



# Baseline evaluation of the Marine Estate Management Strategy

Findings and recommendations from the first evaluation (Strategy evaluation report)

A final report prepared for The Department of Regional NSW - Department of Primary Industries

3 September 2021

## About Aither

Aither's purpose is to help governments and businesses make better decisions about globally significant issues. Natural systems are increasingly strained and under threat, creating challenges in water, infrastructure, cities, agriculture and the environment. The future is uncertain, and the stakes are high.

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Aither assisted the Department of Primary Industries and MEMA agencies to collaboratively develop the Monitoring and Evaluation Framework in 2019. Aside from preparing the Framework, Aither has not been involved in delivery of the MEMS. As such, Aither was able to provide an independent evaluation, with no real or perceived conflict of interest.

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## Abbreviations

Acronym	Meaning
DPIE	Department of Planning, Industry and Environment
DPIE Crown Lands	Department of Planning, Industry and Environment – Crown Lands
DPIE Water	Department of Planning, Industry and Environment - Water
DPIF	Department of Primary Industries Fisheries
DPIE – EES / EES	Department of Planning, Industry and Environment - Environment, Energy and Science
DPIE – P	Department of Planning, Industry and Environment – Planning and Assessment
EPA	Environment Protection Authority
EWG	Evaluation Working Group
IWG	Interagency Working Group
KEQ	Key Evaluation Question
KPI	Key Performance Indicator
LI	Leading Indicator
MASC	Marine estate Agency Steering Committee
MEEKP	Marine Estate Expert Knowledge Panel
MEMA	Marine Estate Management Authority
MEMS	Marine Estate Management Strategy
MEMS staff	Staff responsible for governance and/or delivery of the Marine Estate Management Strategy
MER	Monitoring, evaluation and reporting
Monitoring and Evaluation Framework	Integrated monitoring and evaluation framework for the Marine Integrated Monitoring Program
MIMP	Marine Integrated Monitoring Program
MIMP SC	Marine Integrated Monitoring Program Steering Committee
MIMP staff	Staff responsible for governance and/or delivery of the Marine Integrated Monitoring Program
NRAR	Natural Resource Access Regulator
NSW	New South Wales
TARA	Threat and Risk Assessment
TfNSW	Transport for NSW
TWG	Technical Working Group



# Executive Summary

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## Overall findings

Overall, this baseline / formative evaluation of the Marine Estate Management Strategy (MEMS) found the first two years of implementation (Stage 1, 2018 – 2020) have:

- built strong foundations for future success,
- achieved change against all short-term outcomes, and
- set a trajectory for achieving intermediate and long-term outcomes.

Staff responsible for the delivery of the MEMS have been required to adapt the program in response to challenges beyond their control. These included bushfires, floods, COVID-19, several machinery of government changes; extended approvals processes; reduced funding; and funding uncertainty. At times, adapting to these challenges has required the rescoping of projects and caused project delays. Despite these challenges, important and significant projects have been delivered or substantially progressed across most initiatives.

There has been at least some achievement against all short-term outcomes set out in the Monitoring and Evaluation Framework. There is also evidence of early progress against a range of intermediate outcomes. This suggests that the MEMS is on track to continue to deliver outcomes in the future.

Important management and delivery processes have been established in Stage 1 and, with some refinements, will continue to support efficient delivery of the MEMS. These include governance arrangements, collaboration and partnership arrangements, project management and reporting processes, and external communication. In particular, coordination and collaboration have improved significantly during Stage 1 and have been important enablers of successful implementation. This is an early indication that the intent of the MEMS – for holistic and integrated management of the marine estate – is working.

The Marine Estate Management Strategy (MEMS), released in 2018, represents a new integrated, holistic and collaborative approach to managing the New South Wales (NSW) marine estate. The MEMS focuses on addressing priority threats and risks to the marine estate that require long-term management. Overall, it aims to achieve the Marine Estate Management Agency's (MEMA) vision for *a healthy coast and sea, managed for the greatest well-being of the community, now and into the future*.

This report provides findings and recommendations from the formative / baseline evaluation of the MEMS. The evaluation is intended to:

- identify achievement against short-term outcomes (0-2 years) set out in the 2019 [integrated monitoring and evaluation framework](#) (the Monitoring and Evaluation Framework)
- present baseline information against which to measure future performance
- identify insights for continuous improvement
- support internal transparency and accountability.

The evaluation drew on quantitative and qualitative information from monitoring against outcome indicators, interviews, administrative data, MEMS strategic documents, MEMS reporting documents and processes, and MEMA reports. All information was provided by the MEMA agencies. The evaluation was conducted from December 2020 to June 2021, and considered Stage 1 of MEMS implementation (2018-2020) and the first six months of Stage 2 (July-December 2020).

## The Marine Estate Management Strategy is critical for delivering and communicating integrated outcomes for the marine estate, communities and industries

The MEMS is still critical for advancing coordinated, integrated and evidence-based management, and to address the ongoing priority threats and stressors to the marine estate. The MEMS represents a new integrated, holistic and collaborative approach to managing the marine estate. It is a legislated, evidence-based strategy with strong ownership and participation from multiple key agencies. It provides agencies with a clear vision and priorities for managing the marine estate. It does so by setting a framework for working efficiently together across different agencies. There is strong community awareness and support for the MEMS, and there are associated expectations that the MEMS will deliver against its long-term outcomes and vision. Without the coordinated and integrated management enabled by the MEMS, the multiple agencies responsible for the marine estate are unlikely to be able to enhance support for marine estate management, balance trade-offs in use, and deliver benefits for all stakeholders.

The MEMS focuses on addressing threats and risks to the marine estate that are complex and require long-term management. The priority threats and competing uses of the marine estate, identified in the 2017 state-wide [Threat and Risk Assessment](#) (TARA), are still present. While the nature of and understanding of some of these threats have changed since 2017, the need for coordinated and ongoing management has not.

## Delivery of the MEMS has adapted to a range of external challenges, including bushfires, floods, the COVID-19 pandemic and machinery of government changes

Delivery of the MEMS has been affected by unanticipated, ongoing challenges outside of the control of the MEMS agencies. Despite these challenges, MEMS staff adapted their delivery approaches and have made substantial progress in delivering actions. The challenges faced by MEMS include the COVID-19 pandemic, the 2019-20 NSW bushfires and subsequent floods, and machinery of government changes, with many of these events occurring on an unprecedented scale. Each event has affected the marine estate policy and management environment, with practical implications for delivery.

Several coastal catchments were affected by the 2019-20 bushfires and subsequent floods, with environmental impacts for the marine estate. The emergency response caused disruptions for staff across MEMS agencies.

The ongoing COVID-19 pandemic affected on-ground and face-to-face activities planned for 2020, including field-based research and stakeholder engagement. This delayed multiple projects and resulted in some projects being re-scoped. It also contributed to delays to conducting surveys through the MIMP, which were intended to provide baseline data to inform this evaluation.

There have been several changes to machinery of government in NSW since 2018, with multiple MEMS delivery teams being moved between departments. As a result, there were changes to staff positions and inter-agency working arrangements, and delays to recruiting staff. The changes also

created periods of adjustment and confusion for the affected agencies, partner agencies and other stakeholders.

There has been substantial progress in delivering actions, despite these challenges. There have also been unexpected positive outcomes from adapting to these changes. This includes rapid expansion of the water quality monitoring network to monitor bushfire impacts; extending the reach, efficiency and effectiveness of engagement and education activities through virtual methods; and improved collaboration and efficiency between agencies as some were brought together within a shared department cluster.

### Collaboration, delivery processes and governance arrangements are robust, with opportunities to further strengthen

Governance arrangements, and delivery and program management processes have been established. These foundations have enabled improved coordination and collaboration among government agencies, and with stakeholder and community groups. Some opportunities for improvement have become evident in the last two years. Reviewing and refining some specific delivery processes is required to improve the effectiveness and focus of MEMS implementation.

Coordination and collaboration have improved significantly over recent years and has been an important enabler of successful program implementation. There were reports of strong engagement and collaboration both between and within MEMS agencies, with external stakeholders, and beyond the MEMS program. The MEMS has helped establish relationships and build awareness between agencies. It has also enabled the sharing of resources, knowledge and information, and created a shared sense of ownership for delivery of the MEMS. Staff have reported that collaboration on MEMS projects has also helped foster relationships with other agencies and external stakeholders, with benefits that extend beyond their MEMS work. This is an early indication the MEMS is delivering upon its core intent.

There are also areas for improvement related to processes and governance arrangements. These include ensuring that; governance, approvals, collaboration and communication protocols remain fit-for-purpose as implementation progresses; stakeholder communication is coordinated between agencies; and program management reporting is aligned with staff and stakeholder needs. Refining these processes will improve the efficiency and effectiveness of implementation and achievement of outcomes.

### Approved Stage 1 projects were largely delivered on schedule, with some delays due to unexpected external challenges and funding uncertainty

Overall, implementation of the MEMS is progressing well. Staff adapted to the challenges outlined above to deliver projects and lay foundations for future success. Projects identified for Stage 1 were broadly completed in line with the approved scope. However, the scope was reduced for some actions and projects to accommodate reduced or uncertain funding and delays from approvals and unexpected events. In some areas, this is likely to affect the achievement of intermediate and long-term outcomes. Risks that are within the control of the MEMA agencies or NSW Government, such as delayed approvals and funding quantum and uncertainty, must be addressed to ensure the MEMS vision and long-term outcomes can be achieved.

## Funding uncertainty is a significant barrier to effective MEMS delivery

Longer-term funding certainty is required to ensure effective delivery of the MEMS. Funding uncertainty and delayed approvals processes also compound the difficulty of responding to external events and risk. The MEMS is a long-term strategy with a range of projects that span multiple years and aim to achieve long-term outcomes. These actions and projects require long-term planning, longer-term funding certainty, and timely approvals processes to be implemented effectively. However, only short-term funding has been approved for the MEMS. Some initiatives also received significantly less funding than was required to undertake projects intended for Stage 1. As a result, some projects could not be commenced in Stage 1.

One- or two-year funding cycles create delivery inefficiencies. Staff spend a significant amount of time applying for funding on a frequent basis and are limited in their ability to undertake long-term planning and implementation. Short funding cycles make it difficult to attract and retain qualified staff, and risks failure to meet stakeholder expectations regarding longer-term achievements. It also makes it difficult to adapt to external threats and challenges.

## Achievement has been observed against all short-term outcomes

There has been at least some achievement against all MEMS short-term outcomes, as set out in the 2019 [Marine Integrated Monitoring Program \(MIMP\) Monitoring and Evaluation Framework](#). Short-term outcomes had expected timeframes of 0-2 years. Therefore, there was expected to be observable change against short-term outcomes at the end of 2020. Information from indicator results, interviews, administrative data, MEMS strategic documents, MEMS reporting documents and processes, and MEMA reports collectively indicate that there has been at least some achievement against all short-term outcomes. Intermediate outcomes have expected timeframes of 2-5 years; however, early progress has been identified for a range of intermediate outcomes. This is an indication that MEMS implementation is on track to achieving further outcomes in the future.

Staff are continuing to establish baseline data against a range of indicators, which will better support the measurement of change against outcomes in the future. There have been impediments to collecting results against indicators due to:

- delays to administering surveys due to the COVID-19 pandemic, slow approvals processes and funding constraints. Multiple surveys were developed in Stage 1, but delays to final approvals meant that surveys could not be conducted in time for the results to inform this evaluation.
- delayed and lack of funding, and delays to appointing staff, for implementing the MIMP.
- a lack of clarity among some staff, particularly those new to the MEMS, regarding the role of the MIMP and initiative-based roles and responsibilities for monitoring outcomes.
- a focus on delivering and reporting on actions and projects, with less emphasis on monitoring outcomes.

Staff have also identified outcomes and indicators to review to improve appropriateness for the MEMS intent and scope, and to improve practicality for future monitoring. Data was not collected for most indicators that were identified for refinement. Refinements to outcomes and indicators should help to improve data availability in the future.

## Future implementation

The projects undertaken in the last two years have supported some achievement against all short-term outcomes and laid the groundwork for further results in the future. These projects are a first step. Ongoing management, supported by greater funding certainty, is required to ensure that investment to date is not wasted. It is only through continued implementation of the MEMS that the NSW Government can holistically manage the marine estate and support important social, cultural, economic and environmental benefits for NSW communities and industries.

The recommendations and findings from this first evaluation aim to support continued improvement in delivery of the MEMS. The implementation of the recommendations will improve the efficiency and effectiveness of delivery, and better position the MEMS to achieve intermediate and long-term outcomes for the marine estate and NSW community. As noted in the final recommendation, the Marine estate Agency Steering Committee (MASC) and the Marine Integrated Monitoring Program Steering Committee (MIMP SC) should confirm responsibilities and timeframes for addressing accepted recommendations.

## Recommendations

### Context / basis

#### Recommendation 1

The scheduled five-year review of the TARA should consider new evidence that has emerged since 2017. This includes insights and evidence relating to bushfires, timeframes for climate change risks, and other evidence arising from new or ongoing research, monitoring, cultural knowledge or other formal documentation relating to the marine estate. Future MEMS initiatives, outcomes, management actions and projects should reflect any revised priority threats and risks.

#### Recommendation 2

NSW Government should provide longer-term funding for delivery of the MEMS program. This will allow more efficient planning and implementation, and reduce risks to achievement of intermediate and long-term outcomes for the marine estate environment and the communities and industries it benefits.

### Process and delivery

#### Recommendation 3

Processes for decision-making, approvals and communication should be reviewed and refined. Decision-making and approvals processes must be made clear; and decisions communicated to staff in a transparent and timely manner. To ensure that collaborative processes add value to the project or outcome, input should only be sought from those with relevant expertise or accountabilities.

#### **Recommendation 4**

Program management reporting requirements and frequency should be reviewed to ensure reporting is fit-for-purpose for staff and decision-makers. MEMS governance groups and decision-makers should communicate their responses for addressing reported risks, issues or recommendations to initiative staff. External reporting of content captured through program management reporting should also be reviewed to ensure the information and frequency is fit-for-purpose for stakeholders.

#### **Recommendation 5**

Enhance centralised communications and engagement by:

- Ensuring MEMS staff are aware of the existing centralised communications and engagement strategy, and their responsibilities for undertaking coordinated and consistent engagement, where appropriate.
- Providing external audiences with clear and simple summaries of the MEMS scope and MEMS agencies roles and responsibilities, to assist in managing stakeholder expectations. This should include clarifying interfaces with other related legislation and agencies.
- Providing consistent messaging on shared and common topics, accompanied by guidance for staff to develop initiative-specific messages and communication where required (including co-branded communications, where appropriate).

#### **Recommendation 6**

Clearly communicate the process and requirements for adaptively managing actions and projects, where needed, to MEMS staff.

#### **Outcomes, and outcome monitoring and reporting**

#### **Recommendation 7**

Initiative leads, with input from MIMP staff, should review specific outcomes and indicators identified through this evaluation to improve their appropriateness and practicality. Refinements must be consistent with the definitions of outcomes and indicators set out in the Monitoring and Evaluation Framework. Once refinements to outcomes and indicators have been agreed, initiative leads must complete indicator specifications, where required, to guide data collection.

#### **Recommendation 8**

Initiative leads and MIMP staff, with input from MASC and MIMP Steering Committee, should review, agree and clearly communicate roles, responsibilities and accountabilities for outcomes and monitoring. In doing so:

- Roles, responsibilities and accountabilities for outcomes, indicators and data collection should be assigned to specific individual roles, in alignment with existing governance and delivery roles across the MEMS and MIMP. Roles and responsibilities for indicators and data collection will be assigned to initiative leads or delegates.
- Accountabilities for achieving specific outcomes should be allocated to relevant senior executive roles within the MEMA agencies, reflecting alignment with existing areas of responsibility.

- Include timeframes for fulfilling responsibilities.

#### **Recommendation 9**

Initiative leads should budget for MIMP implementation with respect to their initiative. MASC and MIMP SC should ensure funding and resources are allocated to effectively implement the MIMP.

#### **Recommendation 10**

Initiative leads should identify any short-term outcomes that require ongoing effort to maintain achievements to date, or where there is a desire for further improvement. Initiative and project leads should continue to consider these outcomes in planning and delivery during Stage 2.

#### **Recommendation 11**

Initiative leads, with support from MIMP staff, should embed systems or processes within initiatives for collating data against outcomes, indicators and measures. This should reflect agreed roles and responsibilities and data collection frequencies identified in the Monitoring and Evaluation Framework. Where possible, these should align with existing processes for collating and documenting initiative-level data and information.

Periodic reporting on outcomes and indicators should be embedded into existing initiative and program reporting processes, in line with the frequency of data collection in the Monitoring and Evaluation Framework.

#### **Recommendation 12**

Establish an approach for external reporting against outcomes and indicators. The approach should outline format, frequency and content requirements; be targeted to audience needs and interests; and drive accountability. The reporting frequency may be longer than the data collection frequencies specified in the Monitoring and Evaluation Framework.

#### **General**

#### **Recommendation 13**

MASC and the MIMP SC should confirm responsibilities and set timeframes for executing accepted recommendations. They should also allocate responsibilities, to agencies and roles, where not identified in the recommendations.

# 1. Introduction and background

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The marine estate is one of the most significant natural assets in New South Wales (NSW). It comprises tidal rivers and estuaries, the shoreline, submerged lands, offshore islands, and the waters up to three nautical miles off the coast. The NSW community derives social, cultural, and economic benefits from the marine estate, which are underpinned by good water quality, healthy habitats and diverse and abundant marine life.

The Marine Estate Management Authority (MEMA) released the [Marine Estate Management Strategy \(MEMS\)](#) in 2018, to provide an overarching framework for coordinated management of the marine estate. It is a ten-year strategy with nine management initiatives designed to address priority threats to the marine estate. It aims to deliver the MEMA's vision for:

*a healthy coast and sea, managed for the greatest well-being of the community, now and into the future*

Given the complexity of the marine estate and its significance for NSW, it is critical that it is managed well. Evaluation and learning from evaluation are fundamental to the long-term success of the MEMS and effective marine estate management. Evaluation promotes improved planning and delivery to achieve outcomes, not just outputs, by measuring progress towards outcomes, identifying successes and areas for improvement, and informing adaptive management. Overall, evaluation can support greater efficiency and effectiveness in delivering the MEMS and achieving desired outcomes for the marine estate and those who draw benefit from it.

This report provides the findings and recommendations from the baseline / formative evaluation of MEMS implementation. Stage 1 of the MEMS was completed at the end of June 2020. As progress had been made towards Stage 2 at the time this evaluation was conducted, the evaluation considered the delivery period for Stage 1 and the first six months of Stage 2 (July to December 2020).

