

SYDNEY COASTAL COUNCILS GROUP Inc.

PO Box 999,
Manly NSW 1655
ABN: 39 638 876 538

Reference: 003-21SJ

1 March 2021

Marine Estate Management Authority
chantelle.burns@dpi.nsw.gov.au

Re: Marine Estate Management Strategy – Draft Education Strategy

To whom it may concern,

We write to you regarding Marine Estate Management Authority's (MEMA) Draft Marine Estate Education Strategy (draft Strategy). This submission has been prepared as a joint submission by the Sydney Coastal Councils Group (SCCG), Cooks River Alliance (CRA) and the Parramatta River Catchment Group (PRCG). Together we represent 21 Councils. This joint submission has been prepared on behalf of the Councils we represent.

Councils play a critical role in the management of the marine estate and have a significant role to play in reducing priority threats identified in MEMA's Threat and Risk Assessment which is a key goal for MEMA over the next 10 years. There are many programs Sydney councils currently undertake to reduce priority threats including:

- developing Coastal Management Programs
- developing and implementing education activities in partnership with state Government including Get the Site Right Campaign and Project Penguin,
- working with communities and businesses to reduce waste and littering,
- education, compliance and enforcement activities in aquatic reserves
- community education programs to keep our waterways healthy.

The draft Strategy is therefore of great interest to our members as it has the potential to leverage and support the work of Councils whilst assisting MEMA achieve its goals. However, regrettably the draft Strategy fails to do this. Our key issues are as follows.

Lack of engagement with Councils during the development of this Strategy

Page 1 of the draft Strategy states that "effective marine estate education requires a co-ordinated approach and communication between all involved partners". Despite this, the first time that our Councils have seen the draft Strategy was in February 2021, prior to the Department of Primary Industries presentation to the SCCG on the 3 February 2021.

When asked why Councils were not previously involved in its development, it was advised that MEMA used Council feedback from 2016. Yet, over the last five years, significant changes have been made to regulations, governance and processes including the enactment of the *Coastal Management Act 2016*, Council mergers, and the development and implementation of community and environmental plans and programs including education initiatives.

Frustratingly, we believe that MEMA continues to not appropriately recognise and engage with Councils in the Sydney region at the detriment of its programs, including this draft Strategy. It is also disappointing that there is limited consultation on this draft Strategy. Less than one month is being provided to review it.

The SCCG has been advocating for nearly three years that Sydney Councils should be involved in the development of initiatives and actions identified in MEMA's Marine Estate Management Strategy particularly given the statutory linkages with Coastal Management Programs and that our Councils represent the most populated city in NSW where threats such as marine debris, urban stormwater discharge and loss of biodiversity are of significant concern.

We have also been advocating for MEMA communications to be greatly improved through the development of a local government communications plan developed with us as partners. Our Councils have also continued to raise concerns regarding MEMA through the NSW Coastal Council's annual survey.

The SCCG, PRCG, GRK and CRA wrote to MEMA in 2020 identifying concerns that we were not consulted during the 5-year statutory review of *Marine Estate Management Act 2016* despite the critical role our Councils play in managing the marine estate.

Given the critical role Councils play in managing the marine estate including in community education, we expect that MEMA should be engaging us at an 'Involve' or higher level, according to [IAP2's Public Participation Spectrum](#).

Recommendation: For future MEMA programs, seek to achieve a minimum of 'Involve' or higher. Also in partnership with us, develop a communications plan for engaging with local government.

It does not appropriately recognise Councils as a key partner

The front of the draft Strategy recognises that the marine estate is large and complex and has many influencers. Fixing and conserving the marine estate is a wicked problem yet there is no acknowledgement of this in the actions. Wicked problems are best tackled together and while the draft Strategy recognises the importance of partnerships up front it is not emphasised through the actions.

Partnerships should be the major approach and it should be with Councils primarily as they are:

- implementing the *Coastal Management Act 2016*
- supporting compliance and enforcement activities in aquatic reserves
- assisting with the reduction of priority threats through a range of activities such as reducing stormwater discharge and marine debris, protecting threatened species, and planning for and responding to climate change impacts
- on the ground face to face with their local community and an essential conduit of community education
- facilitating and supporting catchment wide initiatives such as the Get the Site Right program.

It is also alarming that the draft Strategy is written largely in ignorance of Coastal Management Programs (CMPs) developed under the *Coastal Management Act 2016*. Councils developing CMPs are required under the CM Act to (s.3):

- "ensure co-ordination of the policies and activities of government and public authorities relating

- *to the coastal zone and to facilitate the proper integration of their management activities (j)*
- *to support public participation in coastal management and planning and greater public awareness, education and understanding of coastal processes and management actions (k)*
- *to support the objects of the Marine Estate Management Act 2015 (m)".*

Recommendation: Redevelop the draft Strategy in consultation with us and our member Councils

The Department of Education should be identified as a key partner

The Department of Education should be recognised as a key partner due to the identification of schools as a key target audience. As the overarching governing body for education and a landholder that has a role in impacting the marine state, their engagement is critical to effect environmental change.

Recommendation: Consult with the Department of Education about being a key partner and develop partnership actions.

It is likely to have minimal impact upon reducing priority threats

We consider the vision and objectives of the draft Strategy are inadequate as they are largely to raise awareness and increase knowledge. There is not enough weight to the potential of this strategy to create change. It should be clearly identifying the change that the strategy is trying to achieve and how the change will be measured over time.

We believe that as a priority, the actions in the draft Strategy should seek to reduce priority threats identified in the TARA over the next 10 years. Although this is recognised in objective 2 (Provide the knowledge and tools to enable stakeholders and community to become active custodians of the marine estate to help enhance values and reduce threats) the actions generally fail to deliver on this objective.

As a minimum it should be identifying which of those threats could be effectively reduced through education. Boat strike on marine wildlife for example, has been identified as a priority threat. Recently, SCCG, Northern Beaches Council, NPWS, Taronga Zoo with the support of Transport NSW applied for an Environmental Trust grant as it was recognised that this threat could be significantly reduced by better education with the boating community.

Recommendation: Identify which priority threats could be reduced through education and develop appropriate actions in consultation with Councils.

Unclear what change is likely to occur as a result of the Strategy

As noted above, the strategy does not outline its process in effecting environmental change. This is significant as education is recognised as one of the four planks of government to create change along with regulation, policy and infrastructure.

