpose: Promote the wellbeing benefits of connecting with nature to the community

Outcomes from the MIMP

- A healthy and thriving Sea Country supports improved wellbeing for Aboriginal communities (long-term 5–10 years)
- Improved social, cultural and economic benefits of the marine estate that contribute to the wellbeing of the NSW stakeholders and the community (long-term 5–10 years)
- Greater community appreciation and enhanced sustainable experiences of the marine estate in identified regions, and maintained elsewhere (long-term 5–10 years)

Action plan for Objective 2

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
2.1	Conduct a gap analysis to inform the development of new programs. Where relevant, form partnerships to build on existing programs.	DPI	Local government	2-5 years
		MEEWG	EHG TfNSW	5-10 years
2.2	Develop increasing and ongoing awareness of health and wellbeing benefits in programs through partnerships with organisations to offer focused programs.	DPI	EHG	2-5 years
			Local Government Community Groups	5-10 years
2.3	Develop a Healthy Marine Estate, Healthy You program, utilising the expertise of organisations involved in similar program development.	DPI	EHG	2-5 years
			Department of Health	5-10 years
2.4	Conduct a needs analysis and identify suitable channels for a targeted education campaign for the Healthy Marine Estate, Health You program.	DPI	EHG	2-5 years
			Department of Health	5-10 years

OBJECTIVE 3

FOSTER INFORMED DECISIONS AND RESPONSIBLE BEHAVIOUR, THROUGH RESPECT FOR THE MARINE ESTATE'S NATURAL VALUES AND USERS

Purpose: Shape attitudes of concern for the marine estate – including the motivation to address behaviours that lead to threats to the values of the marine estate or otherwise – that do not result in behaviours that maximise the flow of benefits from the marine estate to the community.

Outcomes from the MIMP

- Improved incorporation of the likely impacts of climate change in planning for and managing the marine estate (long-term 5-10 years)
- Increased appropriateness of the built environment with reduced risk to the marine estate (long-term 5-10 years)
- Increased stakeholder and community awareness of safe and sustainable use of the marine estate (Intermediate 2-5 years)
- Increased stakeholder and community adoption of safe and sustainable use of the marine estate (long-term 5-10 years)



Photo by Chris Sheedy, Reflex Photography

Action plan for Objective 3

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
3.1	Identify specific behaviours and attitudes that are leading to, or exacerbating, priority threats identified in the TARA. Identify root causes and barriers to improved outcomes.	DPI	EHG DPE-Planning Local Government	2-5 years
3.2	Identify existing and new education programs that could be implemented to address these behaviours and attitudes.	DPI	EHG DPE-Planning Local Government	2-5 years
3.3	Monitor and evaluate whether existing programs are effective in addressing behaviours.	DPI	EHG DPE-Planning Local Government Community Schools	2-5 years 5-10 years
3.4	Promote self-compliance in the community, industry and stakeholders by cross-linking with existing agency best practice guides. Refer to the guides in a targeted education campaign centred around safe and sustainable use of the marine estate.	DPI	DPE-Planning TfNSW Various stakeholder groups	5-10 years
3.5	Work with existing environmental educators, campaigns and programs to improve awareness and enhance voluntary sustainable practices and self-compliance.	DPI	EHG TfNSW Local Government	2-5 years 5-10 years
3.6	Continue the NSW Marine Litter Prevention, Marine Litter campaign and pilot Stormwater litter prevention program to address water pollution, litter, solid waste, marine debris and microplastics on environmental values.	EPA	NOVA FM	2-5 years 5-10 years
3.7	Deliver a targeted education program, Fish Friendly workshops, for local council staff and their contractors regarding: best practices for in stream works, fisheries permit requirements, and aquatic habitat information to improve water quality outcomes.	DPI	Local Government	2-5 years