At this early stage of implementation, it is important to reflect on; progress towards achieving MEMS outcomes; any external factors that may have affected delivery to date or present risks to future delivery; whether MEMA agencies have the right processes in place to support implementation; and what changes can be made to support efficient and effective implementation and future success.

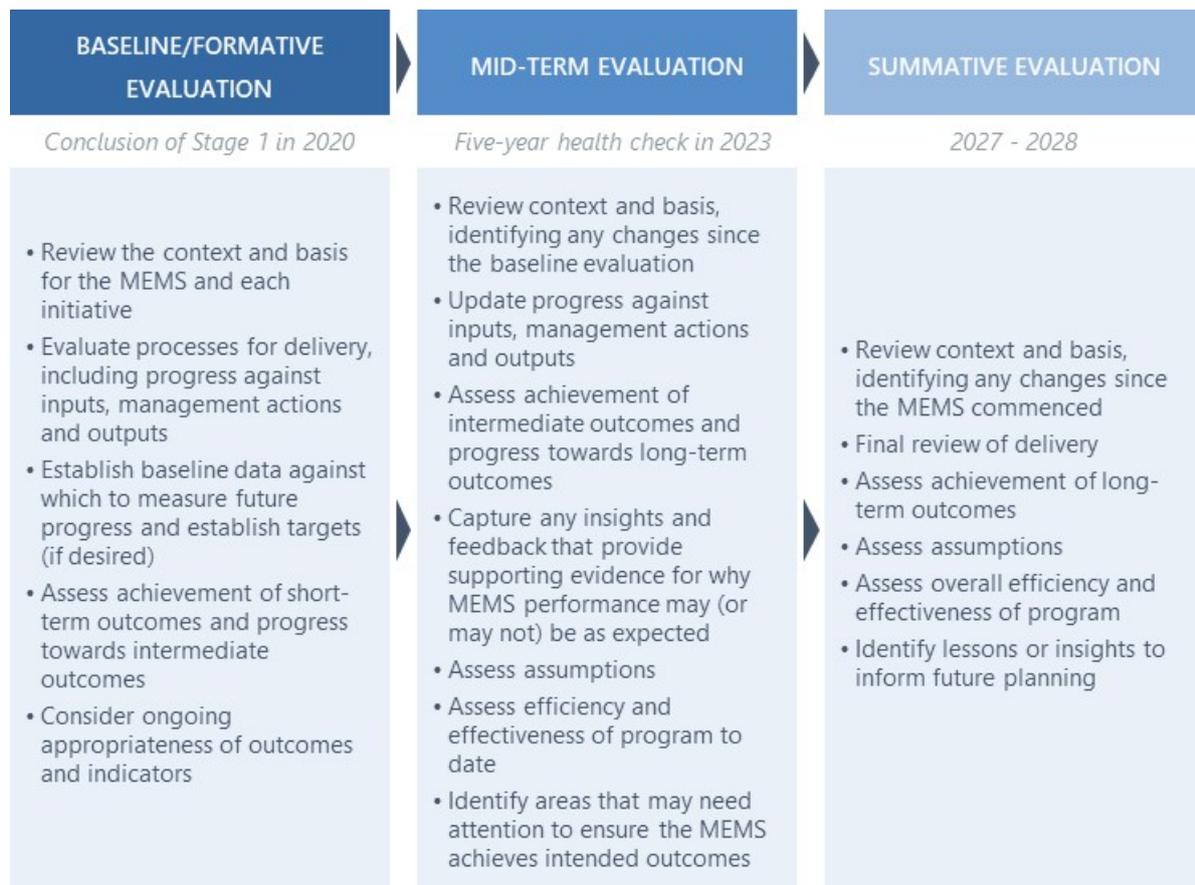
## 1.1. About the Marine Estate Management Strategy

The MEMS is a requirement of the *Marine Estate Management Act 2014*. It is informed by the evidence based state-wide [Threat and Risk Assessment \(TARA\)](#). The TARA uses a comprehensive risk assessment to identify priority threats for management through the MEMS, and is intended to be reviewed every five years.

The MEMS sets out management objectives and actions across nine initiatives designed to address priority threats to the marine estate and achieve the vision. The MEMS also outlines high-level roles and responsibilities for each of the MEMA agencies.

## 1.2. Evaluation purpose

This is the baseline / formative evaluation, which is the first of three evaluations that will be undertaken over the life of the MEMS. The purpose and approach to each evaluation is set out in the 2019 [integrated monitoring and evaluation framework](#) (the Monitoring and Evaluation Framework) for the Marine Integrated Monitoring Program (MIMP), and is summarised below (Figure 1). The baseline / formative evaluation is intended to identify early progress towards achieving MEMS outcomes, establish baseline against which to measure future progress, identify insights for continuous improvement, and support internal transparency and accountability.



Source: Adapted from Table 8 in the [Monitoring and Evaluation Framework](#)

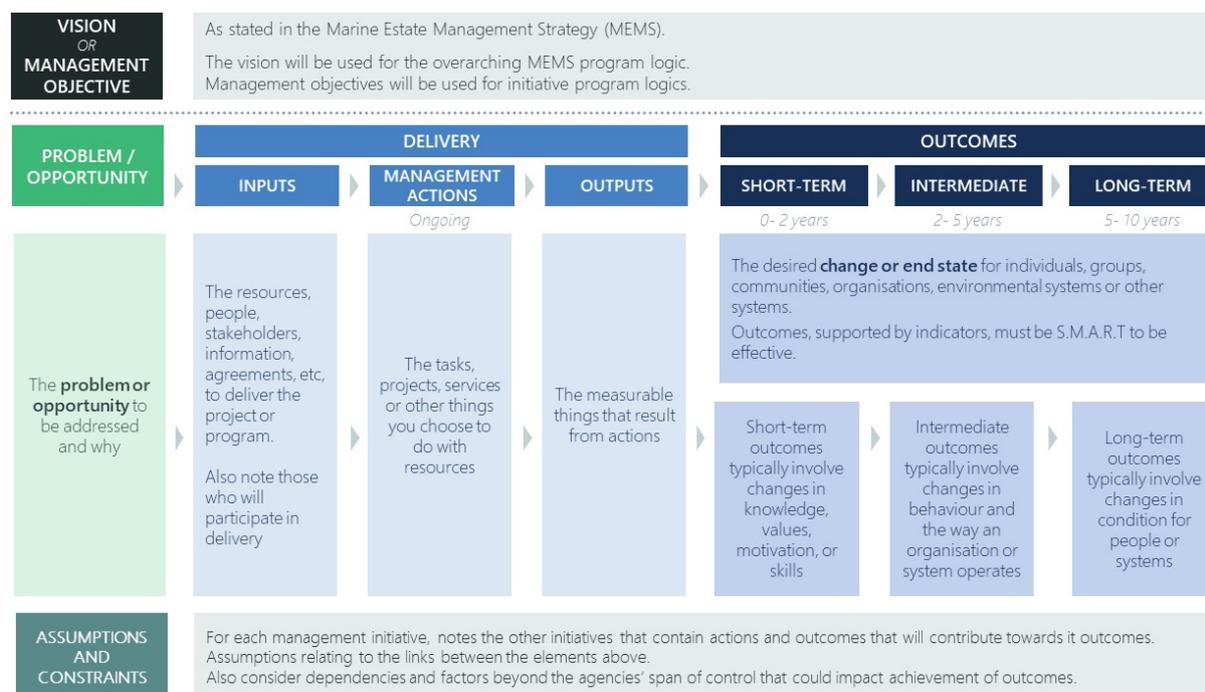
Figure 1 A summary of evaluations to be undertaken for the MEMS

When the original Monitoring and Evaluation Framework was developed, target-setting for selected indicators was intended to be considered through the baseline / formative evaluation. However, staff have since raised concerns about the appropriateness of setting formal targets at this stage in the program. Most outcomes and indicators specify a direction of change (e.g., improve, maintain, reduce), and agencies may set informal targets for the magnitude of change, if desired. Where appropriate, targets may be set once refinements to outcomes, indicators and measures have been agreed (see Section 4.6), and baseline data has been collected.

## 1.3. Evaluation approach

on processes for the delivery of management activities and outputs, progress towards short-term outcomes and implications for future implementation of the MEMS.

The evaluation was undertaken against the initiative-level program logics that were developed as part of the Monitoring and Evaluation Framework. Each program logic contained the elements shown below (Figure 2). Program logics for each initiative can be found in Appendix A of the Monitoring and Evaluation Framework. Treasury benefits mapped against program logic outcomes can be found in Appendix D of the Monitoring and Evaluation Framework.



Source The Monitoring and Evaluation Framework.

Figure 2 Template for program logics for each initiative in the Monitoring and Evaluation Framework

The evaluation was guided by the Key Evaluation Questions (KEQs), sub-questions and proposed data sources, as set out in the Monitoring and Evaluation Framework. The KEQs sub-questions and data sources were reviewed and tailored for this evaluation, considering the evaluation context, purpose, data availability, and constraints. The KEQs, sub-questions and data sources are provided in Appendix A - , with KEQs for each evaluation type summarised below (Table 1).

Table 1 Key evaluation questions for each evaluation type

Evaluation type	Key evaluation question
Context and basis	What was the rationale and intent of the initiative?
	Has the policy context changed since the initiative was developed?
	How has understanding of marine estate environments and issues evolved since the initiative commenced?
Process	Were management actions completed and outputs achieved, within budget, scope and timeframes? Why or why not?
	Was implementation constrained in any way by inputs?

Evaluation type	Key evaluation question
	Why or why not?
Outcome	To what extent have outcomes been achieved? Why / why not?
	Has the initiative produced any positive or negative unintended or unexpected outcomes? Why/why not?
	Are outcomes and indicators appropriate to the identified need? Why/why not?
	What insights are there for ensuring achieved outcomes are maintained in the future?

The evaluation explored the KEQs iteratively, using multiple lines of inquiry. This included an initial desktop review of monitoring data collected and provided by MEMS initiatives, interviews with relevant agency staff and further desktop review of additional data and information identified through the interviews.

Interviews with relevant agency staff include the following groups:

- Initiative leads and key delivery staff, to provide initiative-level insights and some inter-initiative insights
- Interagency groups and committees, to provide overarching program and inter-initiative insights:
  - The Evaluation Working Group (EWG)
  - the MIMP Steering Committee
  - Marine Agency Steering Committee (MASC)
  - Marine Estate Management Authority (MEMA)
- Selected members of the Marine Estate Expert Knowledge Panel (MEEKP), to provide an external perspective.

Engagement was undertaken primarily through small group interviews (approximately 1-4 participants). No stakeholder engagement was undertaken beyond the staff and experts involved in delivery of the MEMS, MEMS and MIMP governance, or advisory groups. Appendix B provides further detail on stakeholder interviews.

## 1.4. Structure of the report

This report provides overall findings and recommendations that apply across the nine initiatives, and how the initiatives and responsible agencies collectively deliver the MEMS. The findings and recommendations are structured according to following evaluation themes:

- Section 2: the context and basis of the MEMS, including contextual factors that may have affected progress and changes to knowledge and information in relation to the marine estate and its management.

- Section 3: processes for delivery, including enablers of success, challenges to delivery progress and processes, improvements and refinements for the future, and high-level delivery status.
- Section 4: findings against **outcomes**, focussing on the achievement of short-term outcomes, the establishment of baseline data, and refinements to outcomes and indicators.

Information was collected against KEQs at the initiative level, however findings in this report are presented against themes across the whole of the MEMS program. Findings specific to individual initiatives are provided separately in the *Baseline evaluation of the Marine Estate Management Strategy: Findings and recommendations from the first evaluation (initiative-level supplementary report)*.

## 2. The Marine Estate Management Strategy is addressing a clear need

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The MEMS is still critical for advancing coordinated, integrated and evidence-based management, and to address the ongoing priority threats and stressors to the marine estate. The MEMS focuses on threats and risks to the marine estate that are complex and require long-term management. The priority threats and competing uses of the marine estate, identified in the 2017 state-wide Threat and Risk Assessment (TARA), are still present. While the nature of and understanding of some of these threats have changed over the last two years, the need for coordinated and ongoing management has not.

Delivery of the MEMS has been affected by unanticipated, ongoing challenges that are outside of the control of the MEMS agencies. The challenges faced by MEMS include the COVID-19 pandemic, the 2019-20 NSW bushfires and subsequent floods, and machinery of government changes, with many of these events occurring on an unprecedented scale. Each event has affected the marine estate policy and management environment, with practical implications for delivery. Despite these challenges, MEMS staff adapted their delivery approaches and there have also been unexpected positive outcomes from adapting to these changes.

Longer-term funding certainty is required to ensure efficient and effective delivery of the MEMS. However, funding has only been approved on short-term timeframes. The MEMS is a long-term strategy with a range of programs that span multiple years and aim to achieve long-term outcomes. These programs require long-term planning, longer-term funding certainty, and timely approvals processes to be implemented effectively.

### 2.1. The MEMS is a highly relevant, ambitious and unique strategy

The MEMS represents a new integrated, holistic and collaborative approach to managing the marine estate. It is a legislated, evidence-based strategy with strong ownership and participation from multiple key agencies, and provides agencies with a clear vision and priorities for managing the marine estate. It does so by setting a framework for working together across the different agencies' remits for efficiency and alignment. The MEMS focuses on threats and risks to the marine estate that are complex and require long-term management. It is still highly relevant and required to address the ongoing priority threats and stressors to the marine estate, as set out in the state-wide TARA.

Consultation and engagement with stakeholders and the community through Stage 1 has built interest in and support for the MEMS. Engagement has also set high expectations for what the MEMS can achieve for the marine estate and the communities and industries that enjoy and benefit from it. It will be important for the responsible agencies to deliver on the commitments in the MEMS and to manage stakeholder expectations regarding the purpose and scope of the MEMS to retain and build support and trust from stakeholders and the community.

#### The MEMS is needed to address ongoing threats to the marine estate

Prior to development of the MEMS, threats and competing stakeholder uses of the marine estate were managed by different agencies and local governments. Management was focused on each individual agency's remit and was often siloed from other agencies. While there was a focus on environmental

condition, there was less consideration of the social, cultural, and economic aspects of the marine estate. Management was disjointed and there was limited coordination, collaboration or information sharing occurring between agencies. This created difficulties for meaningfully addressing complex priority threats to the marine estate and competing use of the estate by different stakeholders.

The NSW Government established the MEMA, supported by the Marine Estate Expert Knowledge Panel (MEEKP), to work with agencies and the community towards a common vision for the marine estate. The MEMA agencies completed an evidence-based state-wide *Threat and Risk Assessment* (the TARA) in 2017 to identify priority threats to the marine estate as whole. The TARA results, along with the *Marine Estate Community Survey Final Report* (2014) and the *Hawkesbury Shelf Marine Bioregion Threat and Risk Assessment Report* (2016), were critical inputs to the development of management responses at a state-wide scale. The MEMS addresses the priority threats to environmental assets and social, economic and cultural benefits as identified through the TARA. A comprehensive list of state-wide priority threats is included in the MEMS.

In the last two years the MEMS has built upon and integrated existing coastal and marine programs and reforms in NSW where relevant to establish a coordinated approach to marine estate management. It integrates the different facets of marine estate management, recognising the need to manage for the diverse environmental, social, cultural and economic values and benefits that the marine estate supports. It has also created space to accelerate existing programs and establish new programs.

The priority threats and competing uses of the marine estate are still present. While the nature of some of these threats may have changed over the last two years (refer to section 2.2), the need for coordinated and ongoing management has not. The MEMS is still critical for advancing coordinated, integrated and evidence-based management of the marine estate.

### Threats and risks to the marine estate require long-term management

Complex systems like the marine estate require long-term and coordinated management to address entrenched threats and conflicting stakeholder use. Without coordinated and integrated management, the multiple agencies responsible for the marine estate are unlikely to be able to balance trade-offs in use and deliver benefits for all stakeholders.

The actions undertaken in the last two years have laid the groundwork for results in the future, or for extending the reach of local or pilot programs to deliver outcomes across the marine estate. These actions are a first step. Ongoing management is required to ensure that implementation undertaken to date is not wasted. It is only through continued implementation of the MEMS that the NSW Government can holistically manage the marine estate and support the social, cultural, economic and environmental benefits that are important to communities and industries across NSW.

### Stakeholder's expectations of the MEMS are high

Consultation and engagement with stakeholders and the community has been an important part of delivery of the MEMS. Staff reported consultation has raised interest in and built support for the MEMS, and established expectations that the MEMS will deliver upon its long-term objectives. Several local councils and industry bodies have provided letters of support and other feedback indicating their support for the MEMS, their expectations that further outcomes will be realised in the future, and their desire to see continued funding for the MEMS.

Community and stakeholder support provides important social licence for the MEMS, can help foster collaboration and support more efficient implementation. This support also increases the visibility of the MEMS and the necessity of implementing it effectively, efficiently and in line with expectations. MEMS staff have also expressed concern that there are unrealistic expectations among some stakeholders regarding the scope of the MEMS; and there is a need to manage unrealistic expectations (see Section 2.3). However, failing to deliver against high but realistic expectations could result in reputational damage for MEMS agencies and the NSW Government more broadly, and result in adverse outcomes for the marine estate. Continued implementation of the MEMS will be important for maintaining stakeholder and community interest in and support for management of the marine estate.

## 2.2. Significant events have affected the MEMS's operating environment and altered understanding of threats to the marine environment

The COVID-19 pandemic, 2019-20 bushfires, subsequent floods and machinery of government changes that have occurred since 2018 have affected the operating environment for the MEMS. These events and changes have had implications for delivery. Staff reported anecdotally that these events have altered understanding among responsible agencies of threats to the marine estate, and that these new insights and knowledge may result in changes to risk ratings when the TARA is reviewed. Staff also reported observing changes in community interest in and use of the marine estate resulting during the pandemic.

### Large-scale challenges affected the NSW Government's operating environment

The COVID-19 pandemic, the 2019-20 NSW bushfires, subsequent floods and machinery of government changes have all affected the marine estate policy and management environment. Many of these events occurred on an unprecedented scale, particularly the COVID-19 pandemic and 2019-20 bushfires.

Widespread bushfires burned along the NSW coast from September 2019 to March 2020. The fire season was exacerbated by drought that affected 95 percent of NSW. The scale and intensity of the fires was unprecedented and resulted in the declaration of multiple states of emergency across south-eastern Australia. Several coastal catchments across NSW were affected, with environmental implications for the marine estate. These impacts became further pronounced as coastal catchments dealt with widespread flooding following the bushfires, with silt and debris washed from burnt catchments into the marine estate.

The COVID-19 pandemic was declared in March 2020 and resulted in significant social and economic disruption across Australia. Governments imposed travel restrictions, social distancing measures and working from home arrangements to curb the spread of the disease within Australia.