Multiple education programs have been implemented in the past decades however little is known about their level of effectiveness given the fact that an evaluation on the rate of environmental change as a result of the education programs has never been conducted. To institute change, we believe the draft Strategy should clearly outline how education is integrated with the remaining elements of government beyond the MEMA Strategy. There should also be SMART objectives so that there is clarity on the amount of change that is expected, its timeframe, and how this change will be measured.

We also believe that the approach to develop “Marine Estate Champions” does not go far enough in effecting this change. Particularly where there is a lack of funding source and support as the risk of “champions” disappearing becomes more apparent. The [CRC for Water Sensitive Cities](#) provides an excellent case example of a program that has transitioned from a “champion” based model to institutional change. We recommend that the draft Strategy considers this process more thoughtfully and supports the current voices for the marine estate (particularly Councils) to influence change.

Recommendation: Identify what change is likely to occur, include SMART objectives, and replace ‘Marine Estate Champions’ with more innovative approaches that create institutional change.

More work needed for culturally and linguistically diverse communities (CALD)

The actions to reach CALD communities across NSW is poor as it only mentions translation. Further work is needed here. Reaching CALD communities around water and marine estate is about cultural relationships to water and the marine estate not just translating a brochure.

Recommendation: Seek expertise to develop a more modern approach to engaging with CALD.

It lacks funding commitment to ensure delivery of actions

There has already been a general lack of MEMA initiatives and actions being delivered in the Sydney region compared with other parts of NSW. This is in addition to no decision yet to be made on the marine park proposal for the Sydney region following community consultation in 2018. Frustratingly, this draft Strategy does not help to address our previous concerns.

It does not identify any committed funds, appears to rely on Councils providing its own funding, and provides vague statements such as “Partnerships will be formed at a program level with funding subject to change during the implementation of the Education Strategy” (p22).

We recommend that funding is provided to innovative ways of working with community that go beyond ‘business as usual’ and that seek to reduce priority threats of the marine estate by making institutional changes. Suggestions include:

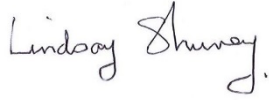
- Fund local place-based education that enables local communities to come up with new ways to educate and create change, and then fund those. Look at diffuse funding models that enable innovation at the local level e.g. Landcare model, EPA’s KAB litter model, Asset Based Community Development approaches.
- Fund local marine estate educators (eg Landcare Coordinators, stormwater education officers)
- Incorporate education as part of the four planks (education, regulation, policy and infrastructure). Look at Stormwater Trust model as an example.
- Build in a funding mechanism through the Environmental Trust as an example.
- Fund Aboriginal employment and vocation pathways.
- Develop a sustainable funding model for stormwater infrastructure.

Recommendation: Commit to funding actions in the draft Strategy and consider incorporating the suggestions above.

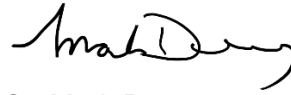
Other issues

One of our Councils has provided detailed comments in the draft Strategy document itself. These are provided in Attachment A.

Yours sincerely,



Cr. Lindsay Shurey
Chair
Sydney Coastal Council's Group



Cr. Mark Drury
Chair
Parramatta River Catchment Group



Cr Maryanne Duggan
Chair
Chair, Cooks River Alliance

MARINE ESTATE MANAGEMENT AUTHORITY



DRAFT MARINE ESTATE EDUCATION STRATEGY

WWW.MARINE.NSW.GOV.AU



Photo by Ian Kerr

Published by the NSW Marine Estate Management Authority

Title Marine Estate Management Strategy – Marine Estate Education Strategy

First published August 2020

Reference number INT20/37049

More information

Marine Estate Management Authority
marine.nsw.gov.au

Acknowledgments

The Authority acknowledges government agencies, organisations and individual 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, Industry and Environment
 - NSW Department of Primary Industries
 - Transport for NSW
- 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 Planning, Industry and Environment, August 2020. 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
01 Introduction	02
1.1 Role of education in the marine estate	04
1.2 Vision	05
1.3 Purpose	05
1.4 Partnerships	05
1.5 Our marine estate	06
1.6 Unique environmental values	08
1.7 Social, cultural and economic values	09
02 Strategic framework	10
2.1 Marine Estate Management Act	10
2.2 NSW Marine Estate Management Strategy (2018-2028)	11
2.3 Partners	15
03 Guiding principles and objectives	16
3.1 Guiding principles	16
3.2 Objectives	17
04 Action plan	18
05 Appendix 1: Acronyms and terms	27
06 Appendix 2: Summary of education specific feedback from the community	31
6.1 Draft Marine Estate Management Strategy (2017)	31
6.2 Draft Statewide Threat and Risk Assessment (TARA)	34
07 Appendix 3: Existing agency and non-agency programs	36



EXECUTIVE SUMMARY

The NSW marine estate is a highly valued natural asset by the people of NSW. The Marine Estate Management Strategy (Strategy) was developed as part of a key commitment of the NSW government to coordinate the management of the marine estate over the next ten years.

The Education Strategy is an output of this Strategy and has been developed to coordinate, develop and deliver education programs that promote the values of our marine estate to the NSW community and the social, cultural and economic benefits it provides, build a sense of custodianship, and encourage sustainable use of the marine estate.

The overarching vision for the Education Strategy is:

TO SHARE KNOWLEDGE AND TO ENCOURAGE RESPECT AND CUSTODIANSHIP OF THE MARINE ESTATE TO ENHANCE COMMUNITY WELLBEING OUTCOMES FOR OUR STAKEHOLDERS, ABORIGINAL PEOPLE AND THE COMMUNITY

Five objectives guide the strategic implementation of this vision

- 01** Promote understanding of the richness and uniqueness of the marine estate
- 02** Provide the knowledge and tools to enable stakeholders and community to become active custodians of the marine estate to help enhance values and reduce threats
- 03** Improve understanding, appreciation and respect for the diversity of users of the marine estate
- 04** Promote the wellbeing benefits of connecting with nature to the community
- 05** Improve coordination, collaboration and efficiency in delivering education programs

Effective marine estate education requires a co-ordinated approach and communication between all involved partners. Partnerships and building on existing programs are critical to success by further enhancing resourcing and avoiding duplication of effort. Implementation of actions in the Education Strategy is funding dependent and will be implemented concurrently with the Strategy subject to funding being secured.

In this Education Strategy we recognise the power of education to provide opportunities for people to enhance knowledge, skills, values and beliefs¹. This is important to foster ownership of community values and attitudes towards understanding that:

- maintaining the health of the marine estate is vital to support the benefits it provides;
- pollution of the marine estate is a major threat, whether from littering, spills or land-based runoff;
- the marine estate is integral to the social and cultural wellbeing of the community;
- the diversity and abundance of marine life and natural beauty of the marine estate are key economic values for nature-based and regional tourism.