Action plan for Objective 3

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
3.8	Develop and implement education and compliance programs to protect and conserve marine wildlife by increasing the community's understanding and awareness of threats.	EHG	Conservation groups Wildlife rescue and rehabilitation groups National Parks and Wildlife Service (NPWS) Citizen scientists Local government Aboriginal custodians DPI Industry	5-10 years
3.9	Improve awareness of threats to threatened and protected species and compliance with regulations to reduce impacts through education campaigns, social research and increased compliance.	DPI	TfNSW EHG	5-10 years
3.10	Educate consumers and the community via the Eat More NSW Seafood Program to understand the importance of sustainable fishing and aquaculture and the role that seafood purchasing choices play.	DPI	Seafood businesses	2-5 years 5-10 years
3.11	Conduct stakeholder mapping to understand government and non-government stakeholders in order to target education, communication, and engagement activities effectively.	DPI	EHG	5-10 years
3.12	Build capacity in the community for shellfish reef restoration and conservation, fill knowledge gaps of shellfish reefs, and deliver shellfish reef restoration in priority estuaries of the marine estate.	DPI	Research institutions (various) NGOs (various) Aboriginal communities Industry Local government Other state government agencies (various)	5-10 years
3.13	Deliver advisory programs to the community to reduce the risk of spread of marine pests and diseases and enhance the understanding of everyone's general biosecurity duty so they act to minimise aquatic pest and disease risk.	DPI	TfNSW Various Stakeholders	5-10 years

OBJECTIVE 4

FACILITATE OPPORTUNITIES FOR GREATER PARTICIPATION AND INVOLVEMENT IN MARINE ESTATE MANAGEMENT

Purpose: Increase participation by facilitating the involvement of managers, stakeholders and the community in activities that contribute to the overarching goals and purpose of the Marine Estate Management Strategy and encourage a sense of custodianship through enhanced sustainable use of the marine estate.

Outcomes from the MIMP

- Improved coordination, transparency, inclusiveness, and evidence-based decision-making managing the marine estate (long-term, 5–10 years)
- Improving efficiency and effectiveness in managing the marine estate (long-term, 5–10 years)
- Increased stakeholder and community participation in informed decision-making and management of the marine estate (long-term, 5–10 years)



Action plan for Objective 4

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
4.1	Establish the MEEWG with representatives from all agencies and key stakeholder groups.	DPI	EHG DPE-Planning TfNSW Aboriginal community Local government	2-5 years 5-10 years
4.2	Identify and maintain a list of key marine education programs (Appendix 3). Use MEEWG and its function to identify gaps and opportunities in existing education programs and maintain an up to date register of these programs.	DPI	EHG DPE-Planning Aboriginal community Local government	2-5 years 5-10 years
4.3	Expand Initiative 4 education working groups to include issues and matters related to marine estate education.	DPI	TfNSW Aboriginal community and organisations	5-10 years
4.4	Build marine estate support agency staff and the capacity of key stakeholder groups to deliver quality education engagement across all Marine Estate Management Strategy initiatives.	DPI	EHG	5-10 years
4.5	Form active partnerships with education networks and institutions to promote marine estate education programs and resources.	DPI	EHG	2-5 years 5-10 years
4.6	Develop processes and provide advice to partners on how to align existing programs with Marine Estate Management Strategy requirements.	DPI	EHG DPE-Planning TfNSW	5-10 years
4.7	Develop internal processes for evaluating and monitoring the success of marine estate education programs, including lessons learned. Create a Strategy implementation education snapshot to document collective success with our partners, stakeholders and the community.	DPI	EHG DPE-Planning TfNSW	2-5 years 5-10 years
4.8	Use networks to recognise work and enhance the work that is already occurring through CALD activities and initiatives.	DPI EHG	Various community leaders	5-10 years

Action plan for Objective 4

Action number	Action	Delivery lead	Prospective delivery partners	Timeframe
4.9	Build on the existing primary school curriculum-based Marine Estate Agents Program. Include a focus on natural values and threats. Pilot the program in schools, integrating Department of Education teachers to provide feedback into the proposed statewide program.	DPI EHG	Schools Department of Education	2-5 years 5-10 years
4.10	Support Marine Estate Champions to help promote Marine Estate Management Strategy work and the importance of the role of education to enhance marine estate values via social media.	DPI EHG	Community Stakeholders Schools	2-5 years 5-10 years
4.11	Develop a high school marine estate education program where an education gap is identified. Use online digital technologies to expand the reach, include messaging about natural values, and communicate scientific discoveries.	DPI EHG	Schools Department of Education	5-10 years
4.12	Investigate opportunities to expand marine estate education into the early childhood curriculum.	DPI EHG	Early childhood centres Department of Education	5-10 years
4.13	Provide opportunities for industry inclusion into marine estate education programs, and work with industry to promote industry-led education programs, reducing user conflict where possible through adoption and promotion of best practices.	DPI EHGI	Industry DPE-Planning	5-10 years
4.14	Provide opportunities for local government inclusion into marine estate education programs. Work with local government to promote local government-led education programs. Provide pathways to link to Coastal Management Programs, including resources and information to support CMPs.	DPI EHG	Local Government DPE-Planning	2-5 years 5-10 years
4.15	Align education activities with monitoring and evaluation of the Marine Estate Management Strategy, including timeframes and outcomes as identified in the MIMP.	DPI EHG	TfNSW DPE-Planning	2-5 years 5-10 years
4.16	Consider additional funding bids to address any gaps in future years of implementation of the Education Strategy.	DPI EHG TfNSW	DPE-Planning Various	2-5 years 5-10 years