Two machinery of government changes have occurred since implementation of the MEMS commenced in 2018. Several departments were brought together into a Department of Planning, Industry and Environment cluster, before the Department of Primary Industries moved into the newly created Department of Regional NSW.

Community values and interest in the marine estate were not assessed as part of this evaluation; however, staff reported observing increased community interest in and use of the marine estate, particularly during the pandemic. In 2020, as more people worked from home and were required to socially distance from one another, there was increased interest in outdoor activities that met the

NSW Government's social distancing guidelines, including activities that could occur in or near the marine estate. Recreational boating is an example of an approved activity. Staff reported that there was an increase in applications for boating licences, and greater use of the marine estate by recreational boaters.

These events in the external environment have had implications for delivery of the MEMS, which are described in the section below.

## Unexpected events have provided both challenges and opportunities for MEMS implementation

The COVID-19 pandemic, the 2019-20 NSW bushfires, subsequent floods and machinery of government changes, outlined above, were all outside of the control of the MEMS agencies and have had significant implications for program delivery. However, in dealing with these challenges, MEMS staff have shown they are highly adaptable, and that there is flexibility in the MEMS program to minimise the negative effects of these challenges. While presenting challenges for MEMS delivery, there have also been some positive outcomes from these events.

The 2019-20 bushfires resulted in the reassignment of multiple MEMS staff to assist with the emergency response. This created role vacancies and understaffing in some initiatives, as well as a temporary loss of institutional knowledge and relationships. For some initiatives, there was increased workload for remaining staff as they took on additional project loads, and inefficiencies associated with staff filling roles temporarily.

However, the bushfires also enabled rapid expansion of the water monitoring network along the NSW south coast. This occurred in locations where the fires and subsequent flooding had created threats to water quality and the condition of the marine estate. Staff from Initiative 1 worked with South Coast councils to design water quality monitoring programs consistent with Initiative 1 monitoring, that also collected information to assist with bushfire response efforts. The rapid development of these programs led to greater collaboration between MEMS agencies and local councils, and are providing MEMS staff with more comprehensive water quality monitoring data than would have otherwise been available.

During the COVID-19 pandemic, government staff shifted to work-from-home arrangements, and had to rearrange and rescope MEMS projects and activities to accommodate the restrictions. The pandemic affected on-ground activities planned for 2020, including field-based research, stakeholder engagement, and community and Aboriginal surveys and workshops. This delayed several projects and resulted in some projects being re-scoped to ensure work could continue. The delays in implementing the community and Aboriginal surveys also resulted in a delay in collecting data for multiple indicators across many initiatives. However, many initiatives were able to make necessary adjustments to progressively bring their programs back on track.

While initially presenting logistical challenges and a period of rescoping and adjustment, several staff also reported positive effects arising from the pandemic. In particular, the necessary shift from in-person engagement to virtual engagement enabled MEMS programs to reach more stakeholders through engagement and education activities, and provided a more efficient and productive way to conduct these activities.

The multiple changes to machinery of government resulted in changes to staff positions and inter-agency working arrangements, and delays to recruitment. Some role changes caused a loss of institutional knowledge, while others saw different priorities emerge with the newly appointed staff.

There was a period of adjustment for each machinery of government change, including some confusion, for the affected agencies, partner agencies and other stakeholders. The changes also supported improved cross-agency collaboration, and improved decision making and efficiencies between agencies, however, there is also still evidence of silos, even as agencies work underneath the same cluster.

These events were not anticipated in the MEMS, and created challenges such as temporary understaffing, increased the workload for remaining staff, delayed implementation, and resulted in temporary budget underspends and some re-scoping. Yet staff have adapted project scopes and timelines to ensure work continued and to try to bring implementation back on track. However, responding to external events is difficult when there are other risks that create barriers to effective program delivery, such as funding uncertainty and delayed approvals processes (see Section 2.3).

### The NSW Government's understanding of threats to the marine environment continues to evolve

The 2017 TARA heavily influenced the content and direction of the MEMS. The TARA drew on significant evidence to provide assessments of threats and risks within 20- and 50-year planning horizons. The assessments reflected the evidence and understanding of those risks and threats that was available at the time of the assessment.

The TARA is due to be reviewed after five years to review existing threats and risk ratings, identify new or emerging threats, reflect new evidence and progress in addressing key knowledge gaps. Staff have indicated areas where they expect risk ratings and priorities to change in the five-year review based on new research and knowledge. These include bushfires in coastal catchments and their impact on the marine estate, and the timeframe for threats posed by climate change.

Bushfires were not identified as a state-wide threat to the marine estate in 2017 when the TARA was completed. As a result, the MEMS does not contain management actions, outputs, or outcomes specific to managing bushfire risks to the marine estate. Given the severity and extent of the 2019-20 bushfire season, staff expect that bushfires could now be classed as a state-wide threat to the marine estate and be considered a higher priority for management.

Climate change stressors, including sea level rise, altered storm and cyclone activity, flooding, climate and sea temperature rise, altered ocean current and nutrient inputs, were included in the TARA on a 20-to-50-year timeframe. Recent extreme events suggest that threats to the marine estate from climate change may be occurring earlier and at a larger scale than anticipated. Delivery staff have also indicated that there is already a need to improve how the effects of climate change are considered in planning, particularly for areas such as coastal wetlands. The classification of climate change as a future challenge has also had implications for the scope and quantum of funding for Initiative 3, and how the MEMS as a whole addresses threats due to climate change.

The TARA also identified knowledge gaps that were important to address to inform future management of the marine estate. In some cases, a high risk rating was identified due to a lack of understanding of the threat. There were a range of projects undertaken during Stage 1 and further projects planned for Stage 2 that are intended to contribute towards addressing knowledge gaps. These projects may produce new evidence that will result in adjustments to risk ratings in the next TARA.

The threats and risks to the marine estate caused by climate change and bushfires need to be reviewed based on new evidence and research that has emerged since 2017. MEMS staff should

prepare to reflect these threats, as well as other new evidence, in the five-year review of the TARA. Any resulting adjustments to risk ratings and overall priorities must be reflected in future planning and funding across the MEMS initiatives to ensure these are adequately and appropriately managed.

### 2.3. Funding uncertainty and delayed approval processes are significant barriers to effective MEMS delivery

The MEMS is a long-term strategy with a range of programs that span multiple years and aim to achieve long-term outcomes. These programs require long-term planning, longer-term funding certainty, and timely approvals processes to be implemented effectively. However, funding has only been approved on short-term timeframes.

One- or two-year funding cycles create delivery inefficiencies. Staff spend a significant amount of time applying for funding on a frequent basis and are limited in their ability to undertake long-term planning and implementation. Short-funding cycles makes it difficult to attract and retain qualified staff as there is low job security. It also risks failing to meet stakeholder expectations regarding longer-term achievements, and makes it difficult to adapt to external threats like bushfires. Longer-term funding certainty is required to ensure effective delivery of the MEMS.

#### Long-term funding uncertainty creates inefficiencies and constrains long-term planning and implementation

Funding uncertainty and delayed internal approvals create inefficiencies in delivery, have implications for planning and delivering management actions, and may affect the ability to achieve long-term outcomes. This creates continued risks to program implementation, which are experienced in varying degrees across the program:

- **Ineffective implementation and long-term planning inefficiencies.** Staff are unable to plan actions or activities that extend beyond the funding timeframe with any certainty that actions will be funded and therefore can be implemented. This includes actions to collaboratively develop and operationalise new policy, as well projects involving on-ground works that may require ongoing monitoring or maintenance to ensure these works perform as intended and continue to support desired outcomes. The lack of certainty can limit actions or projects to those that can be implemented in the short-term, without being able to give due consideration to the most effective and efficient responses, which may require a longer delivery timeframe. Furthermore, short funding cycles limit the time and resources available to scope and plan future actions and projects. Ultimately, long-term funding uncertainty may limit the ability to effectively achieve long-term outcomes.
- **Delays to project schedules.** Delayed internal approval processes and funding announcements results in delays to recruitment, executing memorandums of understanding, procurement and project commencement, with implications for overall delivery. This is particularly challenging when those projects involve on-ground works that must be undertaken at certain times of the year to be most effective, efficient, and safe for delivery staff and contractors. In particular, works on waterways can often only be undertaken in winter and early spring, when streamflow and seasonal weather conditions are more conducive to completing construction safely and to optimising vegetation establishment, so delays to commencing these works can place these projects at risk. Funding delays and uncertainty can also have flow-on effects for partner agencies and researchers.

- **Administrative burden.** Short funding cycles mean that staff are required to regularly apply for the next round of funding. This process can begin soon after their current funding is approved, creating an administrative burden and diverting their time away from program planning and delivery. Where initiatives have planned actions with a longer time horizon, there has been need to rescope actions to reflect the quantum of funding that was received, again creating an administrative burden and distraction from implementation.

The challenges of funding uncertainty for planning and efficient delivery are compounded when the quantum of funding received at shorter timescales is less than anticipated. Some initiatives received a smaller amount of funding than was expected during initial planning and was requested in their funding application. This meant that program managers had to spend additional time rescoping and/or rescheduling projects, and are hesitant to plan future activities until funding has been approved and they can be certain of the amount of funding they will receive. Some projects are yet to commence.

Long-term funding certainty would reduce the administrative burden on staff and allow them to plan over multiple years. Coupled with timely approvals processes, this would provide agencies with greater certainty, improve the efficiency and effectiveness of planning and project delivery, and improve confidence in achieving outcomes.

### Funding uncertainty creates challenges for recruitment and resource planning

Funding uncertainty and delayed approvals processes have had implications for staff recruitment and resource planning over the past two years. A lack of certainty about the quantum of ongoing funds and the timing of funding announcements makes it difficult for MEMS agencies to:

- **Recruit staff in a timely and efficient manner to fill available positions.** This is a result of funding being announced too close to the beginning of the financial year, which creates delays in commencing and running a competitive recruitment process.
- **Recruit staff with appropriate experience.** Positions within agencies are often for a specialised skillset. Short-term funding for positions makes it difficult to recruit staff into permanent positions. This lack of job certainty makes MEMS agency vacancies less competitive than positions in other specialist organisations.
- **Retain staff in the long-term.** A lack of funding certainty means agencies are unable to provide staff with security that their position will exist in the coming financial year. It is difficult to retain staff when they cannot be given job security or timely notice that their position will be funded again.
- **Plan and adequately resource activities.** Uncertainty regarding the projects and number of positions that will be funded means delivery staff are unable to plan implementation ahead of time. Having to wait to plan implementation after short-term funding is announced compounds delays to project delivery and to the achievement of outcomes within original timeframes. Many staff have indicated that dedicated staff positions are required for implementation of their initiatives, rather than MEMS work only being one part of a broader position.

Each of these challenges leads to inefficiencies, a loss of corporate knowledge and a loss of ongoing relationships. Training new staff and having them build their knowledge and establish relationships takes time, which can then further compound project delays. Ongoing recruitment processes also add to the administrative burden for initiative leads, and creates additional stress and uncertainty for all staff members, with has implications for morale, wellbeing and productivity.

## Long-term funding uncertainty makes it difficult to manage stakeholder expectations

Without funding certainty, responsible agencies are unable to commit to projects and outcomes beyond those planned for the short-term. As a result, staff have been unable to communicate a longer-term plan to stakeholders. There are several pilot programs that are continuing into Stage 2. While the intention is to apply the lessons from these programs elsewhere, program managers are unable to provide commitment or definitive information on where, how and at what scale this will occur, as funding for the program has not been secured. This is challenging for managing stakeholder expectations and relationships.

MEMS delivery staff have also been limited in establishing mutually beneficial partnerships with research institutions as they cannot guarantee funding over multiple years. This is a lost opportunity for engaging the academic community in filling knowledge gaps and ensuring the MEMS continues to be informed by the best available evidence.

Funding uncertainty can also have specific effects on stakeholder relationships within each initiative. For example, there is high potential for reduced funding to negatively affect the function and effectiveness of Initiative 4 (Protecting the Aboriginal cultural values of the marine estate). The success of Initiative 4 is heavily dependent on community relationships, trust and engagement. These take time to build, effort to maintain, and can be very difficult to rebuild if lost or compromised. Continuity and certainty are important to enable the grassroots nature of engagement and participation that is unique and critical to Initiative 4.

Long-term funding certainty would enable staff to communicate long-term planning, manage stakeholder expectations, and establish and nurture relationships.

### Recommendations: Context / basis

#### Recommendation 1

The scheduled five-year review of the TARA should consider new evidence that has emerged since 2017. This includes insights and evidence relating to bushfires, timeframes for climate change risks, and other evidence arising from new or ongoing research, monitoring, cultural knowledge or other formal documentation relating to the marine estate. Future MEMS initiatives, outcomes, management actions and projects should reflect any revised priority threats and risks.

#### Recommendation 2

NSW Government should provide longer-term funding for delivery of the MEMS program. This will allow more efficient planning and implementation, and reduce risks to achievement of intermediate and long-term outcomes for the marine estate environment and the communities and industries it benefits.

### 3. Governance and delivery processes are broadly working, and program delivery is largely on track

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Governance arrangements, and delivery and program management processes have been established. These foundations have enabled improved coordination and collaboration among government agencies and with stakeholder and community groups. The MEMS has helped establish relationships and build awareness between agencies of the relevant work undertaken in each and how the context for policy development differs between agencies. It has helped enable the sharing of resources, knowledge and information and created a shared sense of ownership for delivery of MEMS outcomes. Staff have reported that collaboration on MEMS work has also helped them foster relationships with other agencies and external stakeholders in ways that have helped extend and improve their non-MEMS work.

There are also areas for improvements to processes and governance arrangements that have become evident in the last two years. These include ensuring that; processes, governance and communication protocols remain fit-for-purpose as implementation progresses; stakeholder communication is coordinated between agencies; program management reporting is aligned with staff and stakeholder needs; and actions are adaptively managed. Refining these processes will improve the efficiency and effectiveness of implementation and help achieve long-term outcomes.

Overall, implementation of the MEMS is progressing well, with staff adapting to challenges to deliver projects and lay foundations for future success. Projects identified for Stage 1 were broadly completed in line with the approved scope, however, there were delays in some areas due to unexpected events, and funding uncertainty and approvals processes (see in sections 2.2 and 2.3). Some of these risks, like the COVID-19 pandemic and bushfires, are outside of the control of the MEMS, and are being managed where possible through adapting delivery to ensure their effects are minimised. Other risks, such as reduced budgets, are not as readily addressed via mitigation measures and have instead been managed through scope or schedule changes. In some areas, this is likely to affect the achievement of intermediate and long-term outcomes. These risks must be addressed to ensure the MEMS vision and long-term outcomes can be achieved.

#### 3.1. Collaboration has driven successful delivery of the MEMS

Stage 1 of the MEMS focussed on establishing foundational elements, such as project management processes and governance, that set up the program for long-term success. These foundational elements support and enable the coordination and collaboration required to ensure holistic and efficient management of the marine estate as one integrated system.

Coordination and collaboration have improved significantly over recent years and has been an important enabler of successful implementation. There were reports of strong engagement and collaboration both between and within MEMS agencies, with external stakeholders, and beyond the MEMS program. This is an early indication the MEMS is delivering upon its core intent.

## MEMS planning and governance processes have successfully built on existing foundations

The first two years of implementation focussed on establishing robust planning processes and governance as the MEMS integrates different facets of marine estate management in a unique way. This was required to ensure that:

- the MEMS built upon existing programs and processes where appropriate, or filled gaps in existing program management processes,
- delivery staff were able to establish formal relationships and processes with one another to build interagency collaboration, and
- the management of social, cultural and economic values was integrated into project planning and delivery.

As each of these elements were new there was a need to dedicate time and effort to set up the correct foundations for successful implementation. As a result of this work, the MEMS has a strong governance and project management framework, and strong ownership and participation from multiple key agencies.

## Improved collaboration is enabling holistic management of the marine estate

Collaboration across the agencies responsible for implementation has noticeably increased during the development and early implementation of the MEMS. There is greater trust and mutual support between agencies, and between agencies and external stakeholders.

This includes engagement and collaboration:

- between MEMA partner agencies with key marine estate responsibilities
- with related agencies and local governments that were not previously involved in marine estate management, such as those involved in Crown land management, and land use planning and development controls,
- with new partner organisations that are helping deliver specific initiatives, such as peak bodies, and research organisations, and
- with stakeholder and community groups.

As an example, the inclusion of Transport for NSW as a MEMA agency has been highly beneficial for implementing Initiative 7, and improving collaboration between agencies. Prior to the MEMS there was limited engagement between Transport for NSW and the other MEMA agencies. The MEMS has helped establish relationships, as well as build awareness between agencies of the relevant work undertaken in each and how the context for policy development differs between agencies. It has helped enable the sharing of resources, knowledge and information, and created a shared sense of ownership for delivery of MEMS outcomes.

Improved collaboration was attributed to a range of drivers, including:

- Having a shared purpose through the MEMS,
- The collaborative process for developing the MEMS and the Monitoring and Evaluation Framework,
- The MEMS and MIMP governance structure, including interagency representation,
- Meetings and other forums as part of governance processes,

- Formal agreements, such as Memoranda of Understanding,
- Shared projects, or the need to engage on projects or actions to enable delivery, and
- Incidental opportunities to strengthen existing relationships or establish new relationships.

### Communication and knowledge-sharing between agencies has increased

Overall, staff across the MEMS broadly felt that knowledge-sharing and communication has improved. MEMA, MASC and Interagency Working Group (IWG) meetings have supported interagency knowledge sharing and communication among staff at their respective levels in the governance and organisational structure. These groups are also used to identify opportunities for continuous improvement. For example, the monthly IWG meetings provide a process for sharing information and updates at the initiative level, and provides insights for improvements to project management arrangements and other delivery processes.

Delivery staff also reported increased communication and knowledge sharing with delivery staff in other agencies and, in some cases, initiatives. At the initiative level, there are many examples of improved interagency knowledge-sharing that has arisen through partnership arrangements with external agencies, such as Initiative 4's strengthened relationship with Local Land Services and the Elements database led by Initiative 5. Knowledge-sharing has also occurred through various presentations, conferences, workshops, websites and newsletters.

Staff also identified opportunities for improving communication and knowledge-sharing, improving vertical communication (see Section 3.2) and making better use of the MIMP technical working groups (TWGs) to support interagency knowledge sharing and communication. Staff also felt that extended approval times for program planning and reporting documents delay knowledge sharing and communication between agencies, and is an area for improvement to ensure timeliness and transparency. Staff also identified the need for external knowledge-sharing to consider interactions between the MEMS and legislation, such as the Coastal Management Act.