Through this Education Strategy we are committing to working together to ensure that marine estate education is aligned to assist the community, industry, stakeholders and schools to take positive action. We encourage you and your organisation to think about the role you can play in creating a healthy marine estate.

¹ Nurturing Wonder and Igniting Passion, design for future school curriculum. NSW Review Interim Report.

THE NSW MARINE ESTATE IS ONE OF THE MOST SIGNIFICANT NATURAL ASSETS IN NSW





It includes almost a million hectares of tidal rivers, coastal lakes and estuaries and their shorelines, submerged lands, offshore islands, as well as the 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.

01 INTRODUCTION

A healthy and productive marine estate is critical to the health, wellbeing and prosperity of NSW. Of the 7.9 million people who live in NSW, 83% live within 50 kilometres of the marine estate. They have a close affiliation with the NSW 'big blue backyard' – the coast, estuaries and ocean – through recreation, employment and the joy derived from viewing seascapes from outdoor vantage points. For many residents in NSW, the most important benefit of the marine estate is its natural beauty, even if they can't visit it regularly².

National and International visitors enjoy the same benefits when they visit the marine estate. The pressure on the marine estate and its values and benefits is set to increase as the population of NSW doubles over the next 50 years. It is important we all understand the importance of our marine estate to our way of life, and threats to the marine estate, so we can all work together to ensure its health for future generations.

Table 1. Key findings from a survey of community values and attitudes about the NSW marine estate

<p>MAINTAINING THE HEALTH OF THE MARINE ESTATE IS VITAL TO SUPPORT THE BENEFITS IT PROVIDES</p> 	 <p>POLLUTION OF THE MARINE ESTATE IS A MAJOR THREAT, WHETHER FROM LITTERING, SPILLS OR LAND-BASED RUNOFF</p>
 <p>THE DIVERSITY AND ABUNDANCE OF MARINE LIFE AND NATURAL BEAUTY OF THE MARINE ESTATE ARE KEY ECONOMIC VALUES FOR NATURE-BASED AND REGIONAL TOURISM</p>	<p>THE MARINE ESTATE IS INTEGRAL TO THE WELLBEING OF THE COMMUNITY</p> 

² Sweeney Research (2014), Marine Estate Community Survey Final Report



1.1 ROLE OF EDUCATION IN THE MARINE ESTATE

The draft Marine Estate Education Strategy (the Education Strategy) was developed in response to community feedback and the lack of community awareness of the threats and benefits of the marine estate. It is a recognition of the power of education to shape values and beliefs in our youth, and then continue to enhance knowledge and skills of community so they can contribute to environmental custodianship.

The Education Strategy identifies the priority education actions for the marine estate. It aligns with the implementation of the Marine Estate Management Strategy (the Strategy) and key outcomes identified in the Marine Integrated Monitoring Program.

We want to partner with you to help us achieve our vision and with a focus to:

- foster a sense of custodianship
- provide opportunities to enhance environmental stewardship and self-compliance
- encourage sustainable use of the environment
- promote the values of our marine estate to the NSW community and the social, cultural and economic benefits it provides.

It will focus on areas of concern that the community has identified (Appendix 2) and will complement the range of actions underway in the Strategy. The many existing education programs and potential for linking with the Education Strategy are listed in Appendix 3.

New marine estate education programs aim to be developed in response to gaps identified in marine education. Partnerships with existing and new education programs will be developed to ensure existing resources are coordinated and well utilised.





1.2 VISION

TO SHARE KNOWLEDGE AND TO ENCOURAGE RESPECT AND CUSTODIANSHIP OF THE MARINE ESTATE

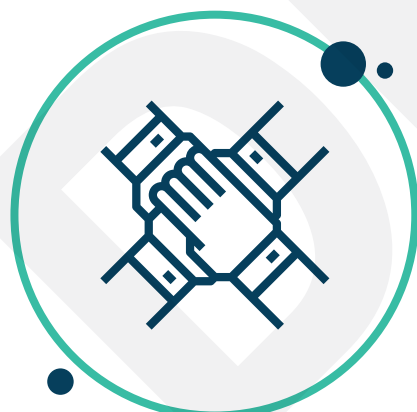
to enhance community wellbeing outcomes for
our stakeholders, Aboriginal people and community



1.3 PURPOSE

TO COORDINATE, DEVELOP AND DELIVER EDUCATION PROGRAMS

that promote the values of our marine estate to the NSW
community and the social, cultural and economic benefits
it provides, build a sense of custodianship, and encourage
sustainable use of the NSW marine estate



1.4 PARTNERSHIPS

TO WORK WITH THE STAKEHOLDERS, ABORIGINAL PEOPLE AND COMMUNITY

on their concerns and link with existing programs that are
already part of the Marine Estate Management Strategy





1.5 OUR MARINE ESTATE

The NSW marine estate covers one million hectares from the Queensland border in the north to the Victorian border in the south and out to three nautical miles offshore (Figure 1).

It is a place of beauty and wonder. The estuaries, beaches, coastal lakes, offshore islands and ocean are a drawcard for the more than six million people who live within 50 kilometres of the NSW coastline, including 11 coastal Aboriginal nations that are intimately connected to their Land and Sea Country.