NEXT STEPS AND CONCLUSION

We have already started work with a suite of successful programs in this Education Strategy [see case studies]. Other programs are planned over the next six years of the Marine Estate Management Strategy's implementation.

Programs are designed to meet the outcomes of the Marine Estate Management Strategy as outlined in the MIMP.

We will know that we are meeting these outcomes through the periodic evaluation of the Marine Estate Management Strategy via the MIMP and thorough evaluation of programs at the program level. Each program will, where possible, address priority threats to the marine estate and will support the Marine Estate Management Strategy delivery.

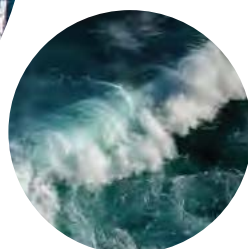
Collaboration through marine estate agencies, local government and partnerships are the key to the successful implementation of this Education Strategy. We value your contribution to marine estate education and look forward to working with you now and into the future. If you have any questions about this Education Strategy or wish to explore opportunities to partner with us, please contact.us@marine.nsw.gov.au



APPENDIX 1

ACRONYMS AND TERMS

Acronym	Details
Authority	Marine Estate Management Authority
CALD	Culturally and linguistically diverse
DPI	Department of Primary Industries
DPE	NSW Department of Planning and Environment
EHG	Environment and Heritage Group
EPA	NSW Environmental Protection Authority
Education Strategy	Marine Estate Education Strategy
DPE-Planning	Planning (part of DPE)
Strategy	Marine Estate Management Strategy
TARA	NSW Threat and Risk Assessment
TfNSW	Transport for NSW



Terminology	Details
action	the process of doing something to achieve an aim or objective
benefit	see 'community benefit'
community benefit	<p>anything that contributes positively to the wellbeing of the community. There are three separate categories of community benefits: economic, social and environmental benefits. Many community benefits are based on what people think is important (what they value). A community benefit of the marine estate could be:</p> <ul style="list-style-type: none"> – swimming at the beach – boating in an estuary – doing something as a hobby (e.g. fishing, kayaking, surfing, bird watching) – running a business (e.g. whale watching business, charter fishing, commercial fishing) – clean waters and marine biodiversity – intrinsic values—valuing the environment regardless of direct benefits. The Marine Estate Management Act 2014 uses the term 'community value' for this
community wellbeing	the overall aggregate of economic, social and environmental benefits
cultural use	the use of the marine estate to demonstrate or perform skills, arts, beliefs and customs and to pass these from one generation to the next
economic	the production, distribution, and use of income, wealth and commodities
economic benefits	benefits derived by the community from the marine estate that are of economic or financial nature
education	the process of teaching, training and learning, especially in schools or colleges to improve knowledge and develop skills
environmental benefit	benefits derived by the community from an environmental asset
evaluation	the process of determining the worth or significance of the management activity, policy or program. It will report on the relevance of objectives, the efficacy of design and implementation, the efficiency of resource use, and the sustainability of outcomes. An evaluation should enable the incorporation of lessons learned into the decision-making process of all stakeholders