### Collaboration has created benefits beyond the MEMS program

Improved collaboration through implementing the MEMS has also had benefits beyond the MEMS. Many MEMS staff have responsibilities for programs that sit outside the MEMS but are complementary to work undertaken for the MEMS. Staff have reported that collaboration on MEMS work has helped them foster relationships with other agencies and external stakeholders in ways that have helped extend and improve their non-MEMS work. This has occurred both through strengthening pre-existing relationships, and by building connections with local groups with whom they would not normally have had the opportunity to engage.

## 3.2. Governance, collaboration and engagement are sound, and there are opportunities for further improvement

There has been a focus on establishing robust processes and governance, which has improved engagement, communication and collaboration in the first two years of the MEMS. However, there are some improvements that can be made to ensure implementation is strengthened into the future. These include ensuring:

- established processes and governance remain fit-for-purpose into the future to ensure the MEMS remains on track and that strong engagement and collaboration can continue

- stakeholder engagement and messaging continue to be coordinated, and is clear, consistent, and appropriately targeted
- program management reporting is aligned with staff and stakeholder needs
- that the long-term intent of the MEMS is at the forefront of planning and that delivery is adaptively managed where necessary to reflect new insights and lessons and to ensure ongoing alignment with the desired outcomes for the marine estate.

### Delivery processes, governance and communication protocols should be periodically reviewed to ensure they remain fit-for-purpose

The MEMS is currently shifting from establishing processes and governance, to maintaining these alongside implementation. Now that these processes have been established, it will be important to review them periodically to ensure they remain appropriate and fit-for-purpose on an ongoing basis.

While collaboration and coordination between and within MEMS agencies and partner organisations has improved overall, staff felt that there is need for further improvement. Some felt that initiative or organisation-based silos still exist and there is need for greater communication between staff at different governance levels. Others also recognised the burden of collaborating unnecessarily. Periodically reviewing why and how staff are involved in decision-making processes and communications can ensure that their input remains fit-for-purpose over time and that communication and decision-making remains efficient and effective.

Many of these challenges can be addressed by improving communication and decision-making processes, including by ensuring that:

- the need for interagency collaboration and stakeholder participation is clear and will add value to the project or process. In some instances, projects or activities may not require collaboration or the involvement of certain staff or stakeholders, particularly where participants do not have relevant expertise, or their involvement may create delays in project delivery.
- communication protocols and approvals processes between and within groups are clear, and that new participants are made aware of these protocols. This includes making participants aware of the need for approval processes for specific projects in advance where required, including who is required to provide input or approval.
- staff have clarity on their role and the role of all decision-making and advisory groups, and how roles may change over time depending on progress with MEMS implementation.
- communication of decisions between and within groups is clear, timely and aligned with staff needs.
- project planning allows for adequate time to ensure appropriate collaboration can occur. Interagency collaboration can be complex and present challenges for coordination, collating input and managing timelines. Planning to ensure there is adequate time and resources to navigate these complexities will allow for improved and more effective collaboration.

In addition, there is an opportunity to make better use of the Technical Working Groups to identify collaboration opportunities, as well as for sharing knowledge, resources, and accessing internal expertise.

There is also need for greater clarity of the role of initiative leads. The demands on initiative leads have increased over time as reporting and implementation requirements have increased. Reviewing or

clarifying the responsibilities or resourcing approach for initiative leads will help ensure this role remains manageable.

### Initiative and program reporting is valuable and can be improved to better meet staff, decision-maker and stakeholder needs

Each initiative is required to report on the status of implementation each quarter. This includes reporting on progress against project delivery and outputs, changes to program scope, schedules, budget and risks, and upcoming deliverables. Reporting is first undertaken by project leads, and then collated into initiative level and program level reports. Progress on implementation of the MEMS is then published online every three months in a quarterly snapshot, and annually at the end of each year.

Staff recognise the importance of program management reporting, particularly in identifying and addressing risks, elevating risks to be addressed by senior staff, and managing budgets effectively and efficiently. Most found the process of reporting to be useful for tracking and managing progress and budgets. However, almost all staff find the frequency and requirements of quarterly reporting to be excessive. Producing the reports on a three-monthly cycle involves collating a large amount of data and can take time away from program implementation. Many staff suggested that the frequency of reporting should be reduced to biannual or annual; quarterly report requirements are reduced or simplified; or an approach that combines the current level of detail for reporting on a biannual or annual basis with a simplified quarterly report.

Staff also identified opportunities for improving how reporting is used. Reporting is currently undertaken against revised scope, budget and schedules, rather than the original intent and design of each initiative. While this approach reflects adaptive management in response to reduced budgets or unforeseen delays, it reduces visibility of risks to outcomes and implementation that result from lack of funding. Some staff also expressed a desire to better understand how reporting is used by decision makers, particularly in identifying and delineating between high-level risks that can be managed by MEMS agencies and those that cannot. Staff would also like to receive reports from decision-makers in response to initiative and program reporting, including actions undertaken in response to risks that have been elevated to senior staff. Quarterly reporting is summarised and made publicly available as a quarterly snapshot. Staff queried the usefulness of this, including whether it meets stakeholder's information needs and provides a meaningful update of progress against the MEMS given the short reporting timeframe.

Better balancing the frequency and content of initiative and program reporting with staff, decision-maker and stakeholder needs would improve the efficiency and effectiveness of this process. The reporting needs of each of these groups should be tested and confirmed with representatives from these audience groups, where practical. Where required, adjust reporting frequency, content and level of detail to align with audience needs.

### More coordinated external engagement and communication will provide clear and targeted messaging about MEMS scope and implementation

Consultation and engagement have raised stakeholder and community interest in the MEMS, and established expectations that the MEMS will deliver upon its long-term objectives. There is a need to manage stakeholder and community expectations of the purpose and scope of the MEMS to ensure they are aligned with what is achievable and realistic. In some instances, the scope and intent of the MEMS has been unclear to stakeholders and the community.

There are expectations that the MEMS will address issues that are not within its remit. In addition, there is a lack of clarity among some stakeholders as to the scope of the MEMS and what management actions and projects are being implemented and when. This includes expectations that pilot programs will be expanded to other locations across NSW, yet there are no current plans for expansion. This has also been demonstrated by the expectation from some local government stakeholders that the MEMS will deliver outcomes for the Coastal Management Program, which it was not designed to do. This lack of clarity can lead to expectations about the MEMS that differ from what it is able to deliver. Managing unrealistic expectations is important for upholding the reputation of MEMS agencies, and for maintaining the interest and support of the community and stakeholders.

Many of the initiatives have management actions and projects that involve the same stakeholder groups. This has resulted in stakeholders being consulted multiple times by different staff, often for different purposes. In some instances where staff are from different MEMS agencies, there can be differences in the messaging and information that is provided to stakeholders. There may also be instances where engagement is occurring on issues that require MEMS agencies to first collaborate and determine if a unified position is required prior to undertaking consultation. Agreeing on messaging prior to consultation will help manage stakeholder expectations, and allow staff to better respond to and meet the needs of stakeholders, including those in local government. Similarly, providing stakeholders with clear details on who to contact for particular issues will also help ensure consistent messaging.

The MEMS communications and engagement strategy provides key messages and protocols for undertaking stakeholder engagement and communications. Ensuring that MEMS staff are aware of this document and are actively using it could improve engagement and communication by supporting consultation and messaging that is clear, consistent, appropriately targeted and coordinated. There would also be benefit in sharing intentions for upcoming external engagement activities through existing governance and discussion forums to identify instances where coordination may be required or to share insights from previous or current engagement with those stakeholders.

### Recent challenges highlight the need to ensure adaptive management occurs and is aligned with long-term policy intent

Management actions were identified at a point in time to align with the long-term intent of the MEMS. It is often necessary to adapt actions and projects during implementation to respond to external challenges, budgetary changes, and new insights or knowledge.

Some staff reported wanting greater flexibility to adapt or refine management actions. Some staff were also unclear on why certain management actions had been included in their initiative, or felt that, as implementation has progressed, some actions would sit more logically elsewhere.

It is important to maintain flexibility in delivery while ensuring that the implementation of management actions and projects remain aligned with the long-term intent and outcomes expected for the MEMS. Planning should focus on outcomes first, and identify appropriate projects required to achieve those outcomes. Continue to identify actions and projects for each delivery stage and annually, where required, that align with the outcomes set out in the initiative program logics in the MIMP Framework, considering external challenges or changes in the operating environment and insights from previous projects.

### 3.3. Approved Stage 1 projects were largely delivered on schedule, with some delays

Projects for each initiative are identified at the beginning of each stage and reviewed annually, if required. Projects are intended to contribute towards completion of management actions and meeting initiative outcomes and overarching objective over the duration of the MEMS. Projects are identified with consideration to appropriate sequencing of work and the quantum of funding that was confirmed for each initiative at that stage. For some initiatives, this meant reducing the original scope, and therefore projects, for Stage 1 to align with its funding allocation.

Overall, implementation of projects identified for Stage 1 was broadly completed in line with the revised scope, however, there were delays in some areas due to unexpected events (see Section 2.2), and funding uncertainty and approvals processes (see Section 2.3). Some of these risks, like the COVID-19 pandemic and bushfires, are outside of the control of the MEMS, and are being managed where possible through adapting delivery to ensure their effects are minimised. Other risks, such as reduced budgets, are not as readily addressed via mitigation measures and have instead been managed through scope or schedule changes. In some areas, this is likely to affect the achievement of intermediate and long-term outcomes.

A summary of delivery of approved projects against their Stage 1 schedule is provided for each initiative below (Table 2).

Table 2 Summary of delivery against each initiative's schedule for Stage 1

Initiative	Delivery status at end of Stage 1
Initiative 1 Water quality and litter	<p><i>Initiative 1a</i></p> <p>Most projects had been delivered against their objectives. However, the loss of key staff, COVID-19 restrictions and extreme natural events caused some delays. Two projects were heavily impacted by COVID-19, The Marine Litter Campaign and the community engagement project to inform water quality objectives, and were rescheduled to occur early in Stage 2.</p> <p><i>Initiative 1b</i></p> <p>There had been effective delivery of projects over Stage 1, with most on-ground works projects meeting or exceeding their contracted deliverables. COVID-19 affected the schedule of some projects, particularly those that required community engagement, however it also enabled greater online participation for other projects. Project delays are expected to reduce as Stage 2 progresses.</p>
Initiative 2 Healthy coastal habitats	<p>Overall delivery of Initiative 2 was on track, with several polices, management strategies and key works associated with fish passage nearing completion. This is despite recruitment delays, bushfires, floods, fish kills and the COVID-19 pandemic causing minor delays to project schedules.</p>
Initiative 3 Climate change	<p>Due to funding limitations in Stage 1, a revised (reduced) scope of deliverables was prepared, and these were achieved on schedule despite COVID-19 and extreme events.</p>

Initiative	Delivery status at end of Stage 1
Initiative 4 Aboriginal cultural values	The majority of deliverables had been achieved; however, some planned engagements could not be achieved due to COVID-19 restrictions. Where this occurred, work schedules and stakeholder expectations were managed, and appropriate alternative procedures were explored.
Initiative 5 Threatened and protected species	<i>Initiative 5a</i> Progressed well with only slight delays to delivery of some projects due to bushfires and COVID-19 restrictions. Delays to projects will be addressed in Stage 2. <i>Initiative 5b</i> The project plan for Stage 1 was realised in full.
Initiative 6 Sustainable fishing and aquaculture	Most projects were on track despite recent natural events, COVID-19 restrictions and continued funding uncertainty.
Initiative 7 Safe and sustainable boating	Delivery was progressing well, with slight delays on some deliverables due to extreme natural events and the COVID-19 pandemic
Initiative 8 Enhancing community benefits	Most projects were on track and progressing well, although in some cases schedules had been revised. The schedule had changed for the development of the Marine Estate Education Strategy and Community Wellbeing Monitoring Program to accommodate changes in scope. Delays in the Aboriginal component of the Community Wellbeing Monitoring Program due to COVID-19. These projects will continue in Stage 2.
Initiative 9 Effective governance	Implementation was on schedule. Risks due to extreme events affected the ability to complete some workstreams, however project management is now firmly embedded in Strategy projects and agencies, with a high degree of adoption of practices ready for Stage 2.

Source Extracted from Marine Estate Management Strategy Quarterly report. Reporting period Stage 1, Year 2, Quarter 4. Marine Estate Management Authority.

Further detail from the process evaluation for each initiative, including implementation successes and enablers, and challenges, constraints and areas for improvement, are provided in the *Baseline evaluation of the Marine Estate Management Strategy: Findings and recommendations from the first evaluation (initiative-level supplementary report)*.

## Recommendations: Process and delivery

### Recommendation 3

Processes for decision-making, approvals and communication should be reviewed and refined. Decision-making and approvals processes must be made clear; and decisions communicated to staff in a transparent and timely manner. To ensure that collaborative processes add value to the project or outcome, input should only be sought from those with relevant expertise or accountabilities.

#### **Recommendation 4**

Program management reporting requirements and frequency should be reviewed to ensure reporting is fit-for-purpose for staff and decision-makers. MEMS governance groups and decision-makers should communicate their responses for addressing reported risks, issues or recommendations to initiative staff. External reporting of content captured through program management reporting should also be reviewed to ensure the information and frequency is fit-for-purpose for stakeholders.

#### **Recommendation 5**

Enhance centralised communications and engagement by:

- Ensuring MEMS staff are aware of the existing centralised communications and engagement strategy, and their responsibilities for undertaking coordinated and consistent engagement, where appropriate.
- Providing external audiences with clear and simple summaries of the MEMS scope and MEMS agencies roles and responsibilities, to assist in managing stakeholder expectations. This should include clarifying interfaces with other related legislation and agencies.
- Providing consistent messaging on shared and common topics, accompanied by guidance for staff to develop initiative-specific messages and communication where required (including co-branded communications, where appropriate).

#### **Recommendation 6**

Clearly communicate the process and requirements for adaptively managing actions and projects, where needed, to MEMS staff.

## 4. Some achievement has been observed against all short-term outcomes, with further achievement expected

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Achievement against outcomes set out in the Monitoring and Evaluation Framework was intended to be measured quantitatively and qualitatively. This combines quantitative data against outcome indicators and measures, with qualitative information from interviews, administrative data, MEMS strategic documents, and MEMS reporting documents and processes. Where achievement or progress against an outcome cannot be identified through these information sources, progress in delivering actions or projects that align with the outcome may be considered as an indication that the outcome may be realised and/or measured in the future.

Information from the various sources reveal that at least some change has been achieved against all short-term outcomes. Short-term outcomes had expected timeframes of 0-2 years. Therefore, there was expected to be achievement against short-term outcomes at the end of June 2020. The scale of achievement against individual outcomes varies, and could not be meaningfully assessed within the scope of this evaluation and with the information available at this stage in the delivery of the MEMS. The scale of achievement against individual outcomes is expected to become clearer for future evaluations, as more appropriate quantitative data becomes available, as baselines are established, and as more time has passed to allow for further change to be realised.

There has been mixed progress in establishing baseline data and collecting subsequent monitoring data (where appropriate) for outcome indicators. Baseline data and some subsequent data has been collected for indicators where it is readily available and did not require new processes. However, there have been a range of delays in establishing monitoring arrangements and collecting new data. These delays are outlined in sections 4.4 and 4.5, and noted where relevant in the outcomes findings (Section 4.1). Importantly, data collection processes are being established, with a significant amount of data collected in early 2021. While this new data could not be used in this evaluation, it will improve data availability for future evaluations. In addition, staff have identified outcomes and indicators for review to improve their appropriateness for the MEMS intent and scope. Refinements to indicators and measures will be agreed following this evaluation (see Section 4.3), and are expected to improve data availability in the future.

Intermediate outcomes have anticipated timeframes of 2-5 years, and were not expected to be achieved at the time of this evaluation. However, early progress has been identified for a range of intermediate outcomes. Achievement against short-term outcomes and early progress towards intermediate outcomes are an indication that MEMS implementation is on track to achieving further outcomes in the future.

Findings against short-term outcomes for each initiative are described in Section 4.1. Further detail from the outcomes evaluation for each initiative, including early progress towards intermediate outcomes, ongoing appropriateness of outcomes and indicators, any unexpected or unanticipated outcomes and insights for future planning, are provided in the *Baseline evaluation of the Marine Estate Management Strategy: Findings and recommendations from the first evaluation (initiative-level supplementary report)*.

## 4.1. Findings against short-term outcomes

Change has been achieved across all short-term outcomes, based on information drawn from indicator results, interviews, agency administrative data, MEMS strategic documents, and MEMS reporting documents and processes. The scale of achievement against individual outcomes varies, and could not be meaningfully assessed within the scope of this evaluation and with the information available at this stage in the delivery of the MEMS. The scale of achievement against individual outcomes is expected to become clearer for future evaluations, as more appropriate quantitative data becomes available, as baselines are established, and as more time has passed to allow for further change to be realised.

Achievement against each initiative's short-term outcomes is provided in the following sub-sections. This combines results against indicators and information from other sources. Indicators provide quantifiable metrics for tracking performance against outcomes over time. Indicators are aligned with outcomes, but may not capture all aspects of each outcome. Therefore, results against indicators are complemented by qualitative and quantitative findings from other sources (noted above).

Results for some indicators, including outcome indicators that reflect changes in stakeholder understanding, awareness, clarity, values and behaviour, are intended to be drawn from surveys. The Community Wellbeing Framework was developed in Stage 1 to provide a coordinated and robust approach to monitoring trends against multiple indicators that relate to the human dimensions of the environment in a way that goes beyond conventional approaches that predominantly use environmental indicators. This type of framework is novel for the NSW marine estate and is rare in coastal management strategies in Australia and internationally. As part of this framework, surveys were developed to create efficiencies in collecting data in relation to the three purposes of the MIMP and to provide baseline data across multiple indicators. However, unforeseen delays meant that these surveys could not be conducted until early 2021. Therefore, results from these surveys could not be included in this evaluation.

Initiative staff have requested refinements to some outcomes and indicators, including identifying indicators or measures to replace or complement those that draw on survey data. Those indicators that have been identified for review are denoted in the findings tables. For some indicators that were identified for review, data has not been collected. Findings to inform proposed new indicators (where available) have been integrated with other general findings.

Outcomes were originally identified for each timeframe based on MEMS staff best estimates of when the changes could be expected to occur. However, staff from some initiatives have reported that timeframes will need to be revised. In some cases, staff have found that the original timeframes were ambitious. For Initiative 1, significant and critical foundational work had been undertaken in Stage 1, particularly in relation to the pilot programs and risk-based framework. However, there is an inherent lag time between completing such actions and observing outcomes from this work, particularly outcomes relating to water quality, which staff felt was not reflected in the existing timeframes. Initiative 3 staff reported that achievement of some outcomes is no longer realistic within the nominated timeframes due to lack of funding and, therefore, inability to undertake foundational activities in Stage 1. Meanwhile, Initiative 4 staff felt that outcomes and timeframes were not ambitious enough, and reported progress against multiple intermediate outcomes well ahead of the original timeframes. In addition, staff from most initiatives indicated that there was some achievement against short-term outcomes during Stage 1, but they expect to see further achievement against these same outcomes in the coming years. Where required, timeframes for outcomes will be considered alongside refinements to indicators and measures (see Section 4.3).