Table 2. Features of the NSW marine estate

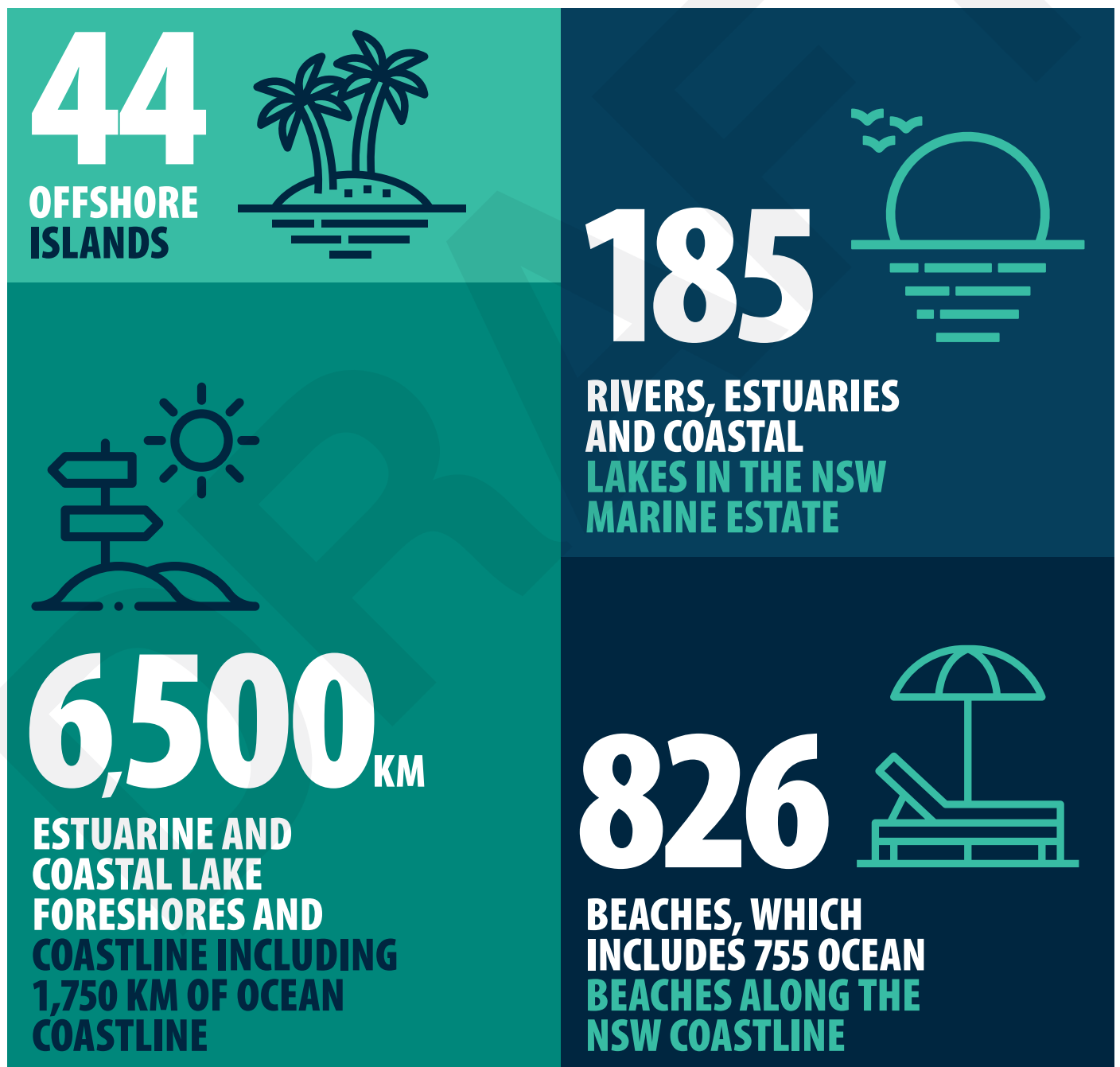


Figure 1. Map of the NSW marine estate





1.6 UNIQUE ENVIRONMENTAL VALUES

The marine estate owes its natural beauty and unique biodiversity to a variety of oceanic, shoreline and estuarine habitats and the influence of subtropical and temperate currents.

The marine estate is divided into three main regions, each with its own features and values:

Northern region

Tweed Heads to southern Stockton Bight. It includes the Manning Shelf marine bioregion and the NSW component of the Tweed-Moreton marine bioregion

Central region

includes the Hawkesbury Shelf marine bioregion (from Newcastle to Wollongong)

Southern region

Shellharbour to the Victorian border. It includes the Batemans Shelf marine bioregion and the NSW component of the Twofold Shelf marine bioregion.

The warmer waters in the northern region support coral growth, with more than 100 species of coral, tropical anemones and an array of subtropical and temperate fish, shark and ray species.

All six species of mangrove found in NSW occur in northern region estuaries. The seagrass beds that occur in most of these estuaries are known for their importance as nursery areas for many species.

The more temperate central and southern regions feature rocky reefs, soft sediment and rocky foreshores and support temperate fish species, sponges, crustaceans and bryozoans.

APPROXIMATELY 76% OF NSW COASTAL WATERS ARE TEMPERATE. TEMPERATE AUSTRALIA HAS MORE ENDEMIC SPECIES THAN ANYWHERE ELSE IN THE WORLD: 80-90% OF ALGAE, INVERTEBRATES AND FISH ARE NOT FOUND ANYWHERE ELSE ON EARTH

The entire marine estate is home to many threatened and protected species such as whales, dolphins, seals, turtles, little penguins, seabirds, some species of fish and sharks, shorebirds and wader birds. The marine estate also supports threatened and protected marine vegetation including saltmarsh, mangrove and seagrass communities and marine algae. One of these brown algae *Nereia lophocladia* is found in a small number of locations around Coffs Harbour on the north coast of NSW.³



³ NSW Marine Estate Threat and Risk Assessment — background environmental information



1.7 SOCIAL, CULTURAL AND ECONOMIC VALUES

The NSW community derives social, economic and cultural benefits from the marine estate. These benefits are underpinned by good water quality, healthy habitats and diverse and abundant marine life. The marine estate offers opportunities for activities such as diving, swimming, fishing, boating, tourism businesses and commercial activities, such as commercial fishing and aquaculture.

Social benefits such as spending time with family and friends and enjoying activities can contribute to our overall health and wellbeing. Being in the natural environment and enjoying the biodiversity and beauty of the marine estate can improve how we feel emotionally. Activities such as swimming, surfing, walking and sailing contribute to our physical wellbeing⁴.

The marine estate is an important economic resource for NSW. It provides income and business opportunities through its ports, nature-based tourism (such as whale watching, scuba diving and recreational boating), and seafood-related industries (such as commercial and recreational fishing).

It is a hub for international and domestic trade and tourism. For example, the millions of domestic and international visitors who enjoy the marine estate contribute billions of dollars each year to the NSW and the Australian economy. The NSW seafood industry alone generates half a billion dollars of economic activity each year.

Aboriginal people have a strong connection to Sea Country: it is a place for food, cultural practices and spiritual significance. They have cared for Sea Country for thousands of years through traditional management practices that supported healthy estuaries and oceans and sustainability of all living things.

Coastal Aboriginal communities collect sea plants, animals, shells and stones that are important for use in ceremonies, as a food source, and in, traditional medicine and healing. Social and cultural benefits arise from communities ongoing connection to Sea Country.⁵ Through this connection, traditional knowledge is passed on to the next generations to continue these practices and care for Sea Country.