Terminology	Details
guiding principles	guiding principles encompass the beliefs and values about what is important throughout the life of the Education Strategy, irrespective to changes to program delivery
marine estate	as defined in the Marine Estate Management Act 2014 means: <ul style="list-style-type: none"> – the coastal waters of NSW within the meaning of Part 10 of the Interpretation Act 1987 – estuaries (being the part of the river whose level is periodically or intermittently affected by coastal tides) up to the astronomical high tide – lakes, lagoons and other partially enclosed bodies of water that are permanently, periodically or intermittently open to the sea – coastal wetlands (including saltmarsh, mangroves and seagrass), lands immediately adjacent to, or in the immediate proximity of, the coastal waters of NSW that are subject to oceanic processes (including beaches, dunes, headlands and rock platforms) – any other place or thing declared by the regulations to be the marine estate – but does not include any place of thing declared by the regulations not to be the marine estate
objective	aimed at or sort for, a goal
priority threat	those threats that have the greatest risk of producing adverse effects on the flow of benefits from the marine estate. A threat is considered to be a statewide priority if it had a high or moderate risk level for each of the three regions (north, central and south). Risk levels that are high or moderate in only two or three regions lead to those threats being identified as regional priorities
program	determines the learning process of each subject in all stages of education
region	the area of NSW that the TARA has been applied to. North region is from Tweed Heads to Stockton, Central region from Stockton to Shellharbour, and South region from Shellharbour to the NSW-Victorian border
resource use	resource uses and activities resulting in stressors to environmental assets arising from these activities (e.g. recreational fishing)
resource use conflict	disagreement and disputes over access to and control of natural resources

Terminology	Details
risk	the chance of something happening that will have an impact on achieving environmental, social or economic objectives
social	of or relating to the life and relations of people in the community
social and economic benefits	also called community benefit, this is anything that contributes to the wellbeing of the community
social benefits	the social and relational benefits the community derives from the marine estate
stakeholder	a person, organisation (including agencies) that can affect, be affected by, or perceive themselves to be affected by a decision or activity
threat	a broad activity, event or process that poses a potential level of risk to an environmental asset or social or economic benefit. Threats often affect multiple assets and benefits, and similarly, an asset or benefit may be affected by multiple threats
threat and risk assessment	a process that identifies, assesses and prioritises threats and their associated risks to the marine estate. It also highlights areas where information is lacking, and where research is needed
value	The term used by the <i>Marine Estate Management Act 2014</i> for 'community benefit'



APPENDIX 2

SUMMARY OF EDUCATION SPECIFIC FEEDBACK FROM THE COMMUNITY



DRAFT MARINE ESTATE MANAGEMENT STRATEGY (2017)

The NSW community provided feedback during consultation for the Strategy and the TARA as they were being developed. The responses showed that the community wanted:

- improved education about all aspects of marine estate values
- opportunities that linked to the priority threats
- enhanced environmental stewardship across the NSW coastline.

Tables 9 and 10 summarise the key points that were relevant to education.

The full report is at:

[Draft Marine Estate Management Strategy Overview of Feedback \(PDF\)](#)

Community comments and the Authority’s responses — education specific feedback

What the community has told us	Our response
<p>We need a genuine Education Strategy that reinforces the values to the whole community by having the world’s best managed marine environment.</p>	<p>This Education Strategy is the response to community feedback. It is a priority under Initiative 8, action 8.1 of the Strategy, which is to enhance environmental stewardship of the marine estate.</p>
<p>The Strategy needs to be underpinned by a comprehensive education and communication strategy, including for schools. Consider the ‘Our Valuable Estuaries’ educational resources developed by OceanWatch for NSW schools, and the Seafood Industry Partnerships in Schools (SIPS).</p>	<p>The Education Strategy will include new programs and provide information about existing programs that schools and clubs (as well as other stakeholders and community) can access.</p>
<p>Improve and develop innovative education programs that can be delivered at schools and clubs.</p>	
<p>Enhancing volunteer efforts with strategic resourcing to increase community engagement, education and on-ground action (e.g. Local Land Services works with Landcare groups)</p>	<p>The Education Strategy builds on actions in the Strategy. It includes actions to enhance volunteer efforts and coordination across many initiatives in the Strategy. It also builds upon specific actions, such as citizen science projects.</p>

Community comments and the Authority's responses — education-specific feedback cont.