## Initiative 1: Improving water quality and reducing litter

Staff reported that some outcomes for Initiative 1 were unrealistic for the nominated timelines and noted that many projects undertaken during Stage 1, particularly those relating to the risk-based framework and other pilot programs, provide important foundations for achieving outcomes beyond Stage 1. This includes activities to identify and inform planning for future projects in alignment with the initiative’s management actions. Therefore, there has been significant effort in establishing foundations for success across the identified outcomes, however, the effect of this work is only partly reflected in outcomes findings as it is too soon to observe measurable change. Staff have identified the need to review outcomes for Initiative 1 to better reflect expected timeframes for achieving change and to improve alignment with the initiative’s scope. Staff have also proposed refinements to multiple indicators and measures to improve appropriateness and alignment with outcomes, and to reflect data that is more readily available.

Initiative 1 staff continue to engage with stakeholders and the community to improve understanding of water quality issues, and their responsibilities, behaviours and practices to support improvements in water quality. Pilot programs, including applications of the new *Risk-based Framework for Considering Waterway Health Outcomes* and new water quality monitoring programs, have been implemented to support multiple short-term and intermediate outcomes at a local scale. These activities are expected to support outcomes across the marine estate in the future as the programs continue to be implemented, using insights from the pilots and through a stakeholder capacity building program. These future outcomes include enduring outcomes that are unlikely to be realised within the timeframe of the MEMS, as they relate to strengthened provisions for stormwater management in strategic and local planning instruments target that new developments, re-developments and infill developments that are expected to be completed following the MEMS’ ten-year horizon. There have been extensive on-ground works programs delivered by multiple agencies to improve habitat, reduce nutrient and sediment runoff, improve floodplain management, and ultimately, improve water quality. These works will contribute to outcomes at different timescales, including outcomes that may not be realised until after the 10-year timeframe for the MEMS due to inherent lag times between undertaking actions and achieving change in environmental condition.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 1 are provided below (Table 3).

Table 3 Findings against short-term outcomes for Initiative 1

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
1K: Greater clarity of roles, responsibilities and accountabilities among all agencies responsible for water quality and litter management	Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate (LI 5)	<b>Responsible agency staff:</b> proportion of survey respondents demonstrating clarity	Not available. Survey yet to be conducted.	<ul style="list-style-type: none"> <li>Staff have mapped roles and responsibilities for water quality management, which staff report has supported clarity of roles and responsibilities among responsible agencies.</li> <li>A survey of ESS staff conducted as part of actions to develop the RBF found that approximately 35% of staff reported they understood their role with EES in delivering the State’s Water Policy (approximately 40% skipped the question).</li> <li>Outcome 1K is linked to outcomes 1L and 1N, and findings against these outcomes will also support change against Outcome 1K.</li> </ul>	1.1 1.2 (a) 1.2 (c) 1.4	Communities - Coordinated and inclusive approach to management  Aboriginal People - Coordinated and inclusive approach to management  Landowners: Rural and Urban - Coordinated and inclusive approach to management  Boat users - Coordinated and inclusive approach to management
		<b>Targeted stakeholders:</b> proportion of survey respondents demonstrating clarity	Not available. Baseline survey being conducted at the time of this evaluation.			
1L: Improved access to, use, coordination and efficiency of frameworks, policies and processes by responsible agencies for managing water quality and litter	Relevant agency staff demonstrate use of the risk-based framework and other relevant frameworks, policies and processes for managing water quality (LI 2)	*Proportion of survey respondents reporting awareness, use and/or recommending use of Risk-based Framework	Proportion of surveyed EES staff reporting understanding of RBF: ~48% (40% skipped the question) <sup>1</sup>		1.1 1.2 (a) 1.2 (b) 1.2 (c)	Communities - Coordinated and inclusive approach to management  Aboriginal People - Coordinated and inclusive approach to management

<sup>1</sup> RBF OEH Engagement Outcomes and Recommendations Report. Internal administrative data.

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
			<p>Proportion of surveyed EES staff reporting awareness of tools to support RBF: ~35% (40% skipped the question)<sup>2</sup></p> <p>Level of application among surveyed stakeholders: 61% reported application in some waterways.<sup>3</sup></p> <p>Level of familiarity with RBF among stakeholders prior to consultation: average 36% (between "not at all" and "partially" familiar)<sup>4</sup></p>	<ul style="list-style-type: none"> <li>The <i>Risk-based Framework for Considering Waterway Health Outcomes in Strategic Landuse Planning Decisions</i> (RBF) is a significant action for Initiative 1, and is expected to contribute to multiple short-term, intermediate and long-term outcomes. It has been applied in pilot areas for South Creek, Northern Beaches LGA, Hornsby Shire LGA, Lake Illawarra Catchment and Richmond River Catchment. It has been adopted through various mechanisms, for example: <ul style="list-style-type: none"> <li>Regional planning, through the Greater Sydney Regional Plan and the North District Plan</li> <li>Revisions to Local Strategic Planning Statement, Local Environment Plans (LEPS) and Development Control Planning (DCPs).</li> <li>The draft Aerotropolis State Environmental Planning Policy (SEPP) and Development Control Plan (DCP)</li> <li>Stormwater strategies</li> </ul> </li> <li>Through the application of the RBF in the South Creek catchment, water quality and related developer controls have been included in a legislated planning instrument for the first time in NSW. This is a fundamental change that sets a precedent for improving stormwater management, and therefore waterway, estuary and marine estate health, across NSW.</li> <li>For each RBF pilot, partner agencies (local councils, Sydney Water) have invested in adapting their business to apply the framework, indicating their support for the RBF and recognising the benefits it can deliver.</li> <li>There is significant work being undertaken through the risk-based framework pilot projects to develop guidelines, data sets, tools, fact sheets, case studies and other information to support councils to implement the framework. This support information is being released publicly upon completion, where appropriate. Workshops are also being conducted with local councils to build awareness of the framework.</li> </ul>		<p>Landowners: Rural and Urban - Coordinated and inclusive approach to management</p> <p>Boat users - Coordinated and inclusive approach to management</p>
		*Number of times toolkit on Risk-based Framework is accessed	Not available. This will begin in 2021 when the toolkit is released.			
		*Proportion of documents demonstrating use of DMPs or Floodplain study information.	Not available.			
		*Number of 'new' BCA and FMA PLC sites (related to marine estate) and Aquatic Offsets	Not available			
		*Number of works approvals done under new processes	Not available.			

<sup>2</sup> RBF OEH Engagement Outcomes and Recommendations Report. Internal administrative data.

<sup>3</sup> Survey of workshop participants from various catchments and LGAs

<sup>4</sup> Survey of workshop participants from various catchments and LGAs

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
		<b>*Agency staff survey:</b> Proportion of survey respondents' confidence	Not available. Baseline survey not yet conducted.	<ul style="list-style-type: none"> <li>At least one Local Land Services (South East LLS) has reported including the risk-based framework in its prioritisation process for on-ground works to improve water quality, including riparian rehabilitation, bank protection and road/track works.</li> <li>Staff have identified that confidence among local government can be a barrier to using the frameworks for managing water quality and litter effectively. Staff continue to engage with stakeholders to build capacity to implement the Risk-based Framework.</li> <li>The delivery of pilot projects across Initiative 1 actions is also helping to develop consistent approaches and data sets that can be eventually used across the state, and will further support improved use, coordination and efficiency of processes for managing water quality and litter. In addition, the engagement undertaken during pilot programs is building the knowledge of the MEMS and Initiative 1 actions and scope, and driving further collaboration.</li> <li>Fish Friendly Council Workshops and associated workshop booklets and videos have been completed to outline key requirements to reduce the impact of works on fish habitats. Four Fish Friendly videos have been produced, with a total of 1090 views</li> <li>Initiative 1 staff propose the following measures be added to Leading Indicator 2: <ul style="list-style-type: none"> <li>Proportion of survey respondents reporting awareness, use and/or recommending use of Risk-based Framework</li> <li>Number of times toolkit on Risk-based Framework is accessed (replacing "Proportion of planning instruments that reflect the risk-based framework for water quality and river flow objectives")</li> <li>Agency staff survey: Proportion of survey respondents' confidence</li> </ul> </li> </ul>		
	Responsible agencies report confidence with capacity to fulfil governance roles and responsibilities (LI 11)	Proportion of survey respondents' confidence	Not available. Baseline survey not yet conducted.			
1M: Greater community awareness of the sources and effects of water pollution and litter on the marine estate	Community members and targeted stakeholders demonstrate awareness of benefits of, and threats to, the marine estate (LI 10)	<b>*Community:</b> Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.		1.1 1.2 (d) 1.3	Communities - Improved communication and education

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
		<p><b>*Targeted stakeholders:</b> Proportion of survey respondents reporting awareness and clarity</p> <p><b>*Post-event:</b> Proportion of survey respondents reporting awareness and clarity</p>	<p>Not available. Baseline survey being conducted at the time of this evaluation.</p> <p>Not available. Baseline survey being conducted at the time of this evaluation.</p>	<ul style="list-style-type: none"> <li>The "Don't be a Tosser" song, intended to encourage behaviour change in relation to litter, has had more than 275,000 views, exceeding the target for the campaign by 48%. Most (96%) views occurred through YouTube Discovery, where contextually relevant ads are promoted, suggesting that users were interested in the content. This campaign will continue in Stage 2.</li> <li>The EPA was conducting a social research evaluation of the marine litter campaign at the time of this evaluation, which is expected to provide results on behaviours once completed.</li> <li>A marine based litter measure, the Key Litter Item Study (KLIS) is tracking marine debris in NSW. This study is providing critical data on the composition of marine debris. The findings will be used to identify reduction in debris densities as well as sources of marine litter debris, and to communicate with key stakeholders' and community groups on upstream solutions.</li> <li>Research to understand the source of faecal indicator bacteria (FIB) at two sites with high contamination found contamination was due to sewage infiltration of stormwater. A toolkit developed alongside this research will assist in source tracking at other sites.</li> <li>Initiative 1 staff continue to engage with the community through project delivery, webinars, consultative committees, behaviour change campaigns, and stewardship groups. These activities will likely support further measurable change for this outcome.</li> <li>Post-event surveys will be conducted in the future, including following the upcoming community meeting for Tilba Tilba. These surveys will assist in measuring this outcome.</li> <li>Some of the additional data collection processes listed for Outcome 1N will also support future measurement of this outcome.</li> </ul>	<p>1.4</p> <p>1.5</p>	<p>Landowners: Rural and Urban - Improved communication and education</p>
		<p><b>*Community:</b> Proportion of survey respondents reporting awareness and clarity</p>	<p>Not available. Baseline survey being conducted at the time of this evaluation.</p>	<ul style="list-style-type: none"> <li>Overall, staff felt that there has been improved understanding among stakeholders.</li> </ul>	<p>1.1</p> <p>1.2 (d)</p> <p>1.4</p>	<p>Communities - Improved communication and education</p>

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
1N: Improved community, landholder, urban planner and developer understanding of best practice land management, rules and regulations for managing water pollution and litter	Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	*Targeted stakeholders: Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.	<ul style="list-style-type: none"> <li>The risk-based framework (see Outcome 1L) supports this outcome. A range of guidance and tools, the online toolkit and training with agency staff and local government, industry and other stakeholders delivered through the pilot programs are important for supporting understanding of best practice land management, rules and regulations for managing water pollution and litter.</li> <li>DPI staff reported being approached by other organisations for information on how to implement best practice oyster reef restoration, reflecting growing awareness and desire to adopt best practice.</li> <li>The research and capacity-building work undertaken through the MEMS to assist agriculture and horticulture industries to improve operations to reduce nutrient and sediment runoff has been endorsed by peak bodies, including Protected Cropping Australia and Berries Australia. Letters of support from these organisations indicate that they see value in this groundwork and highlight the need for continuing engagement and support to ensure growing adoption of best practice management.</li> <li>Initiative 1 staff also work with farmers on improving awareness of best practice. While the changes in attitude and awareness have not been measured, staff indicated that changes can be inferred through the increased interest and participation in incentive programs for improved orchard and blueberry farm management. For example, the number of blueberry farms applying for grants to complete on-farm works to improve water, nutrient and erosion management grew from five in the first round (all of whom were approached by agency staff to participate) to 60 in the second round. This indicates growing awareness in the benefits of improving farming practices. Similarly, for the pilots of the Risk-based Framework, staff reported that partner councils were now in the process of expanding the pilots in their Local Government Area through additional investments.</li> <li>The "Don't be a Tosser" marine litter campaign (see Outcome 1M) also supports this outcome.</li> <li>A website is being prepared to provide the community with all relevant information regarding NSW estuaries.</li> </ul>		<p>Landowners: Rural and Urban - Clearer guidelines and better land use management</p> <p>Landowners: Rural and Urban - Reduced loss of topsoil and erosion events</p> <p>Landowners: Rural and Urban - Better support to implement best management practices</p> <p>Landowners: Rural and Urban - Improved communication and education</p> <p>Landowners: Rural and Urban - Improved capacity building</p>
		*Post-event: Proportion of survey respondents reporting awareness and clarity	69% of oyster farmers had limited or no knowledge of oyster reef restoration. <sup>5</sup>			

<sup>5</sup> NSW Government, Oyster Reef Restoration NSW Oyster Industry Survey, July 2019, [https://www.marine.nsw.gov.au/\\_data/assets/pdf\\_file/0020/1149131/Summary-report-Oyster-reef-restoration-industry-survey.pdf](https://www.marine.nsw.gov.au/_data/assets/pdf_file/0020/1149131/Summary-report-Oyster-reef-restoration-industry-survey.pdf)

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>Initiative 1 staff continue to engage with the community and stakeholders through project delivery, webinars, consultative committees, behaviour change campaigns, and stewardship groups. These activities will likely support further measurable change for this outcome.</li> <li>Staff reported a range of additional post-event surveys, consultative committee interviews and other processes that will be used to capture changes in community and stakeholder awareness and clarity of rules, regulations, best practice and their own responsibilities. Data from these processes will be available in the future and are expected to include feedback from a range of stakeholders, including oyster farmers, recreational fishers, farmers, agronomists and councils. Post-event surveys are expected to provide a more meaningful approach than the community survey to measure Leading Indicator 21 for this initiative. Measures can be updated to reflect future data availability.</li> </ul>		

## Initiative 2: Delivering Healthy Coastal Habitats with Sustainable Use and Development

Initiative 2 staff continue to build the body of knowledge required to inform appropriate land use and best practice management for coastal and foreshore environments. There is improved clarity and understanding of the regulatory framework among core staff with responsible agencies, and further work to extend this improved clarity externally. Initiative 2 has established foundations for future success, including preparations for on-ground works, developing templates and processes for simplifying and integrating information, and strategies for coastal and foreshore planning and management.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 2 are provided below (Table 4).

Table 4 Findings against short-term outcomes for Initiative 2

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Results	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
2G: Improved clarity of roles and responsibilities for coastal and foreshore planning and management among agencies, landholders, developers and the community	*Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate (LI 5)	Proportion of survey respondents demonstrating clarity	Not available. Baseline survey not yet conducted.	<ul style="list-style-type: none"> <li>Staff report that there has been improved understanding of the regulatory framework for coastal and foreshore planning and management among those who are closely involved in coastal and foreshore planning and management, however this has not been measured through indicator monitoring.</li> <li>The process of developing strategies through initiative 2, such as the Domestic Waterfront Structure Strategies, has required agencies to thoroughly examine their relevant legislation and policy, ensure integration with other relevant legislation, and identify gaps. This has helped staff to improve clarity of legislated roles and responsibilities.</li> </ul>	2.3 (a) 2.3 (b) 2.3 (c) 2.4 (a)	Communities - Coordinated and inclusive approach to management
	Community members report awareness and clarity of agencies' respective roles and responsibilities in managing the marine estate (LI 24)	Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Results	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>The publication of strategies has also seen that information shared with stakeholders and the public, which supports improved clarity of roles and responsibilities among these stakeholders, as well as supporting improved management of these areas more generally.</li> <li>The Coastal Floodplain Drainage Management project (originally in Initiative 1) is seeking to improve access to, use, coordination and efficiency of policies and processes and to assist agencies to better understand and fulfill their governance roles.</li> <li>Staff have requested an alternative measure for LI 5.</li> </ul>		
<p><i>Outcomes 2H and 2I share LI 3 and are discussed together here.</i></p> <p>2H: Improved understanding of current coastal and foreshore environments and land uses in prioritised regions among responsible agencies.</p> <p>2I: Improved understanding of environmentally, socially, culturally and economically appropriate land use and best practice design in coastal and foreshore zones among agencies, landholders, developers.</p>	Knowledge gaps adequately addressed. Knowledge gaps relate to threats, stressors, risks, condition, value and management approaches. (LI 3)	*Number of knowledge gaps with status changing from 'inferred' to 'adequate'	Not available – to be assessed during 2022 review of the TARA. Alternative measure(s) requested by MEMS staff.	<ul style="list-style-type: none"> <li>Initiative 2 staff continue to develop the body of knowledge relating to appropriate land use and best practice design in coastal and foreshore zones and to address knowledge gaps. The growing body of knowledge is not reflected in the results against Leading Indicator 3 as the TARA assessment has not been revisited, but could be reflected in new, complementary measures for this indicator. Staff suggestions for complementary measures could reflect: <ul style="list-style-type: none"> <li>Auditing to better understand the extent of threat and risk and documenting case studies of successful and unsuccessful works to improve best management practice.</li> <li>Length of foreshore where a foreshore structure strategy applies (current total of 387 km across Richmond and Brunswick estuaries, see below).</li> <li>Areal extent of estuary foreshore and coastal floodplain managed by strategy (km<sup>2</sup>) for improved social, cultural, economic and environmental values (for example, marine vegetation strategies, see below).</li> <li>Areal extent of estuary foreshore and coastal floodplain wetlands where blue carbon opportunities can be prioritised (current statewide total of 61km<sup>2</sup>, with 19.85km<sup>2</sup> in the Richmond and Tweed estuaries).</li> </ul> </li> </ul>	2.1 (c) 2.2 (a) 2.2 (b) 2.3 (b) 2.3 (c) 2.4 (a) 2.5	<p>Communities - Improved communication and education</p> <p>Landowners: Rural and Urban - Research and monitoring to inform adaptive management</p> <p>Landowners: Rural and Urban - Clearer guidelines and better land use management</p> <p>Landowners: Rural and Urban - Clearer guidelines on appropriate location for development and access infrastructure</p> <p>Landowners: Rural and Urban - Better support to implement best management practices</p> <p>Landowners: Rural and Urban - Improved capacity building</p>

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Results	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
	Community and targeted stakeholders demonstrate improved capacity to anticipate and adapt to climate change impacts (LI 9)	*Number of permit applications for works in floodplains and low-lying areas that give consideration to potential climate change impacts	Not available. Alternative Indicator requested by MEMS staff.	<ul style="list-style-type: none"> <li>- Undertaking assessments to progress on-ground fish passage barrier remediation (total 27 assessment reports completed to date).</li> <li>• Initiative 2 staff suggest that a more appropriate alternative to Leading Indicator 9 could reflect the areal extent of estuary foreshore and coastal floodplain to be managed as Marine Vegetation Priority Areas. Data for this indicator can be collated from catchment-based planning reports.</li> </ul>	2.2 (a) 2.2 (b) 2.3 (a) 2.3 (c) 2.4 (a) 2.5	Communities - Improved communication and education Landowners: Rural and Urban - Clearer guidelines and better land use management
	Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.	<ul style="list-style-type: none"> <li>• Staff have undertaken activities that are expected to contribute towards outcomes 2I and 2H, including: <ul style="list-style-type: none"> <li>- a web-based map to assist private landholders to identify and understand planning policies relevant to them. The map is complemented by a clear explanation of the assessment process. The map and complementary explanations are expected to support improved understanding among responsible agencies and landowners or developers.</li> <li>- Foreshore structure strategies to support best practice decision-making and information sharing for installing foreshore structures. Strategies have been completed and approved for the Richmond and Brunswick estuaries, supporting improved decision-making for foreshore structures of 285 km and 102 km of estuarine foreshore, respectively.</li> <li>- Marine vegetation strategies. Strategies are being finalised for the Tweed and Richmond estuaries to guide improved vegetation management of 231km<sup>2</sup> and 1024 km<sup>2</sup>, respectively, of estuary foreshore and coastal floodplain.</li> <li>- Development and validation of a visual rapid assessment framework for identifying potential key fish habitats in freshwater streams in various landscape settings.</li> </ul> </li> </ul>		Landowners: Rural and Urban - Clearer guidelines on appropriate location for development and access infrastructure Landowners: Rural and Urban - Better support to implement best management practices Landowners: Rural and Urban - Improved capacity building

### Initiative 3: Planning for Climate Change

Implementation for Initiative 3 has been significantly limited by funding constraints. Funding has not been provided for actions relating to capacity building, climate change adaptation or managerial response, which were critical to achieving intermediate and long-term outcomes and to collecting data and information against indicators. These actions and associated projects, which were to be led by EES, could not be commenced during Stage 1. As a result, some intermediate and long-term outcomes will not be achievable in the current timeframes.