For more information, visit:

[Initiative 4 - Protecting the Aboriginal Cultural Values of the Marine Estate.](#)

[Initiative 8 - Enhancing Social, Cultural and Economic Benefits.](#)



⁴ World Health Organisation - Policy Brief - Health, the global ocean and marine resources

⁵ Feary, S (2015) Sea Countries of New South Wales; a benefit and threats analysis of Aboriginal people's connections with the marine estate.

02 STRATEGIC FRAMEWORK

The marine estate education programs are guided by a range of policy and legislation. The two most important are outlined in 2.1 and 2.2 below.



2.1 MARINE ESTATE MANAGEMENT ACT

The *Marine Estate Management Act 2014* (Act) governs marine estate management in NSW.

Objects of the Act

Section 3 outlines the objects of the marine estate which include: This includes:

- providing for management that is consistent with the principles of ecologically sustainable development
- promoting a biologically diverse, healthy and productive marine estate
- facilitating economic opportunities for the people of NSW, including regional communities
- facilitating cultural, social and recreational use of the marine estate
- maintaining ecosystem integrity
- facilitating scientific research and education 
- coordinating marine estate management across government
- providing for the declaration and management of the marine park.





2.2 NSW MARINE ESTATE MANAGEMENT STRATEGY (2018–2028)

The Strategy was released on 16 August 2018. It aims to deliver the NSW Government's vision for the marine estate, which is:

A HEALTHY COAST AND SEA, MANAGED FOR THE GREATEST WELLBEING OF THE COMMUNITY, NOW AND INTO THE FUTURE

The Strategy sets the overarching framework for the NSW Government to coordinate the 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 Strategy outlines the management initiatives and associated management actions that will be implemented over ten years to address priority threats to marine estate health. These threats were identified by the TARA. A five-year health check will review progress of implementation of the Strategy, respond to research and monitoring outputs, and consider new evidence and emerging threats that need a management response.

The Strategy includes nine management initiatives (Table 3 and Figure 2) and 53 actions.



Education is most effective when it is combined with other tools, such as research, planning, policy, compliance and on-ground action. Therefore, education is intertwined through each initiative and is integral to the successful delivery of the Strategy.

The Strategy and the Education Strategy will be implemented together to optimise strategic outcomes for both strategies.

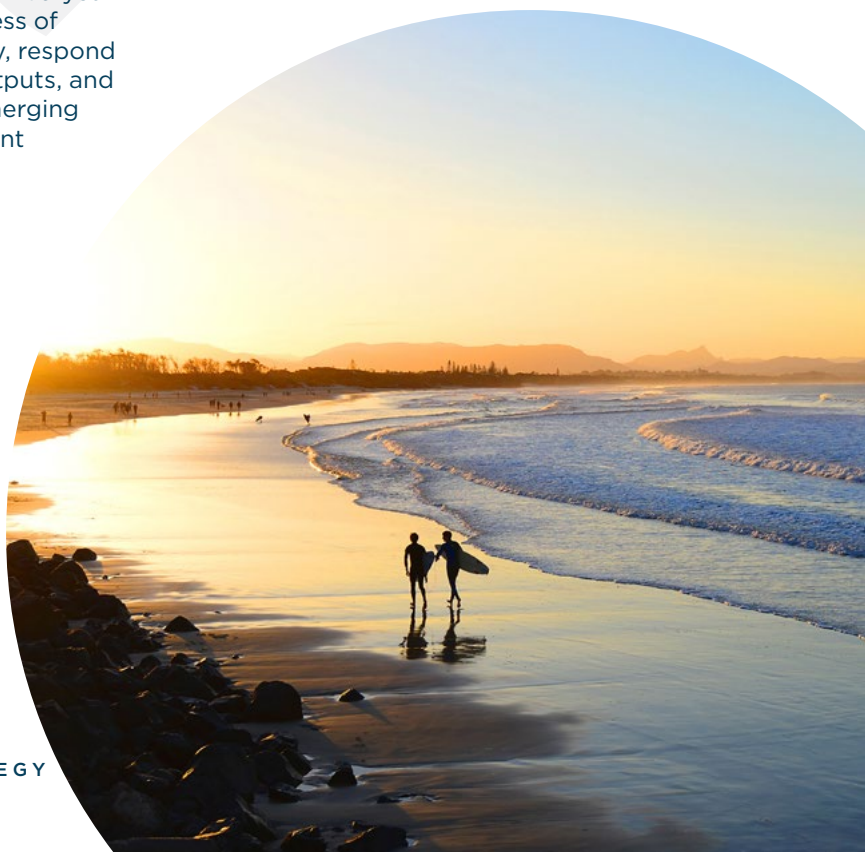


Table 3. Marine Estate Management Strategy initiatives

<div>01</div> <div></div> <div>IMPROVING WATER QUALITY AND REDUCING LITTER</div>	<div>02</div> <div></div> <div>DELIVERING HEALTHY COASTAL HABITATS WITH SUSTAINABLE USE AND DEVELOPMENT</div>	
<div>03</div> <div></div> <div>PLANNING FOR CLIMATE CHANGE</div>	<div>04</div> <div></div> <div>PROTECTING THE ABORIGINAL CULTURAL VALUES OF THE MARINE ESTATE</div>	<div>05</div> <div></div> <div>REDUCING IMPACTS ON THREATENED AND PROTECTED SPECIES</div>
<div>06</div> <div></div> <div>ENSURING SUSTAINABLE FISHING AND AQUACULTURE</div>	<div>07</div> <div></div> <div>ENABLING SAFE AND SUSTAINABLE BOATING</div>	
<div>08</div> <div></div> <div>ENHANCING SOCIAL, CULTURAL AND ECONOMIC BENEFITS</div>	<div>09</div> <div></div> <div>DELIVERING EFFECTIVE GOVERNANCE</div>	

The Education Strategy is a key deliverable under Initiative 8 of the Strategy, Management Action 8.1:



Increase stakeholder and community awareness of the marine estate values, management arrangements and promote safe and ecologically sustainable use of the marine estate by:

- *building on existing school and community education programs to encourage environmental stewardship, enhance self-compliance and promote physical and mental health benefits associated with nature*
- *developing and promoting best practice guidance and codes of practice to reduce user conflict*
- *developing online information resources and expansion of digital technologies.*

The outcomes we are striving to achieve in delivering the Education Strategy are listed in Table 4.