What the community has told us	Our response
Additional funding for community education and engagement, and landholder incentive programs (working with Local Land Services), to allow ecological health programs to be increased and additional outcomes achieved.	Funding and resourcing are provided to ecological health programs in Initiative 1 of the Strategy, which links Local Land Services and landholders and enables a partnership approach to improved land practices. Education is a key component built into this work.
Outcomes can be achieved through educational campaigns and by voluntary practice change (e.g. the Landcare movement or the OceanWatch SeaNet Program rather than regulation).	The Education Strategy works with existing environmental educators, campaigns and programs to improve awareness and enhance voluntary sustainable practices and self compliance.
More education is needed on: <ul style="list-style-type: none"> — plastic pollution for residents and beach visitors — water pollution for individuals to reduce their impact on stormwater and downstream areas 	Initiative 1 in the Strategy aims to progress research and education efforts to reduce marine litter. The Initiative is contributing to this through marine litter campaigns and the establishment of a marine litter working group. The Education Strategy links to the outcomes and outputs from the marine litter work.
There is an opportunity to partner with waste education officers to improve compliance.	
More education around contacts for land and water-based rescue agencies is needed (e.g. what you do when you find a stranded mammal).	Initiative 5 in the Strategy is delivering multiple actions to enhance the community's understanding of what to do in the event of a marine mammal stranding and other wildlife events. It also sees a strengthening of partnerships (government and non-government) for rescue, rehabilitation and notification of events. The Education Strategy links to the outcomes and outputs from the threatened and protected species work.
Increase education for boat users about the effects of poor anchoring practices on the marine ecosystems.	Initiative 7 in the Strategy is improving awareness of good boating practices through work in the statewide mooring review and Boating Now Program. This Education Strategy links to the outcomes and outputs from the safe and sustainable boating work.

Community comments and the Authority's responses — education-specific feedback cont.

What the community has told us	Our response
<p>The Strategy does not capture proven health, social and educational benefits of recreational fishing.</p>	<p>Initiative 6 in the Strategy has included information about the community benefits of recreational fishing. Current actions aim to:</p> <ul style="list-style-type: none"> – promote fishing and the benefits of wild caught seafood – build social licence in the commercial and recreational fishing industries. <p>A community wellbeing framework, developed in the Marine Integrated Monitoring Program, guides how we implement and measure changes to community wellbeing from actions delivered in the Strategy. The Education Strategy links to the outcomes and outputs from the sustainable fishing and aquaculture work.</p>
<p>Monitoring and education is key to ensure long-term sustainable fish stocks and to reduce the multiple user conflicts.</p>	<p>There are many existing monitoring and education projects that are specific to fishing and fish stocks. These continue to be delivered and the outcomes measured in the Marine Integrated Monitoring Program. The Education Strategy links to the outcomes and outputs from the sustainable fishing and aquaculture work.</p>
<p>Education needs to be targeted to threats identified in the TARA and fostering environmental stewardship. Education shouldn't be there just to raise awareness of the marine estate.</p>	<p>Actions in the Strategy address the priority threats facing the NSW marine estate. Educational components of each initiative ensure we are focusing efforts on these priority threats. The actions in the Education Strategy facilitate greater opportunities statewide to educate the community about marine estate threats, ways to affect attitudinal change, and ways to improve environmental stewardship.</p>
<p>Education of culturally and linguistically diverse communities is also needed.</p>	<p>The Education Strategy includes actions to educate and engage with culturally and linguistically diverse communities.</p>



DRAFT STATEWIDE THREAT AND RISK ASSESSMENT (TARA)

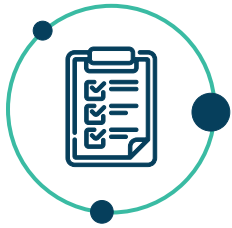
Feedback on the TARA and final threats and risks identified through the evidence-based approach underpins the actions that were included in the draft (and now final) Strategy. Responses in Table 10 show how we listened to comments and how we considered them for inclusion in the draft Strategy as proposed management actions.

The full report is at:

[Community and Stakeholder Engagement Report draft statewide TARA \(PDF\)](#).

Community comments and the Authority's responses

What the community has told us	Our response
The absence of research and education and the secondary impact of this is a threat to environmental values.	Research and education are threaded through the Strategy in each initiative to address the threat of limited knowledge on environmental, social, cultural and economic values.
There are impacts from inadequate social and economic information (this is related to a lack of education and training).	
Education of anglers was presented as a preferred option to 'lock outs'.	Existing education programs and additional action in the Strategy contribute to improving specific educational opportunities for fishers.
Continue education of boaters (to reduce threats from boaters).	Existing education programs and additional action in the Strategy contribute to improving specific educational opportunities to the boating public.
More education about where food (fish) comes from.	Actions in the Strategy focus on promoting fishing and consumption of NSW wild caught seafood.
More education is needed (to improve lack of compliance with regulations).	Initiative 8 in the Strategy includes an action that delivers improved awareness and education of marine estate values (the Education Strategy) and actions to enhance self compliance with regulations.