Funding was provided for filling some knowledge gaps in relation to research and monitoring of climate change impacts on marine estate assets, allowing some progress against the short-term outcome. Some of the findings have been presented to marine estate managers, contributing towards knowledge-sharing.

Indicator results and other findings for the short-term outcome (0-2 years) for Initiative 3 are provided below (Table 5).

Table 5 Findings against the short-term outcome for Initiative 3

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Results	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
3E: Ongoing and likely effects of climate change on the marine estate are monitored	Knowledge gaps adequately addressed. Knowledge gaps relate to threats, stressors, risks, condition, value and management approaches (LI 3)	*Number of knowledge gaps with status changing from 'inferred' to 'adequate'	Not available – to be assessed during 2022 review of the TARA. Alternative measure(s) requested by MEMS staff.	<ul style="list-style-type: none"> <li>Research has been undertaken by DPIE staff through Initiative 3 to support improved monitoring. This research is not reflected in the results against Leading Indicator 3 as the TARA assessment has not been revisited, but could be reflected in future measures for this indicator. New monitoring relating to threats, stressors, risks, condition and value in relation to coastal and marine habitat has been published in the following journal papers: <ul style="list-style-type: none"> <li>Davis et al. 2019 (including M. A. Coleman): Costs and benefits of towed videos and remotely operated vehicles for sampling shallow reef habitats and fish.</li> <li>Davis et al. 2020 (including M. A. Coleman): Environmental drivers and indicators of change in habitat and fish assemblages within a climate change hotspot.</li> <li>Davis et al. 2021 (including M. A. Coleman): Climate refugia for kelp within an ocean warming hotspot revealed by stacked species distribution modelling.</li> </ul> </li> <li>Baseline subtidal monitoring of rocky reefs has been completed throughout NSW to help understand climate change effects on these reefs.</li> <li>Initiative 3 staff from DPIE also contributed information for the Marine Integrated Monitoring Program (MIMP) and provided grants to the Australian Research Council to undertake research relevant to the initiative.</li> <li>Initiative 3 staff suggest adding a measure that reflects the extent of asset monitoring across the marine estate.</li> <li>Actions to be led by EES were not funded during Stage 1 and could not contribute towards this outcome.</li> </ul>	3.2 3.5	<p>Communities - Improved climate resilience</p> <p>Aboriginal People - Research and monitoring to inform adaptive management</p> <p>Landowners: Rural and Urban - Better climate change support tools and guidance</p> <p>Landowners: Rural and Urban - Research and monitoring to inform adaptive management</p> <p>Fisheries and aquaculturalists - Research and monitoring to inform adaptive management</p> <p>Tourists and tour operators - Research and monitoring to inform adaptive management</p> <p>Boat users - Research and monitoring to inform adaptive management</p>

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

Initiative 4 has provided more opportunities for Aboriginal people to participate in Sea Country management through direct employment and community engagement processes. It has also supported greater capacity and skills for Aboriginal people to take up employment or other opportunities. There is evidence that effort to provide more opportunities and build capacity is supporting increased Aboriginal participation in Sea Country management, planning and monitoring. This includes through direct employment in MEMA and partner agencies, representation in advisory groups, and through community engagement. There are also reports that actions through Initiative 4 have enabled a small number of training participants to derive economic benefit from the marine estate through private enterprise.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 4 are provided below (Table 6).

Table 6 Findings against short-term outcomes for Initiative 4

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Pre-2018 result	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
4H: Increased opportunities and capacity for Aboriginal participation in Sea Country management, planning and monitoring	*Area of Sea Country under formal management agreements (LI 14)	Area covered by Indigenous Land Use Agreements	130 km <sup>2</sup>	973 km <sup>2</sup>	<ul style="list-style-type: none"> <li>Initiative 4 has delivered capacity-building programs to contribute towards this outcome and lay foundations for intermediate and long-term outcomes. Improved capacity is not measured in the current indicators for this outcome. Capacity-building programs and results include:                             <ul style="list-style-type: none"> <li>A range of training and education opportunities, including Sea Ranger training, Certificate II in Maritime Operations, school education programs, community engagement activities (e.g., canoe making) and support to obtain boat licences. Participants have been from diverse age groups and backgrounds, ranging from young people to elders.</li> <li>Training and educational completion rates have been high (98% to 99%) among participants in the pilot communities on the South Coast, with an important factor in the high success rates being the grassroots approach where mentors and elders are recommended participants.</li> <li>150 Aboriginal people have been trained and qualified for a general boat licence.</li> <li>Seventeen people completed the initial Certificate II in maritime operations and expect to have opportunities to apply their training, e.g., starting commercial cultural tours. The training program also provided mentorship and development opportunities for people of different ages, including older, middle-aged people, and disengaged school leavers. The program is continuing in 2021.</li> <li>Five Aboriginal community members from the Jervis Bay area successfully completed the coxswain certification course; with an additional 22 candidates engaged in completing their sea time. Participants are actively working in local Sea Country ranger teams and in the Narooma Aboriginal cultural tourism pilot project.</li> </ul> </li> <li>Videos posted on Facebook demonstrating the programs and training opportunities for other Aboriginal community members have resonated better with Aboriginal communities than conventional government reports and written promotional material. It has been an effective way to share success stories and to reach other potential participants within the Aboriginal community.</li> </ul>	4.1 4.3	Aboriginal People - More participation in events effecting culturally significant species Aboriginal People - Co-management of Sea Country Aboriginal People - Training and job opportunities
	*Number of programs or agreements initiated by Aboriginal groups or individuals for managing Sea Country (LI 16)	Number of MOUs		1 currently under investigation			
		Number of ILUAs	5	9			
		Native Title Determinations	39	54			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Pre-2018 result	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
					<ul style="list-style-type: none"> <li>Reflecting the success of the early programs, staff report being approached directly by members of the community wishing to find out about training opportunities, including opportunities to build on existing training or training in new skills.</li> <li>Staff have identified the need for more culturally appropriate indicators and measures for Initiative 4 outcomes, including this outcome.</li> </ul>		

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

Initiative 5 staff reported improvements to interagency coordination, knowledge-sharing and management of threatened and protected species, and has undertaken a range of activities to improve external awareness and capacity for protecting wildlife and responding to wildlife incidents. Cultural protocols are followed at all wildlife events, and there is continued effort to increase Aboriginal participation in these events through these protocols and training. Initiative 5 continues to review and improve the Elements database, which is critical for collaborative, coordinated and efficient management of threatened and protected species, as well as data collection and knowledge sharing among agencies.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 5 are provided below (Table 7).

Table 7 Findings against short-term outcomes for Initiative 5

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
5F: Improved public and industry participant awareness of threats to biodiversity and their statutory and social responsibilities relating to threatened and protected species	*Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate (LI 5)	Proportion of survey respondents demonstrating clarity	Not available. Baseline survey not yet conducted	<ul style="list-style-type: none"> <li>Public and industry awareness of threats to biodiversity and their respective obligations has been promoted through a range of events and education material, however a change in awareness as a result of these activities has not been measured.</li> <li>More than 400 people have been reached through collaborative workshops and attending conferences. This has included staff from external groups Organisation for the Rescue and Research of Cetaceans in Australia (ORRCA), Dolphin Marine Conservation Park (DMCP) and Sea Life. This level of engagement had not been possible without MEMS funding.</li> <li>Initiative 5 has undertaken a range of other tasks that are expected to contribute towards this outcome. These include: <ul style="list-style-type: none"> <li>refining the Marine Wildlife Management Manual and the intranet reporting portal.</li> <li>Updating the Elements database.</li> <li>delivering the wildlife observer program.</li> <li>engaging with the fishing industry to reduce wildlife entanglements</li> <li>Preparing fact sheets, case studies and pocket guides for various audiences</li> </ul> </li> </ul>	5.3 5.5 5.6	Communities - Improved outcomes for threatened and protected species Communities - Improved communication and education Fisheries and aquaculturalists - Reduced by-catch and interactions with threatened and protected species Boat users - Improved outcomes for threatened and protected species
	*Community members and targeted stakeholders demonstrate awareness of benefits of, and threats to, the marine estate (LI 10)	Proportion of survey respondents demonstrating awareness	Not available. Baseline survey being conducted at the time of this evaluation.			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>– Preparing seal awareness guidelines and seal safety signs. The guidelines have been adopted in the Marine Wildlife Management Manual, and safety signs continue to be rolled out.</li> <li>• MEMS staff propose reviewing the use of the coastal resident and visitor survey as a data source for indicators for this outcome, as the survey has not been able to capture the nuances of the outcome. There may be need to review the measure or identify an alternative to LI 10 to better monitor this outcome.</li> </ul>		
5G: Improved interagency coordination and management of threatened and protected species	Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate (LI 5)	Refer to Outcome 5F	Refer to Outcome 5F	<ul style="list-style-type: none"> <li>• Initiative 5 staff continue to review and improve the Elements database, a comprehensive system for reporting incidents, responses, results and other management activities in relation to threatened and protected species among responsible agencies and partners. Elements is critical for collaborative, coordinated and efficient management of these species, as well as knowledge sharing among agencies and reporting changes over time. It will also collect data against indicators for this outcome.</li> <li>• Over 300 agency staff and 80 new veterinary staff have been trained in Elements Marine Wildlife Module.</li> <li>• Three external organisations already access to Elements. Including non-government groups is expected to help reduce response times, is making it easier for different groups to share information, provides a central place for all information, improve coordination between groups, and make it easier to follow the progress of rescues.</li> <li>• While training and access for Elements has improved, there is need for further work on reporting on timeliness.</li> <li>• There are still some challenges with coordination of roles and responsibilities for managing threatened and protected species across marine park boundaries, and establishing greater clarity on working with local councils.</li> <li>• Initiative 5 staff have reported undertaking other processes that will contribute towards this outcome, including establishing memorandums of understanding (MoUs), developing training standards and the Marine Wildlife Management Manual.</li> </ul>	5.1 5.2 (a) 5.2 (b) 5.2 (c)	<p>Communities - Improved outcomes for threatened and protected species</p> <p>Communities - Improved communication and education</p> <p>Fisheries and aquaculturalists - Reduced by-catch and interactions with threatened and protected species</p> <p>Boat users - Improved outcomes for threatened and protected species</p>

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
5H: Improved survivorship and management of threatened and protected species	*Rate and timeliness of response to reported animal strandings or entanglements (LI 25)	*Rate of response to reported animal strandings or entanglements	N/A – data will be available in future through the Elements database.	<ul style="list-style-type: none"> <li>Increased use of the Elements database (see Outcome 5G) among external organisations is expected to support survivorship and management of threatened and protected species. The database will also provide information on survivorship and response times in the future.</li> <li>Research is being undertaken through Initiative 5 better understand impacts of commercial fishing on threatened and protected species, including testing new technology that may help reduce whale entanglements.</li> <li>Staff continue to work with industry to reduce impacts on threatened and protected species. This includes working with commercial fish trawl operators to adopt new fishing practices that are seabird-friendly and ensure threatened seabird species are not injured or killed by these operators.</li> </ul>	5.2 (a) 5.2 (b) 5.2 (c) 5.5	<p>Communities - Improved outcomes for threatened and protected species</p> <p>Boat users - Improved outcomes for threatened and protected species</p>

### Initiative 6: Ensuring sustainable fishing and aquaculture

Initiative 6 Stage 1 projects have focussed on establishing foundations for achieving outcomes in the future, including developing harvest strategies, undertaking environmental assessments, fisheries enhancement programs, support for aquaculture ventures, promoting ethical angling, research examining innovative ways to reduce the impact of aquaculture infrastructure on seagrass and supporting industry training programs. There has been good progress in delivering these actions, with extensive outputs delivered across the initiative. Over time, the results are expected to translate to meeting community and stakeholder outcomes, which were the focus of short-term outcomes and some intermediate outcomes.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 6 are provided below (Table 8).

Table 8 Findings against short-term outcomes for Initiative 6

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
6F: Improved awareness, understanding, experience and engagement among commercial and recreational fishers of best practice guidelines, rules and regulations for ecologically sustainable fishing and aquaculture practices.	Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	*Proportion of survey respondents reporting enhanced opportunities and experiences	Not available. Baseline survey being conducted at the time of this evaluation.	<ul style="list-style-type: none"> <li>There have been various projects undertaken that are expected to help improve awareness, understanding, experience and engagement among fishers in relation to best practice ecologically sustainable fishing and aquaculture. However, improved awareness, understanding, experience and engagement as a result of these activities has not been measured.</li> </ul>	6.1 6.2 6.7	<p>Communities - Increased consumer confidence in NSW seafood</p> <p>Communities - Improved communication and education</p> <p>Fisheries and aquaculturalists - Reduced risk of marine pests and disease</p>

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>Examples of projects that have helped raise awareness include collaborating with OceanWatch in promoting and delivering the Master Fisherman Program to train fishers to practice environmentally sustainable and responsible fishing practices, and updating modules through this program to align with most recent NSW Ocean Trap and Line Fishery Code of Practice for Reducing Whale Entanglements to inform best practice in the field to reduce whale interactions.</li> <li>Less direct capacity-building was undertaken through installing signs at popular boat ramps and fish cleaning tables at multiple sites on the South Coast to encourage sustainable fishing.</li> <li>In addition, the harvest strategies are expected to make a significant contribution towards this outcome. Engagement so far has been targeted through working groups and advisory committees, and public exhibition of drafts.</li> <li>Communications and stakeholder relationships remains a high priority for Initiative 6, and several project profile pages were uploaded to the marine estate website to assist this effort. This content is educational and contributes to improved awareness and understanding among fishers of best practices rules and regulations. MEMA agencies have also received letters of support for MEMS actions and projects from multiple business and industry groups, including a seafood and aquaculture business, the NSW Seafood Industry Council, Ocean Watch, and the Recreational Fishing Alliance of NSW.</li> </ul>		<p>Fisheries and aquaculturalists - Clearer rules and improved opportunities for self-compliance</p> <p>Tourists and tour operators - Enhanced visitor education and awareness</p>
6G: Enhanced opportunities and experiences for recreational fishers while balancing other social, cultural, economic and environmental values.	*Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	Proportion of survey respondents reporting enhanced opportunities and experiences	Not available. Baseline survey being conducted at the time of this evaluation.  Alternative measure(s) requested by MEMS staff.	<ul style="list-style-type: none"> <li>Fisheries enhancement programs are expected to support enhanced opportunities and experiences for fishers in the marine estate. This includes stocking juvenile yellowtail kingfish in Lake Macquarie (2,600) and Botany Bay (6,500). Information on fish stocking at these and other sites across the marine estate is available on the DPI website.</li> <li>New recreational fishing infrastructure is also supporting this outcome, including fishing platforms, as well as artificial reefs installed offshore near Newcastle, Wollongong and Tweed.</li> <li>Recreational fishers, through bodies such as the Recreational Fishing Alliance of NSW and Wallamba Sportfishing, recognise that projects undertaken through the MEMS for improving water quality and fish habitat are important for the health of the marine environments to support fisheries.</li> <li>There is ongoing engagement with recreational fishers through the development of the draft harvest strategy policy and guidelines.</li> </ul>	6.1 6.6 6.7	<p>Communities - Improved commercial and recreational opportunities</p> <p>Fisheries and aquaculturalists - Improved water quality, healthier habitats and better fishing</p> <p>Fisheries and aquaculturalists - Improved fishing opportunities through fisheries enhancements</p> <p>Tourists and tour operators - Improved fishing opportunities</p>
	Community and targeted stakeholders report enhanced opportunities and experiences for activities relating to marine estate (LI 23)	*Proportion of survey respondents reporting enhanced opportunities and experiences	Not available. Baseline survey being conducted at the time of this evaluation.			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
						Tourists and tour operators - More tourist interest in marine estate Tourists and tour operators - Enhanced marine eco-tourism opportunities
6H: Enhanced opportunities for commercial fishers and marine aquaculture while balancing other social, cultural, economic and environmental values	*Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	Refer to outcome 6G	Refer to outcome 6G	<ul style="list-style-type: none"> <li>Initiative 6 projects have investigated potential sites for prospective aquaculture to enhance opportunities for aquaculture. This includes developing aquaculture leases in Jervis Bay, which also led to the development of the NSW Marine Waters Sustainable Aquaculture Strategy, a regulatory and industry best practice legislative framework. This is being used to attract and guide future aquaculture investment in NSW.</li> <li>Initiative 6 actions have also supported other opportunities for industry to contribute towards balancing fishing with other values. This includes working with the 2020 Tide to Tip campaign, a series of Australian oyster industry led clean-up events. Through these events, participants removed over 500kg waste from estuaries across NSW.</li> <li>There is ongoing engagement with the commercial fishing and aquaculture industry through the development of the draft harvest strategy policy and guidelines.</li> </ul>	6.1 6.3 6.4 6.7 6.8	Communities - Improved commercial and recreational opportunities Fisheries and aquaculturalists - Reduced conflict with other users Fisheries and aquaculturalists - New aquaculture opportunities and business growth Fisheries and aquaculturalists - Improved fishing opportunities through fisheries enhancements Tourists and tour operators - Improved fishing opportunities
	Community and targeted stakeholders report enhanced opportunities and experiences for activities relating to marine estate (LI 23)	*Refer to outcome 6G	Refer to outcome 6G			
6I: Enhanced opportunities and experiences for Aboriginal cultural fishing practices.	Community and targeted stakeholders report enhanced opportunities and experiences for activities relating to marine estate (LI 23)	*Refer to outcome 6G	Refer to outcome 6G	<ul style="list-style-type: none"> <li>MEMS staff continue to work with the Aboriginal Fishing Trust Fund through funding secured for proposed projects extending across coastal NSW.</li> <li>Further cultural permits have been issued (12 in 2019-20), allowing greater participation in cultural fishing practices.</li> <li>MEMS staff have also worked at local scales to enhance opportunities and experiences for cultural fishing practices. This includes supporting a men's group from the Wallaga Lake Aboriginal community to regain cultural knowledge about boat building and net-making to preserve cultural fishing practices, and progressing cultural fishing local management plans.</li> <li>The harvest strategies and guidelines are also expected to support enhanced opportunities and experiences for cultural fishing in the future. Development of the draft strategies and guidelines included engagement with the Aboriginal Fisheries Advisory Committee. The Committee provided positive feedback on the drafts.</li> </ul>	6.1 6.7	Aboriginal People - Greater support for Aboriginal cultural fishing practices Fisheries and aquaculturalists - Improved fishing opportunities through fisheries enhancements Tourists and tour operators - Improved fishing opportunities