Table 4. Outcomes of Initiative 8⁶ and their expected timeframe for implementation



Outcome	Timeframe
Improve stakeholder and community awareness of benefits, threats, and management arrangements relevant to the marine estate	Short-term (0-2 years)
Greater stakeholder and community awareness of their responsibilities and opportunities to participate in management of the marine estate	Short-term (0-2 years)
Greater adoption of principles for ecologically sustainable growth among marine industries	Intermediate (2-5 years)
Increased stakeholder and community participation in informed decision-making and management of the marine estate	Intermediate (2-5 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)
Improved social, cultural and economic benefits of the marine estate that contribute to the wellbeing of the NSW stakeholders and community	Long-term (5-10 years)

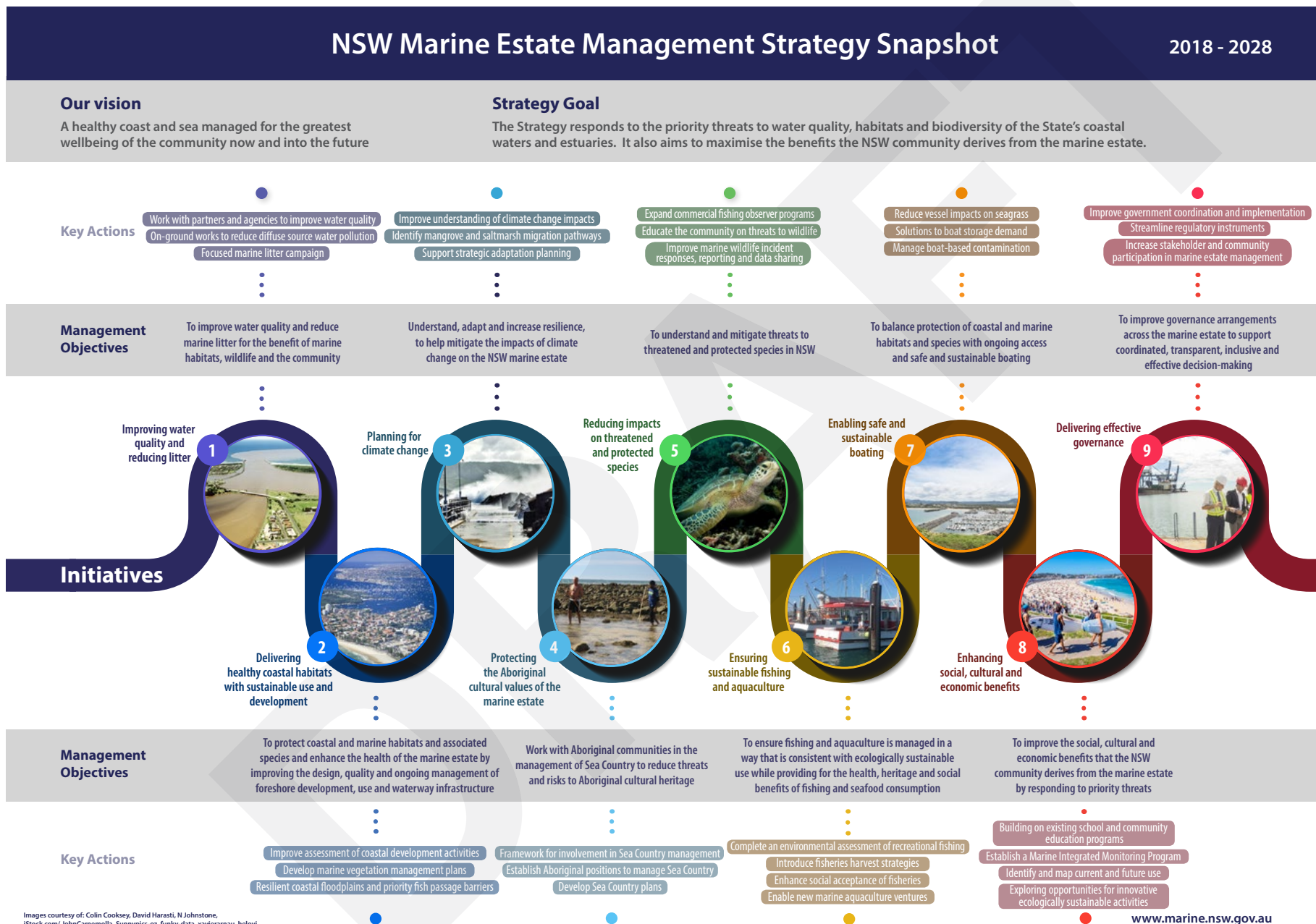


Monitoring and evaluation of the Education Strategy will occur through the Marine Integrated Monitoring Program.



⁶ Integrated monitoring and evaluation framework for the Marine Integrated Monitoring Program (PDF) (pages 105-106)

Figure 2. NSW Marine Estate Management Strategy snapshot





2.3 PARTNERS

Through this Education Strategy we are committing to working together to ensure that marine estate education is aligned to assist the community, industry, stakeholders and schools to take positive action. We encourage you and your organisation to think about the role you can play in creating a healthy marine estate.

The Marine Estate Management Authority (the Authority) brings together the heads of four government agencies to advise the NSW Government about the management of the NSW marine estate:

- NSW Department of Primary Industries (DPI)
- Department of Planning, Industry and Environment — Environment, Energy and Science (EES)



- Department of Planning, Industry and Environment—Planning and Assessment (P&A)
- Transport for NSW (TfNSW).

These NSW Government agencies have legislative responsibility for managing the marine estate and work together to implement the Strategy.

Other partnerships are also critical for coordinating and delivering education programs in a strategic and effective way. These partnerships will fill gaps, avoid duplication and have the scope to add value to and build on the existing marine estate programs listed in Appendix 3.

Proposed partnerships in addition to the Authority are shown in Figure 3.

Figure 3. Prospective partners for Education Strategy implementation



03 GUIDING PRINCIPLES AND OBJECTIVES

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.



3.1 GUIDING PRINCIPLES

The guiding principles of the Education Strategy (Table 5).

Table 5. The six guiding principles of the Education Strategy



ALIGNED

- ~~coordinating~~ with the Strategy's initiatives and actions and addressing the statewide priority threats in the marine estate that can be improved by education (e.g. 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 with innovative programs
- building on existing programs where possible by including innovative marine estate education concepts into those programs

ADAPTABLE

- changing in response to outcomes of the Strategy, shifts in environmental issues or priorities and community needs
- changing with resourcing to provide quality education throughout implementation of the Education Strategy





3.2 OBJECTIVES

The Education Strategy has five education objectives (Table 6). These objectives are the basis for the high-level actions outlined in the following pages. Actions can relate to more than one objective however each action has been placed under the objective that is most suitable.