STATEWIDE COMMUNITY SURVEY

The following information is summarised from the February 2014 community survey, it is applicable to education actions.

Access to the full report is at: [Marine estate community survey report minus appendices \(PDF\)](#).

The marine estate was identified as a place for scientific discovery and for educational opportunities (including cultural education).

The most important social opportunities for the marine estate were:

- support the continuation of cultural practices
- education and communication activities that:
 - educate people about the importance of managing and protecting the marine estate
 - explain how to interact safely with the marine estate
 - provide positive messaging so people know what they can do
 - provide a central information source for regulations and restrictions
 - provide more regular communication with the community
 - include different types of communication to fit a variety of audiences (e.g. different methods in different languages)
 - explain the reasoning behind decisions
 - encourage interaction with the marine estate to promote healthy lifestyles
- engagement:
 - define the role of the community in decision-making and management to encourage ownership and responsibility
 - include community and marine estate interest groups and user groups in decision making at the local and state levels
 - collaborate with and among different stakeholder groups (aim for win-win outcomes)
 - provide access to decision makers (locally and at the executive and ministerial levels)
 - ensure there is a local presence of decision makers
- representation of the range of views and interests held in NSW.



APPENDIX 3

EXISTING AGENCY AND NON-AGENCY PROGRAMS

Existing agency programs – collated Workshop 1 findings

Program	Agency	Description / purpose	Target audience
3 canoes cultural project	DPI	Aboriginal cultural program teaching young males how to build canoes	Aboriginal students
Aboriginal licensing program; Aboriginal maritime safety plan	TfNSW	Teaching boating laws and practices to Aboriginal communities	Aboriginal communities
Agriculture industry focused programs	DPI	Targeted industry education including catchment management	Industry
Waterway bank management strategy	DPI	GIS mapping prioritisation bank management	Councils Agencies Landholders
Beachwatch	EHG	Water quality monitoring and reporting program	Community who use (and swim) at beaches 132 swimming locations monitored in NSW (with focus on Sydney, Hunter and Illawarra) General community education element is on the website and in social media.
Biosecurity warrior	DPI	Science-based initiative about importance of biosecurity	Community Schools

Existing agency programs — collated Workshop 1 findings cont.

Program	Agency	Description / purpose	Target audience
Boating education officer education program	TfNSW	Delivering boating safety key messages to stakeholder groups	Schools Boating clubs Retailers Aboriginal communities Boaters
Boating safety officers	TfNSW	On-water engagement	Boaters
Careers expo	DPI	Careers in primary industries	School leavers
Coast snap beach monitoring	EHG	Citizen science program to provide data about how beaches change over time	Beach goers at the four monitoring sites: <ul style="list-style-type: none"> — Manly (south Steyne) — North Narrabeen — Tallow Beach (Byron) — Blacksmiths Beach (Swansea)
Commercial whale, dolphin, and seal operations	EHG	Licensed sea-based tour operators	Tour participants, key messages delivered by operator
Don't be a Tosser	EPA	Anti-litter education campaign	Marine estate users General community Schools
Ecopass (land based)	EHG	Parks Eco Pass is the NPWS system for licensing operators of commercial tours, recreational activities, and educational activities in parks	Tour participants
Fish friendly council workshops	DPI	Targeted education program for local councils	Targeted education program for local council staff