## Initiative 7: Enabling safe and sustainable boating

Initiative 7 continues to improve boating and infrastructure programs to reduce impacts of boating on the marine estate and provide better boating experiences for participants and other users of the marine estate. Positive progress has been made to-date, including the launch of Boating Now Program, which provides funding to enhance safe and sustainable boating access and infrastructure, the Maritime Infrastructure Plan, and the updated Boating Handbook. There are also a number of standards and guidelines currently in development that are expected to support Initiative 7 outcomes in the future. There are opportunities for outcome-based data collection to better understand the long-term effects of these programs.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 7 are provided below (Table 9).

Table 9 Findings against short-term outcomes for Initiative 7

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2019 result	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
7E: Greater community, government and industry awareness and understanding of guidelines and regulations for safe and sustainable boating:	Greater community, government and industry awareness and understanding of guidelines and regulations for safe and sustainable boating (LI 20)	Proportion of survey respondents reporting appropriate attitudes and behaviours. <b>Note:</b> This measure has been adapted from 'Proportion of survey respondents reporting inappropriate attitudes and behaviours'	82% of respondents see the attitudes or behaviours of other waterway users as a problem. <sup>6</sup>	N/A – boating participation survey data to be collected in 2021.	The following activities are expected to support this outcome: <ul style="list-style-type: none"> <li>Research to inform the development of mooring standards in NSW. This will be a pioneering project, with no similar standards elsewhere to draw insights from. Adequate time will be required to navigate the technical complexities to develop the standard.</li> <li>Finalising the new boating handbook highlighting the risk of boat-based contamination.</li> <li>Investigating ways to better manage vessels that have reached their end of life while reducing potential environmental impact.</li> </ul>	7.1 7.3 7.4 7.5	Communities - Improved communication and education  Tourists and tour operators - Enhanced visitor education and awareness  Boat users - Improved boating behaviour  Boat users - Improved communication and education
7F: Improved boating and infrastructure programs for the benefit of coastal and marine habitats and species	*Number of new maritime infrastructure projects delivering new or upgraded infrastructure to support improved waterways access (LI 19)	Number and value of projects delivered per annum under the Boating Now Program	72 projects awarded funding through the Boating Now program in round 2 (2018-2019)	69 project awarded funding through the Boating Now program in round 3, with total value of \$28 million (2020)	<ul style="list-style-type: none"> <li>The ongoing NSW Boating Now Program focuses on maritime infrastructure and facilities to support safe, sustainable and enjoyable boating in NSW. The current round of the program (Round 3, 2020-2022) will provide up to \$28 million funding for new projects.</li> <li>A new type of mooring apparatus is being trialled to protect sensitive seagrass communities while keeping boaters safe. Preliminary results of the environmentally friendly mooring trial at Port Stephens-Great Lakes Marine Park are positive. After six months there is no movement of the four apparatus being trialled, noting some significant storms have occurred in this period.</li> <li>The current indicator focusses on counting outputs and does not capture the change sought through the outcome. Initiative 7 identified the need to capture more qualitative information to better understand performance against this outcome.</li> </ul>	7.2 7.4 7.7	Tourists and tour operators - Abundant and diverse marine life for current and future generations  Boat users - Better mooring management  Boat users - Better boating access and waterway infrastructure

<sup>6</sup> NSW Government, *Recreational Boating in NSW 2019 Survey Results*, July 2019, <https://maritimemanagement.transport.nsw.gov.au/documents/recreational-boating-behaviour-report-final.pdf>

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

Initiative 8 has made progress on foundational activities that are expected to contribute towards intermediate and long-term outcomes. This includes the development of a Community Wellbeing Framework, to address critical knowledge gaps relating to social, cultural and economic information and allow for a coordinated and robust approach to monitoring trends and impacts to human dimensions of the marine estate. The development of the Community Wellbeing Framework recognises the increasing need to monitor and track the human dimensions of the environment in a way that goes beyond conventional approaches that predominantly use environmental indicators. The Community Wellbeing Framework and the Marine Estate Education Strategy will strengthen the evidence base for management decisions and provide insights for informing future actions. Initiative 8 staff continue to support other initiatives to integrate social and economic considerations in delivering their actions, which contributes towards outcomes captured in other initiatives. Initiative 8 has limited data against outcome indicators due to unforeseen delays in conducting community surveys, which are the primary data source for the initiative. Surveys were conducted in early 2021 and will provide information to track progress against relevant Key Performance Indicators and Leading Indicators to reach outcomes articulated in the MEMS.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 8 are provided below (Table 10).

Table 10 Findings against short-term outcomes for Initiative 8

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
8H: Greater stakeholder and community awareness of their responsibilities and opportunities to participate in management of the marine estate.	Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate (LI 21)	Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.	Initiative 8 staff have been unable to collect data for measuring outcomes due to unforeseen delays in conducting community surveys, which are the primary data source for indicators for the initiative. The coastal residents and visitors' survey and Sea Country (marine estate) survey were developed with extensive engagement during Stage 1. This is the first time a Sea Country (marine estate) survey will be done at this scale and will include a large number of coastal Aboriginal communities in NSW. The coastal residents and visitors surveys were approved during the evaluation period, but were being conducted in early 2021. As such, results could not be included in this evaluation.  Outcome 8I and 8H are closely linked, and progress and effort towards one will inherently support the other.  <ul style="list-style-type: none"> <li>The Community Wellbeing Framework is intended to facilitate strategic monitoring of social, cultural and economic components of the MIMP. This will help to understand current stakeholder and community awareness to inform future activities and provide a baseline for measuring improvement. This type of framework is novel for the NSW marine estate and is rare in coastal management strategies applied in Australia or Internationally. It will be important for all outcomes for Initiative 8.</li> <li>The draft Marine Estate Education Strategy was completed and undergoing targeted consultation with key local government educators, Aboriginal organisations, and other relevant environmental educators. This strategy will help improve community and stakeholder understanding of the benefits of the marine estate and its management. It will be important for all outcomes for Initiative 8.</li> </ul>	8.1 (a) 8.1 (b)	Communities - Improved communication and education
	Community and stakeholder participation in decision-making and management of the marine estate (LI 22)	Number of community members responding to survey	Not available. Baseline survey being conducted at the time of this evaluation.			
		Number of surveys conducted	3 surveys prepared, to be conducted 2021.			
8I: Improve stakeholder and community awareness of benefits, threats, and management arrangements relevant to the marine estate	Community members and targeted stakeholders demonstrate awareness of benefits of, and threats to, the marine estate (LI 10)	Proportion of survey respondents demonstrating awareness	Not available. Baseline survey being conducted at the time of this evaluation.		8.1 (a) 8.3 (a)	Communities - Improved communication and education  Landowners: Rural and Urban - Improved communication and education
	Community members report awareness and clarity of agencies' respective roles and responsibilities in managing the marine estate (LI 24)	Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	2020 result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>Coastal residents and visitors' surveys were developed during Stage 1 and will be conducted in early 2021. The survey will monitor the ways people benefit from the marine estate and impacts to these benefits. A Sea Country (marine estate) survey for Aboriginal people has been developed with survey design finalised with the project gaining final approval from the Australian Institute of Aboriginal and Torres Strait Islander Studies Ethics Committee. The survey was developed to understand the ways Aboriginal people value and culturally connect to Sea Country and impacts to these connections. These surveys will gather important baseline data and other insights for Initiative 8 and across the MEMS.</li> <li>Initiative 8 has collaborated with other initiatives to help deliver educational and monitoring projects, which indirectly contribute towards these outcomes, as well as some intermediate outcomes. This includes working with Initiative 4 and the Cultural Working Group to develop appropriate approaches to surveying Aboriginal people.</li> <li>Initiative 8 has also supported other initiatives to integrate social and economic considerations in delivering their actions, including facilitating fish friendly workshops and videos, the oyster reef restoration program and the marine litter campaign for water quality. This is important for delivery of the MEMS, particularly given the desire for integrated and holistic management that underpins the MEMS. However, the results of this effort are largely captured through other initiatives.</li> </ul>		

### Initiative 9: Delivering effective governance

During Stage 1, Initiative 9 focussed on establishing foundations for success through governance and project management frameworks and processes. These are already helping to improve project management and reporting practices, and internally focused outcomes for improving coordination, transparency, consistency and knowledge-sharing between the MEMA agencies. As this is the first time the MEMA agencies have worked together in this way, there will be ongoing refinements to these processes to support continuous improvement and to ensure they continue to support governance outcomes. Initiative 9 has limited data against outcome indicators as agency surveys have not yet been conducted. However, staff across the nine MEMS initiatives and governance groups provided insights that indicate there have been improvements in governance, knowledge-sharing and communication for the MEMS and that there are opportunities to continue improving and adapting governance arrangements in the future.

Indicator results and other findings for short-term outcomes (0-2 years) for Initiative 9 are provided below (Table 11).

Table 11 Findings against short-term outcomes for Initiative 9

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
9H: Greater clarity of roles, responsibilities and accountabilities and improved capacity to fulfil roles among all responsible agencies	Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate (LI 5)	Proportion of survey respondents demonstrating clarity	Not available. Baseline survey not yet conducted.	<p>Staff across the MEMS reported to the evaluators that there is generally improved clarity of roles, responsibilities and accountabilities and capacity to fulfill their roles.</p> <p>Staff also identified the need for further work to:</p> <ul style="list-style-type: none"> <li>Clarify and communicate roles and responsibilities in relation to monitoring through the MIMP, in particular the roles for initiatives in monitoring indicators.</li> <li>Review and clarify the role and responsibilities of initiative leads, particularly in the context of managing increasing workload for the leads.</li> <li>Clarify roles and processes for approvals and decision-making, and communicating outcomes from these processes.</li> </ul> <p>Initiative 9 has developed systems and processes and continues to engage staff across the responsible agencies to build clarity and capability to fulfil roles under the MEMS, particularly in relation to project management. This includes:</p> <ul style="list-style-type: none"> <li>Undertaking early and upfront discussions with initiative and MEMS teams on strategic direction and responsibilities to develop trust and understanding across each party.</li> <li>Establishing the Governance and Project Management Framework to provide a clear, consistent and rigorous approach to planning and implementing projects, transparent budget management, reporting and risk management for the MEMS has been a significant achievement for Initiative 9. This has formed a critical foundation for several outcomes for initiative 9 and delivery of the MEMS.</li> <li>Providing state-wide project management training workshops and online video training to accompany implementation of the framework. This has facilitated a better understanding of roles and responsibilities, and staff members' ability to fulfil duties. Additional meetings with individuals across the MEMS have helped increase uptake and ownership of the framework where necessary. This has also helped give senior staff greater confidence in delivery of the strategy.</li> <li>The framework has supported notable upskilling in project management among responsible agencies, particularly financial management and reporting. This was new for some agencies.</li> </ul>	9.1 (a) 9.1 (b)	Landowners: Rural and Urban - Coordinated and inclusive approach to management  Boat users - Coordinated and inclusive approach to management
	Responsible agencies report confidence with capacity to fulfil governance roles and responsibilities (LI 11)	Proportion of survey respondents' confident	Not available. Baseline survey not yet conducted.			

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
9I: Improved processes for knowledge sharing and communication among responsible agencies	New or improved processes or events for sharing knowledge among responsible agencies, and between responsible agencies and targeted stakeholders and the community (LI 8)	Number of new or improved processes, networks, data sharing platforms or events	12	<p>Interagency knowledge sharing and communication process that have been reviewed or created include:</p> <ul style="list-style-type: none"> <li>• MEMA meetings</li> <li>• MASC meetings</li> <li>• Interagency Working Group meetings</li> <li>• Quarterly 'snapshot' report</li> <li>• MEMA confidential quarterly report</li> <li>• Marine Estate website, including Initiative profile pages</li> <li>• Presentations</li> <li>• Conferences (e.g., NSW Coastal Conference 2019)</li> <li>• Marine Estate newsletters</li> <li>• Program Plan</li> <li>• Implementation Plan</li> <li>• Health Check and Stage 2 Requirements</li> </ul> <p>Overall, staff across the MEMS broadly felt that knowledge-sharing and communication has improved, and there are opportunities to further improve communication between the various governance, advisory and working groups.</p> <ul style="list-style-type: none"> <li>• The MEMS and MIMP governance structures, with interagency groups at different levels within the structure, are intended to facilitate knowledge-sharing and communication between agencies. Some of these groups, for example technical working groups (TWGs) in the MIMP, have only formed recently and are still establishing their role in interagency knowledge sharing and communication. The TWGs provide an opportunity for further achievement this outcome. Other groups, such as the MASC and IWG, have supported interagency knowledge sharing and communication among staff at their respective levels in the governance and organisational structure.</li> <li>• These groups are also used to identify opportunities for continuous improvement. For example, the monthly IWG meetings provide a process for sharing information and updates at the initiative level, and provides insights for improvements to project management arrangements.</li> <li>• Extended approval times for program planning and reporting documents delays knowledge sharing and communication between agencies, and is an area of improvement for ensuring timely and transparent communication.</li> </ul>	9.1 (d) 9.4 (b)	Fisheries and aquaculturalists - Transparent reporting and data sharing

Outcome	Indicator (*denotes those to be reviewed)	Measure (*denotes those to be reviewed)	Result	Other findings and discussion	Actions that support outcome	Business case benefits linked to outcome
				<ul style="list-style-type: none"> <li>In addition, examples of improved knowledge sharing and communication among agencies have been noted for other initiatives, as well as opportunities for further improvement. These reflect initiative-led processes, such as the Elements database through Initiative 5, and interagency relationships, such as Initiative 4's strengthened relationship with Local Land Services and new relationship with TfNSW.</li> </ul>		
9J: Greater community awareness of governance arrangements and opportunities to participate in management of the marine estate	Community members report awareness and clarity of agencies' respective roles and responsibilities in managing the marine estate (LI 24)	Proportion of survey respondents reporting awareness and clarity	Not available. Baseline survey being conducted at the time of this evaluation.	<p>Overall, Initiative 9 has focused on creating robust foundations for project management and governance to underpin delivery of the MEMS, rather than building community awareness (Outcome 9J). However, some public-facing documents noted against Outcome 9I may contribute towards Outcome 9J. These include:</p> <ul style="list-style-type: none"> <li>Quarterly 'snapshot' report</li> <li>Marine Estate website, including Initiative profile pages</li> <li>Conferences (e.g., NSW Coastal Conference 2019)</li> <li>Marine Estate newsletters</li> <li>Implementation Plan</li> </ul>	9.1 (a) 9.1 (b) 9.1 (d) 9.2 9.3 (c)	Communities - Improved communication and education

## 4.2. Early progress towards intermediate outcomes has been observed across multiple initiatives

Intermediate outcomes have expected timeframes of 2-5 years and were not expected to be achieved at the time of this evaluation. However, early progress has been observed against intermediate outcomes for multiple initiatives. This progress is a positive indication that delivery of the MEMS is on track to achieve intermediate and long-term outcomes. Findings on early progress against intermediate outcomes are provided in the *Baseline evaluation of the Marine Estate Management Strategy: Findings and recommendations from the first evaluation (initiative-level supplementary report)*.

## 4.3. Some outcomes and indicators should be refined to improve appropriateness and practicality

The first two years of implementation have provided staff with insights on the appropriateness of outcomes and indicators for their initiatives. As a result, MEMS staff have identified potential changes to outcomes, indicators and measures to improve the appropriateness of outcomes and indicators, and to enable more practical monitoring.

Potential changes to outcomes, indicators and measures reflect:

- Improvements to alignment of outcomes with the intent and scope of the initiative.
- Adjustments to timelines for outcomes to reflect funding, delays due to external factors, or insights into the suitability of original timeframes.
- Data collection being more difficult than expected.
- Ability to identify an alternative indicator or measure that aligned more closely with the outcome.
- Concerns over the extent to which external influences may affect results.

Outcomes, indicators and measures that have been identified to be reviewed need to be discussed and refinements agreed through a collaborative process following this evaluation. Any agreed changes must be consistent with the definitions of outcomes and indicators set out in the Monitoring and Evaluation Framework, and should prioritise capturing changes in understanding, behaviours, systems or condition rather than counting outputs. The review of indicators and measures may consider more qualitative and/or culturally appropriate approaches to measuring outcomes, where relevant.