Table 6. The five objectives of the Education Strategy



01

promote understanding of the richness and uniqueness of the marine estate



02

provide the knowledge and tools to enable stakeholders and community to become active custodians of the marine estate to help enhance values and reduce threats



03

improve understanding, appreciation and respect for the diversity of users of the marine estate



04

promote the wellbeing benefits of connecting with nature to the community



05

improve coordination, collaboration and efficiency in delivering education programs



04 ACTION PLAN






The following actions outline how we aim to meet the objectives. Partnerships will be formed at a program level with funding subject to change during the implementation of the Education Strategy.

01




PROMOTE UNDERSTANDING OF THE RICHNESS AND UNIQUENESS OF THE MARINE ESTATE

Action	Target audience	Lead agency	Links with Strategy (page 13)
 <p>Work with marine estate staff to ensure consistency in implementation of existing 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').</p>	Community Stakeholders Schools	DPI/EES 	Initiative 1 Initiative 3 Initiative 4 Initiative 5 Initiative 6 Initiative 8 
Use digital technologies apps and webinars to enhance statewide education capabilities and improve opportunities to showcase marine estate natural values.	Community	DPI	Initiative 8
Add new components to existing marine education programs to enhance understanding of natural values and the benefits they provide to the marine estate (Appendix 3 lists possible programs).	Community	DPI	Initiative 8
Build on the existing primary school curriculum-based Marine Estate Agents Program. Include a focus on marine estate natural values and threats.	Schools	DPI	Initiative 8
Tailor new community programs to include a marine estate values component (e.g. Pilot for the Marine Estate Champions Program).	Community Stakeholders	DPI	Initiative 8

01



PROMOTE UNDERSTANDING OF THE RICHNESS AND UNIQUENESS OF THE MARINE ESTATE CONT.

Action	Target audience	Lead agency	Links with Strategy (page 13)
Develop high school marine estate education programs where an education gap is identified. Use online digital technologies to expand reach and include messaging about natural values and to communicate scientific discoveries.	Schools	DPI 	Initiative 8
Investigate opportunities to expand marine estate education into early childhood curriculum.	Early childhood centres	DPI	Initiative 8
Develop a standard marine estate information package that includes marine estate values factsheets for the north, central and southern regions. Display them on the marine estate website; use them as a resource for schools, community, industry, stakeholder groups and other educators.	Community Schools	DPI/EES	All initiatives
Ensure any education strategies for Marine Protected Areas, are consistent with this Education Strategy.	Community Stakeholders	DPI/EES	All initiatives

02



PROVIDE KNOWLEDGE AND TOOLS TO ENABLE STAKEHOLDERS AND COMMUNITY TO BECOME ACTIVE CUSTODIANS OF THE MARINE ESTATE TO HELP ENHANCE VALUES AND REDUCE THREATS


Action	Target audience	Lead agency	Links with Strategy (page 13)
Create online curriculum-based resources for primary and high schools that provide opportunities for active custodianship of the marine estate (e.g. citizen-science programs).	Schools 	DPI	Initiative 8
Provide opportunities for community input into the design and development of programs to foster custodianship (e.g. Marine Estate Champions). Ensure program development targets local as well as statewide marine estate threats.	Community Stakeholders	DPI	All initiatives
Educate the community about their role in decision-making and management to encourage responsibility and ownership of the marine estate. Use digital technology to expand the reach (e.g. EES delivery of digital portal and water quality report cards).	Community Stakeholders	DPI/EES	All initiatives



Photo by Chris Sheedy, Reflex Photography

02



PROVIDE KNOWLEDGE AND TOOLS TO ENABLE STAKEHOLDERS AND COMMUNITY TO BECOME ACTIVE CUSTODIANS OF THE MARINE ESTATE TO HELP ENHANCE VALUES AND REDUCE THREATS **CONT.**

Action	Target audience	Lead agency	Links with Strategy (page 13)
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.	Community	DPI	Initiative 4, Initiative 8
Integrate into suitable education programs 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 for different language groups).	CALD communities	DPI/EES	All initiatives
Investigate how incentives (e.g. awards or certificates) could be used to celebrate marine estate education achievements within the community.	Community	DPI	Initiative 8, Initiative 9
Continue to participate in community events and conferences to increase awareness of marine estate management, ensuring the communication of information that fosters custodianship of the marine estate and sustainable behaviour.	Community Stakeholders	DPI/EES	All initiatives

02






PROVIDE KNOWLEDGE AND TOOLS TO ENABLE STAKEHOLDERS AND COMMUNITY TO BECOME ACTIVE CUSTODIANS OF THE MARINE ESTATE TO HELP ENHANCE VALUES AND REDUCE THREATS **CONT.**

Action	Target audience	Lead agency	Links with Strategy (page 13)
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).	Community Stakeholders	DPI	All initiatives
Provide opportunities for those involved in research and management of the marine estate to share their knowledge via digital technologies (e.g. meet a marine estate scientist online workshops and videos).	Schools Education institutions Community Stakeholders	DPI/EES	All initiatives
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.	 Community Stakeholders	DPI	Initiative 8
Deliver presentations and webinars (on request) about marine estate management to enhance students' understanding.	Schools Education institutions	DPI/EES	Initiative 8
Provide local and regional training to increase the number of Aboriginal people that have the skills to gain employment in the marine estate.	Aboriginal communities		Initiative 4, Initiative 8
Provide vocational training to increase participation, access and management of the marine estate by Aboriginal communities.	Aboriginal communities		Initiative 4, Initiative 8

03




IMPROVE UNDERSTANDING, APPRECIATION AND RESPECT FOR THE DIVERSITY OF USERS OF THE MARINE ESTATE

Action	Target audience	Lead agency	Links with Strategy (page 13)
Promote self-compliance within 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.	Community Stakeholders Industry	DPI	Initiative 6, Initiative 7, Initiative 8
Work with existing environmental educators, campaigns and programs to improve awareness and enhance voluntary sustainable practices and self-compliance.	Community Stakeholders	DPI	Initiative 6, Initiative 8
Integrate into community programs an opportunity to showcase the diversity of users of the marine estate to foster understanding and respect for their connections to coast (e.g. Marine Estate Champions).	Community Stakeholders	DPI	Initiative 8
Provide opportunities for industry inclusion into marine estate education programs and work with industry to promote industry-led education programs.	Industry	DPI	All initiatives
Provide opportunities for local government inclusion into marine estate education programs work with local government to promote of local government-led education programs.	Local government 	DPI 	All initiatives 