Existing agency programs — collated Workshop 1 findings **cont.**

Program	Agency	Description / purpose	Target audience
Foreshore stabilisation	DPI	Streamlining the approval process for foreshore development and stabilisation	Councils Land holders Other agencies (e.g. Crown Lands) EHG
Get Hooked. It's fun to fish	DPI	Education about sustainable fishing	Primary school students
Habitat Action Program	DPI	Recreational fisher engagement funded by the Rec-fishing Trust	Recreational fishers Community groups
Launch of annual whale migration season	EHG	Media surrounding the launch of humpback whale season — safe whale watch — approach distances	Community interest whale and wildlife waters as well as broader promotions
Manly fairy penguins	EHG	Conservation program for community and school students	Community Schools
Marine parks education kit	DPI	4 education modules — marine parks — rocky shores — estuaries — Sea Country	Primary schools
Marine parks education program	DPI	Education program for the rollout of marine park management plans and their use for public enjoyment, science programs	Community School groups Research institutions
Marine wildlife preparedness days	EHG	Multiagency operational response training for marine wildlife emergencies	Agencies involved in emergency response and wildlife rescue
Maritime safety campaigns	TfNSW	Tell the general public about safety issues	Boaters General public

Existing agency programs — collated Workshop 1 findings cont.

Program	Agency	Description / purpose	Target audience
Maritime safety plan	TfNSW	Initiatives to reduce serious injuries and fatalities	Boaters General public
Marine safety regulations	TfNSW	Boating safety officers monitor compliance with boating laws	Boaters
Marine wildlife and wildlife education	EHG	Fact sheets, videos, website	Community
Maritime Environmental Services	TfNSW	Daily monitoring of waterways Commercial vessel compliance	Recreational and commercial boaters
Messaging and advertising through website promotional banners	EHG	Trial of advertisement for southern right whale on Swellnet	Community
Mooring program	TfNSW	Seagrass-friendly moorings	Boaters
NPWS Discovery Program	EHG	Tours in national parks	Students
NPWS Wilderquest	EHG	School resource designed to nurture love for nature	Students
ORRCA whale census	EHG	NPWS hosted locations for the national humpback whale migration census day held each year by the marine mammal rescue organisation ORRCA (Organisation for the Rescue and Research of Cetaceans in Australia) at: <ul style="list-style-type: none"> —Cape Byron Lighthouse —Tacking Point Lighthouse (Port Macquarie) —Crackneck Lookout —Wyrabalong National Park —Central Coast —North Head —Sydney Harbour National Park —Cape Solander —Kamay Botany Bay National Park, Sydney 	Community

Existing agency programs — collated Workshop 1 findings **cont.**

Program	Agency	Description / purpose	Target audience
Oyster education	DPI	General educational engagement	Oyster industry
Oyster reef restoration project	DPI	Restoration of lost ecosystems and ecosystem function	Oyster farmers Coastal communities Aboriginal communities
Pollution control and response	TfNSW	Pollution controller for NSW waterways	General public and councils Shipping companies Boaters
Recreational fishers (non English speaking)	DPI	Translation service	Non English speaking fishers
Regulatory and information signs	EHG	Temporary and permanent signs with key management issues	Specific site users
Royal Easter Show	DPI	Education about the work and programs of primary industries	Community
Saving our marine species (SOS) turtle project	EHG	Pilot citizen science program: North Coast Marine Turtle Resting	North coast beachgoers
School education program	DPI	Resources and support for marine teachers in schools	Students years 7-12
Shark Management Strategy	DPI	A program to increase protection for bathers from shark interactions while minimising harm to sharks or other animals	Community
SharkSmart	DPI	Education program to help the community to understand shark movements, shark-human interactions and to manage personal risk when undertaking activities in coastal waters	Community
Solitary Islands Lighthouse Islands	EHG	Helicopter tours out to south Solitary Island lighthouse	Visitors to South Solitary Island

Existing agency programs — collated Workshop 1 findings cont.

Program	Agency	Description / purpose	Target audience
Strandings and face-to-face liaison at emergencies	EHG	Strandings, rescues and nesting events can attract people	People in attendance
Threatened species education	DPI	Raising awareness of threatened and endangered listed species Species listings	Community Recreational fishers Local councils Other agencies
Visitor Services Unit	EHG	Education program provider: – supports NPWS staff engaged in discovery programs – builds curriculum education programs – creates formal learning opportunities for schools – works on cultural heritage education	Community Teachers Schools
Wild about whales	EHG	Online (including social media) whale watching app or website	Whale watchers General public



Desktop survey of a sample of existing non-agency programs that are relevant to the Education Strategy