04



PROMOTE THE WELLBEING BENEFITS OF CONNECTING WITH NATURE TO THE COMMUNITY


Action	Target audience	Lead agency	Links with Strategy (page 13)
Undertake a gap analysis to inform the development of new programs or to partner with existing programs. Where relevant, form partnerships to build on existing programs. 	Agency Partners	DPI	Initiative 8
Develop increasing and ongoing awareness of health and wellbeing benefits in programs through partnerships with organisations to offer focused programs.	Agency Partners	DPI	Initiative 8
Develop a Healthy Marine Estate, Healthy You program, utilising the expertise of organisations involved in similar programs during program development.	Community	DPI	Initiative 8
Conduct a needs analysis and identify suitable channels for a targeted education campaign for the Healthy Marine Estate, Healthy You program.	Community	DPI	Initiative 8



05



IMPROVE COORDINATION, COLLABORATION AND EFFICIENCY IN DELIVERING EDUCATION PROGRAMS

Action	Target audience	Lead agency	Links with Strategy (page 13)
Establish the Marine Estate Education Working Group (MEEWG) with representatives from all agencies and key stakeholder groups. 	Agency Stakeholders	DPI	Initiative 8
Identify key stakeholders for advice and delivery of programs (e.g. education networks and institutions, industry, local councils, peak bodies).	Stakeholders	DPI	Initiative 8
Develop and maintain a list of current marine education programs, identifying gaps and opportunities in existing education programs and prioritise for action. Where practically applicable, use existing education resources and programs, fostering partnerships to meet outcomes.	Agency		Initiative 8
Build capacity in marine estate support agency staff and key stakeholder groups to deliver quality education engagement across all Strategy initiatives.	Agency	DPI	All initiatives
Form active partnerships with education networks and institutions to promote marine estate education.	Education networks Education institutions	DPI	Initiative 8, Initiative 9
Develop systems and provide advice to partners on how to align existing programs with Strategy requirements.	Agency	DPI	All initiatives

05



IMPROVE COORDINATION, COLLABORATION AND EFFICIENCY IN DELIVERING EDUCATION PROGRAMS CONT.

Action	Target audience	Lead agency	Links with Strategy (page 13)
Develop internal processes to evaluate and monitor the success of marine estate education programs, including lessons learnt. Create an overall Strategy implementation education snapshot to document collective success. Communicate performance to partners, stakeholders and the community.	Agency	DPI	All initiatives



05 APPENDIX 1

ACRONYMS AND TERMS

Table 7. Marine estate acronyms

Acronym	Details
Authority	Marine Estate Management Authority
CALD	Culturally and linguistically diverse
DPI	Department of Primary Industries
DPIE	NSW Department of Planning, Industry and Environment
EES	NSW Environment Energy and Science (part of DPIE)
EPA	NSW Environmental Protection Authority
Education Strategy	Marine Estate Education Strategy
P&A	Planning and Assessment (part of DPIE)
Strategy	Marine Estate Management Strategy
TARA	NSW Threat and Risk Assessment
tfNSW	Transport for NSW



Table 8. Marine estate terms

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 <i>Marine Estate Management Act 2014</i> 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

Table 8. Marine estate terms **cont.**

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	<p>as defined in the <i>Marine Estate Management Act 2014</i> means:</p> <ul style="list-style-type: none"> — the coastal waters of NSW within the meaning of Part 10 of the <i>Interpretation Act 1987</i> — 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 or 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

Table 8. Marine estate terms **cont.**

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'



06 APPENDIX 2

SUMMARY OF EDUCATION SPECIFIC FEEDBACK FROM THE COMMUNITY



6.1 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 \(PDF\)](#)

Table 9. Community comments and the Authority's responses — education specific feedback

What the community has told us	Our response
We need a genuine Education Strategy that reinforces the values to the whole community by having the world's best managed marine environment.	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.
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).	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.
Improve and develop innovative education programs that can be delivered at schools and clubs.	
Enhancing volunteer efforts with strategic resourcing to increase community engagement, education and on-ground action (e.g. Local Land Services works with Landcare groups)	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.

Table 9. 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.

Table 9. Community comments and the Authority's responses — education-specific feedback cont.

What the community has told us	Our response
The Strategy does not capture proven health, social and educational benefits of recreational fishing.	<p>Initiative 6 in the Strategy has included information about the community benefits of recreational fishing.</p> <p>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>
Monitoring and education is key to ensure long-term sustainable fish stocks and to reduce the multiple user conflicts.	<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>
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>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>
Education of culturally and linguistically diverse communities is also needed.	<p>The Education Strategy includes actions to educate and engage with culturally and linguistically diverse communities.</p>



6.2 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 \(PDF\).](#)

Table 10. 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.



6.3 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.



07 APPENDIX 3

EXISTING AGENCY AND NON-AGENCY PROGRAMS

Table 11. 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	EES	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

Table 11. 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	EES	Citizen science program to provide data about how beaches change over time	Beach goers at the four monitoring sites: — Manly (south Steyne) — North Narrabeen — Tallow Beach (Byron) — Blacksmiths Beach (Swansea)
Commercial whale, dolphin, and seal operations	EES	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)	EES	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

Table 11. 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) EES
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	EES	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	EES	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	EES	Multiagency operational response training for marine wildlife emergencies	Agencies involved in emergency response and wildlife rescue
Maritime Infrastructure program	TfNSW	New and upgraded boating Infrastructure assessed for environmental impact	Boaters General public
Maritime safety campaigns	TfNSW	Tell the general public about safety issues	Boaters General public

Table 11. 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	EES	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	EES	Trial of advertisement for southern right whale on Swellnet	Community
Mooring program	TfNSW	Seagrass-friendly moorings	Boaters
NPWS Discovery Program	EES	Tours in national parks	Students
NPWS Wilderquest	EES	School resource designed to nurture love for nature	Students
ORRCA whale census	EES	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: — 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

Table 11. 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	EES	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	EES	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	EES	Helicopter tours out to south Solitary Island lighthouse	Visitors to South Solitary Island

Table 11. Existing agency programs — collated Workshop 1 findings **cont.**

Program	Agency	Description / purpose	Target audience
Strandings and face-to-face liaison at emergencies	EES	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	EES	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
Watson Bay Pilot Station	TfNSW	Boating Industry Association uses resources and site for educational purposes	Schools
Wild about whales	EES	Online (including social media) whale watching app or website	Whale watchers General public



Table 12. 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

Table 12. 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

Table 12. Desktop survey of a sample of existing non-agency programs that are relevant to the Education Strategy *cont.*

Program	Organisation	Description / purpose	Target audience
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