Program	Organisation	Description / purpose	Target audience
Project Aware	Project Aware	Adventure conservation in the ocean	Divers Community School
Birdwatch	Birdlife Australia	Coastal management beach managers working with seabird and shorebird nesting	Community
Environmental education, including marine	NSW Environmental Education Centres	Educational programs and resources for schools, including training for teachers	Students Teachers
Take 3 for the Sea	Take 3 for the Sea	Marine debris education and action	Community
Australian Marine Debris Initiative	Tangaroa Blue Foundation	Marine debris monitoring and identification	Community
Clean up Australia	Clean up Australia	Litter collection event	Community
Activ8 for the Ocean	Positive Change for Marine Life	Education and advocacy for healthy marine environments	Schools Community
Australian Microplastics Assessment Project	AUSMAP, Australian Association for Environmental Education (NSW), Total Environment Centre	Monitoring of microplastics	Schools Community
Best practice seafood	OceanWatch (with NSW Government)	Training and resources to encourage and enable sustainable seafood	Industry Schools Community

Desktop survey of a sample of existing non-agency programs that are relevant to the Education Strategy cont.

Program	Organisation	Description / purpose	Target audience
Bring the Sea to You	Ocean Life Education	Education resources and programs about protecting our marine environments	Schools Community
Litter Free Ocean	Taronga Zoo	Initiative to support schools and businesses to reduce their litter	Schools Businesses
Marine Education	Marine Teachers Association NSW	Broad range of marine education resources and programs	Schools Industry
Marine Stewardship Council Certified Sustainable Seafood	Sydney Institute of Marine Science	Community education about the source of seafood	Community
Protect Our Oceans	World Wildlife Fund	Marine turtles and plastic and southern right whales	Community
Ocean Plastic Pollution	Australian Marine Conservation Society	Plastic pollution initiative (including microplastics)	Community
O.C.E.A.N. education	Dolphin Research Australia	Resources and programs for conserving and protecting marine environments	Schools Community
Plastics awareness	Cool Australia	Resources, activities, programs for schools on dangers of plastic in the environment and on advocating for reduction of single-use plastics	Schools

Desktop survey of a sample of existing non-agency programs that are relevant to the Education Strategy cont.

Program	Organisation	Description / purpose	Target audience
Operation Crayweed	UNSW Sydney Institute of Marine Sciences DPI Fisheries Southern Cross University	Citizen scientists help to reestablish crayweed in study areas with scientists	Community
Operation Posidonia	UNSW Sydney Institute of Marine Sciences DPI Fisheries	Citizen Scientists are asked to collect donor shoots from their local beach and take to a collection spot. Scientists then use the seagrass shoots to restore seagrass populations without damaging existing Posidonia meadows	Community
Rise Above Plastics	Surfrider Foundation Australia	Education resources and activity plans about reducing plastics	Schools Community
Sculpture by the Sea education programs	Sculpture by the Sea	Workshops, talks, professional development, and tours all related to marine education	Schools Community
Sea Shepherd campaigns	Sea Shepherd	Marine debris, reef defence, whale defence, illegal fishing	Community
Get the Site Right Campaign	Sydney Coastal Councils Group	Raises awareness of the impacts of water pollution and sediments from building sites on the aquatic environment	Developers/ Builders
Project Penguin	Taronga Zoo in partnership with Northern Beaches Secondary College	Students become ambassadors for the little penguins that live in the local area after learning about them	Primary and High school students Community

Desktop survey of a sample of existing non-agency programs that are relevant to the Education Strategy cont.

Program	Organisation	Description / purpose	Target audience
EnviroMentors	Keep Australia Beautiful NSW	Incursion-based environmental education service to improve awareness and engagement on local sustainability issues and initiatives	Local government Schools
StreamWatch	Greater Sydney Landcare Network	A citizen science water monitoring program	Community groups
Clean4Shore	NSW Landcare	Community groups remove litter and rubbish from foreshores and mangroves	Community groups
Sustainable Shellharbour	Shellharbour City Council	Sustainability education program, including sustainability at home	Community
OceanWatch Australia Various education programs	OceanWatch Australia	A broad range of projects to improve environmental practice, protect marine species, reduce by-catch, introduce sustainable technologies, change behaviours and restore marine habitats	Industry Community
East Coast Whale Entanglement Mitigation Project	Professional Fishers Association OceanWatch Australia National Landcare Program	Workshops attended by professional fishers to enable the successful implementation and reporting of the modified fishing gear field trials	Industry