A summary of proposed changes to indicators and outcomes for each initiative is provided in Appendix D - . Additional changes may be identified as further baseline data is collected. The proposed changes to indicators and outcomes for each initiative are indicative only and will be considered and agreed upon by MEMS staff in 2021.

## 4.4. Outcome monitoring programs are being established, and access to data against indicators is expected to improve for future evaluations

At the time of this evaluation, there was a lack of quantitative data against current outcome indicators in the Monitoring and Evaluation Framework to establish baselines and measure change. Baseline data and some subsequent data had been collected for indicators where data was readily available or did

not require new collection processes to be established. However, elsewhere, quantitative data was limited.

After the Monitoring and Evaluation Framework was completed, the responsible agencies were required to develop some further detail, including further developing complex key performance indicators, completing specifications for multiple indicators to reflect any initiative-based nuances, and to establish and commence monitoring processes. This additional work was critical for operationalising the Monitoring and Evaluation Framework, yet it was delayed for some initiatives. Delays in completing this work were caused by:

- delays in establishing governance processes for the MIMP, appointing dedicated staff, and creating the MIMP Steering Committee and MIMP Technical Working Groups (TWG).
- staff confusion over roles and responsibilities for monitoring, evaluation and reporting through the Framework. Although roles and responsibilities have been communicated to staff, there remains confusion, particularly where there has been staff turnover, regarding the allocation of responsibilities to initiatives, for monitoring indicators that cut across multiple initiatives, and responsibilities for completing indicator specifications.
- a focus on delivering actions and projects, without allocating time and resources for monitoring outcomes and indicators.
- Funding constraints, leading to prioritising delivery of projects over monitoring outcomes. In some cases, lack of funding meant that some projects that would have facilitated data collection against one or more outcomes, could not be progressed.

Additionally, staff who were not involved in developing the Monitoring and Evaluation Framework had difficulty engaging with and understanding the Framework due to its complexity.

Several MEMS initiatives, and the outcomes sought by these initiatives, share common indicators that were intended to be measured through common surveys. Surveys were intended to be a data source for 18 indicators in the Monitoring and Evaluation Framework. These surveys include the coastal residents and visitor survey, Aboriginal Sea Country survey, and responsible agency/staff survey. These surveys experienced a series of delays caused by the COVID-19 pandemic, slow approval processes and delays to completing indicator specifications, and had not been conducted in time for findings to be included in this evaluation. The coastal residents and visitor survey and Aboriginal Sea Country survey were conducted in early 2021 and will provide a baseline for repeat surveys in the future. The responsible agency/staff survey is in development and will be undertaken in late 2021.

Some outcomes have indicators that required new data collection processes or analytical approaches to be developed. New processes or methods have been developed for some indicators alongside delivery of Stage 1, and staff report being able to complete baseline data collection and or analysis in 2021. As noted in Section 4.3, staff have also identified multiple indicators to review, and have proposed refinements or alternatives to consider. In some cases, the proposed refinements or alternatives reflect data that is more readily available and can be expected to improve the availability of quantitative data for future monitoring and evaluations.

A summary of current availability of quantitative data for each indicator in the Monitoring and Evaluation Framework is provided in Appendix C - . This summary also denotes those indicators that have been proposed for review.

#### 4.5. Effective resourcing for the MIMP and data collection is important for improving measurement of outcomes, communicating achievements and enabling adaptive management

The MIMP is intended to monitor the trend in condition of marine estate assets and benefits, measure success in reducing priority threats, and fill key knowledge gaps identified in the TARA. In doing so, it supports evidence-based decision-making and adaptive management, and enables reporting of achievement against outcomes. Effectively implementing the MIMP is important for capturing changes to the condition of assets and benefits resulting of MEMS actions, to understand the effectiveness of interventions, and communicating these changes and benefits to stakeholders. Therefore, the MIMP has an important role in supporting implementation of the MEMS, achieving outcomes, identifying insights, and communicating successes.

While the MIMP was established early in Stage 1, there were delays in resourcing its implementation. In the interim, staff from Initiative 8 undertook early tasks to progress the MIMP through the development of the Monitoring and Evaluation Framework, although this was in addition to their own management actions and roles. Although a steering committee, several technical working groups and a coordinator have been appointed for the MIMP, staff from across the MEMS reported concerns that additional resources are required to deliver the MIMP most effectively.

These issues described in this section and Section 4.3, above, have contributed to limitations to quantitative data and have highlighted some lessons for ongoing implementation of the MIMP. MEMS staff require clarity on the purpose of the MIMP, and their roles, responsibilities and accountabilities in implementing the Monitoring and Evaluation Framework. MASC or the MIMP SC will need to ensure that staff are fulfilling their responsibilities with respect to the MIMP. This may require coordination support, particularly for initiatives where there are shared indicators. Finally, it is critical that the MIMP is adequately funded and resourced to ensure it can be successfully implemented, and provide insights that will support the efficient and effective delivery of the MEMS and achievement of outcomes for the marine estate and the NSW community.

#### 4.6. Maintain a focus on outcomes in planning, delivery, monitoring and reporting to ensure future success

To ensure that the MEMS remains on track to achieving its intermediate and long-term outcomes, it will be important to build on existing progress against outcomes, and to enhance the visibility of outcomes in project planning, monitoring and data collection, and reporting processes.

Although it was anticipated that outcomes were achievable within the nominated timeframes, ongoing effort may be required to maintain achievement against outcomes beyond those timeframes. Furthermore, staff indicated that there are many short-term outcomes where they would like to see further achievement in the future. To ensure that future delivery of the MEMS continues to build on existing progress, initiative leads should identify any short-term outcomes that will require deliberate effort to maintain or where there is a desire for further achievement in the future, and consider these when planning and delivering projects in Stage 2 (see Section 3.2 on adaptive management).

Internal systems need to be embedded across the initiatives to support regular collation of data against outcomes and indicators, along with clear responsibilities for collating data. This will be particularly important where indicators are shared across multiple initiatives. Internal systems should be fit for purpose and be able to accommodate the different monitoring needs for different outcomes

and indicators. For indicators that draw on existing data sources or collection processes, this data should be extracted at the nominated frequency and documented against the appropriate outcome and indicator.

Much of the monitoring data and other information that informed this evaluation was collated immediately prior to the evaluation, even for those indicators and measures where data was intended to be collected annually. This last-minute information gathering put additional pressure on initiative leads, and it was evident that many leads and other initiative staff were uncertain about what data and information needed to be collected. Initiative leads (or a delegate) and project leads should establish a habit of collating results and information against outcomes throughout the delivery cycle. Some information may become available on an irregular or ad hoc basis. This could include event-based surveys, informal feedback or testimonials from stakeholders, or other information that relates to the change sought by each outcome (as opposed to projects or outputs completed). Collating this information against outcomes as it emerges will build an ongoing understanding of progress towards outcomes, assist in identifying areas requiring attention through early adaptive management, and reduce the burden and pressure of retrospectively identifying and collating this information immediately prior to the next evaluation.

Reporting on outcomes and indicators also needs to be embedded into existing internal initiative reporting processes and included in external reporting. Internal reporting should be fit for purpose and reflect the data collection frequencies specified in the Monitoring and Evaluation Framework.

External reporting should reflect the type and level of information of interest to the intended audiences and appropriate frequencies for meaningful reporting. The reporting frequency may be longer than the data collection frequencies specified in the Monitoring and Evaluation Framework. The external reporting approach should consider the guidance and approach for developing reporting processes, as set out in the Monitoring and Evaluation Framework, and may be reviewed or further tested or explored to ensure the original approach is still relevant for audience needs.

## Recommendations: Outcomes, and outcome monitoring and reporting

### Recommendation 7

Initiative leads, with input from MIMP staff, should review specific outcomes and indicators identified through this evaluation to improve their appropriateness and practicality. Refinements must be consistent with the definitions of outcomes and indicators set out in the Monitoring and Evaluation Framework. Once refinements to outcomes and indicators have been agreed, initiative leads must complete indicator specifications, where required, to guide data collection.

### Recommendation 8

Initiative leads and MIMP staff, with input from MASC and MIMP Steering Committee, should review, agree and clearly communicate roles, responsibilities and accountabilities for outcomes and monitoring. In doing so:

- Roles, responsibilities and accountabilities for outcomes, indicators and data collection should be assigned to specific individual roles, in alignment with existing governance and delivery roles across the MEMS and MIMP. Roles and responsibilities for indicators and data collection will be assigned to initiative leads or delegates.

- Accountabilities for achieving specific outcomes should be allocated to relevant senior executive roles within the MEMA agencies, reflecting alignment with existing areas of responsibility.
- Include timeframes for fulfilling responsibilities.

#### **Recommendation 9**

Initiative leads should budget for MIMP implementation with respect to their initiative. MASC and MIMP SC should ensure funding and resources are allocated to effectively implement the MIMP.

#### **Recommendation 10**

Initiative leads should identify any short-term outcomes that require ongoing effort to maintain achievements to date, or where there is a desire for further improvement. Initiative and project leads should continue to consider these outcomes in planning and delivery during Stage 2.

#### **Recommendation 11**

Initiative leads, with support from MIMP staff, should embed systems or processes within initiatives for collating data against outcomes, indicators and measures. This should reflect agreed roles and responsibilities and data collection frequencies identified in the Monitoring and Evaluation Framework. Where possible, these should align with existing processes for collating and documenting initiative-level data and information.

Periodic reporting on outcomes and indicators should be embedded into existing initiative and program reporting processes, in line with the frequency of data collection in the Monitoring and Evaluation Framework.

#### **Recommendation 12**

Establish an approach for external reporting against outcomes and indicators. The approach should outline format, frequency and content requirements; be targeted to audience needs and interests; and drive accountability. The reporting frequency may be longer than the data collection frequencies specified in the Monitoring and Evaluation Framework.

#### **General**

#### **Recommendation 13**

MASC and the MIMP SC should confirm responsibilities and set timeframes for executing accepted recommendations. They should also allocate responsibilities, to agencies and roles, where not identified in the recommendations.

## 5. Conclusion

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The MEMS represents a new integrated, holistic and collaborative approach to managing the marine estate. During its first two years there has been a strong focus on establishing governance, delivery and program management processes, as well laying groundwork for future success. This includes developing policies, strategies and frameworks, and implementing significant pilot programs. There are ongoing challenges for delivery, however, there has been substantial progress in delivering actions so far. While there is limited quantitative data to measure outcome indicators, other information indicates that change has been observed against all short-term outcomes. Meanwhile, there is early progress towards multiple intermediate outcomes. Progress achieved through Stage 1 indicates that delivery of the MEMS is on track to achieve further outcomes in the future.

## Appendix A - Key evaluation questions, methods and data sources

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The KEQs and sub-questions used to guide the baseline / formative evaluation, as well as methods and data sources used for this evaluation are provided below (Table 12).

Table 12 Evaluation questions, methods and information requirements used for the baseline evaluation

Evaluation type	Program logic component	Key evaluation question and sub-questions	Methods and information requirements	Data and information sources
Context and basis	Problem / opportunity	<p>What was the rationale and intent of the initiative?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>Is the original rationale and intent still relevant?</li> </ul> <p>Has the policy context changed since the initiative was developed?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>Policy and management context</li> <li>Community expectations</li> </ul> <p>How has understanding of marine estate environments and issues evolved since the initiative commenced?</p>	<p>Literature review of:</p> <ul style="list-style-type: none"> <li>Documented evidence of rationale and intent of the MEMS</li> <li>Documentation of relevant changes to policy context</li> <li>Documentation of relevant changes to body of knowledge</li> </ul> <p>Qualitative insights from key agency staff relating to the original and ongoing context and basis for the initiative.</p>	<ul style="list-style-type: none"> <li>NSW Marine Estate Management Strategy 2018-2028</li> <li>Legislation</li> <li>MEMS Business Case Stage 1 (2018)</li> <li>Current MEMS Implementation Plan</li> <li>Stage 2 Funding Proposal (2020)</li> <li>Any other revised MEMS documentation</li> <li>Interviews with: <ul style="list-style-type: none"> <li>Initiative leads and delivery staff</li> <li>Staff from relevant interagency groups and committees</li> <li>Selected members of the MEEKP</li> </ul> </li> </ul>
Process	Inputs, actions, outputs	<p>Were management actions completed and outputs achieved, within budget, scope and timeframes?</p> <p>Why or why not?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>Were budget, scope and timeframes appropriate for the intended management actions and outputs?</li> <li>What could be done differently?</li> <li>Has implementation been influenced by external factors?</li> </ul> <p>Was implementation constrained in any way by inputs?</p> <p>Why or why not?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>Funding</li> <li>Resources</li> <li>Involvement of stakeholders</li> <li>Partnerships or agreements</li> </ul>	<p>Review of program delivery monitoring data relating to:</p> <ul style="list-style-type: none"> <li>Documentation of management actions and outputs achieved or progressed</li> <li>Budget and delivery timeframe reporting for management actions and outputs</li> <li>Documentation of scope changes for management actions and outputs, where relevant</li> </ul> <p>Qualitative insights from key agency staff relating to implementation progress and challenges.</p>	<ul style="list-style-type: none"> <li>Quarterly Program Reports</li> <li>Quarterly Program Status Report</li> <li>MEMS Annual Reports</li> <li>MEMA Strategy outcomes and highlights - year 1 - MEMA and MEEKP - August 2019 (Presentation)</li> <li>MEM Strategy outcomes and highlights by initiative - Stage 1 - MEMA and MEEKP - November 2020 (Presentation)</li> <li>MEMA Annual reports</li> <li>MEMS Annual Implementation Report</li> <li>MEMS Health Checks: <ul style="list-style-type: none"> <li>REAF Panel Gateway Review Report – Health Check (2020)</li> <li>Health Check and Stage 2 requirements report (2020)</li> </ul> </li> <li>Initiative status reports - Stage 1</li> <li>Interviews with: <ul style="list-style-type: none"> <li>Initiative leads and delivery staff</li> <li>Staff from relevant interagency groups and committees</li> </ul> </li> </ul>
Outcome	Short-term, intermediate outcomes	<p>To what extent have outcomes been achieved?</p> <p>Why / why not?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>What trends have been identified through indicators?</li> <li>To what extent have completed management actions and outputs contributed towards outcomes?</li> </ul>	<p>Qualitative insights from key agency staff relating to achievement of outcomes (focus on short-term and progress towards intermediate outcomes).</p> <p>Review of monitoring data against KPIs and LIs. Where available, trends identified over time.</p> <p>Review of relevant achievements/progress reports.</p>	<ul style="list-style-type: none"> <li>Indicator monitoring data (in accordance with the initiative monitoring plans in Appendix B of the Monitoring and Evaluation Framework)</li> <li>MEMS Annual Reports</li> <li>MEM Strategy outcomes and highlights - year 1 - MEMA and MEEKP - August 2019 (Presentation)</li> </ul>

Evaluation type	Program logic component	Key evaluation question and sub-questions	Methods and information requirements	Data and information sources
		<ul style="list-style-type: none"> <li>To what extent are planned or in-progress management actions and outputs expected to contribute towards outcomes?</li> <li>Are management actions and outputs still considered appropriate to the initiative need and to achieve outcomes?</li> <li>What could be done differently?</li> <li>Was achievement of outcomes influenced by external factors?</li> </ul>		<ul style="list-style-type: none"> <li>MEM Strategy outcomes and highlights by initiative - Stage 1 - MEMA and MEEKP - November 2020 (Presentation)</li> <li>MEMA Annual reports</li> <li>MEMS Health Checks</li> <li>Stage 2 Funding Proposal</li> </ul>
		<p>Has the initiative produced any positive or negative unintended or unexpected outcomes? Why/why not?</p> <p>Consider (for example):</p> <ul style="list-style-type: none"> <li>Community and cultural: safety, access, relationships and interactions, employment, attitudes and behaviour, physical and mental health</li> <li>Economic: industry structure, industry expansion/contraction, business/industry practices, goods/services prices</li> <li>Environment: species population growth/decline, species/individual health and safety, greenhouse gas emissions, soil/water/air pollution, ecosystem disruption</li> <li>Responsible agencies: administrative burden, indicator fixation, restricted focus, misinterpretation</li> </ul>	<p>Qualitative insights from key agency staff relating to unintended or unexpected outcomes.</p> <p>Review of monitoring data against KPIs and LIs. Where available, trends identified over time.</p>	<ul style="list-style-type: none"> <li>Interviews with: <ul style="list-style-type: none"> <li>Initiative leads and delivery staff</li> <li>Staff from relevant interagency groups and committees</li> <li>Selected members of the MEEKP</li> </ul> </li> </ul>
		<p>Are outcomes and indicators appropriate to the identified need? Why/why not?</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>Were outcomes and indicators effectively aligned with the original identified need?</li> <li>Are outcomes and indicators still relevant given any changes in the broader context?</li> <li>Are outcomes still considered realistic?</li> <li>Do / did indicators provide sufficient and appropriate signal for progress towards outcomes and/or any emerging risks?</li> <li>Is / was data collection against indicators achievable?</li> </ul>	<p>Qualitative insights from key agency staff relating to reflections on appropriateness of outcomes and indicators.</p>	<ul style="list-style-type: none"> <li>Interviews with: <ul style="list-style-type: none"> <li>Initiative leads and delivery staff</li> <li>Staff from relevant interagency groups and committees</li> <li>Selected members of the MEEKP</li> </ul> </li> </ul>
		<p>What insights are there for ensuring achieved outcomes are maintained in the future? Consider:</p> <ul style="list-style-type: none"> <li>Are impacts likely to endure through subsequent planning timeframes?</li> <li>How should management responsibilities be assigned?</li> </ul>	<p>Qualitative insights from key agency staff relating to maintaining outcomes.</p>	<ul style="list-style-type: none"> <li>Interviews with: <ul style="list-style-type: none"> <li>Initiative leads and delivery staff</li> <li>Staff from relevant interagency groups and committees</li> <li>Note, we anticipate that this question will also be informed by some of the sources listed for other questions above.</li> </ul> </li> </ul>

## Appendix B - Stakeholder engagement

Table 13 provides details of stakeholder interviews conducted to inform the evaluation.

Table 13 Stakeholder interviews conducted to inform the evaluation

Interview group	Participants
MEMA	Current and former MEMA Chairs
MEEKP	MEEKP members
MEEKP	MEEKP Chair and members
MASC - EES	EES Directors and staff
MASC - DPIE Planning	DPIE – Planning Director and staff
MASC - DPIF	DPIF Director and staff
Initiative 9 & Program Management	Initiative leads & co-leads, DPIF staff
MIMP SC: co-Chairs	MIMP SC co-Chairs – DPIE-EES & DPIF
Initiative 8 & MIMP Socio-cultural TWG	Initiative co-leads and DPIF staff
Enviro Tech WG reps	MIMP coordinator, Enviro WG lead, DPIF staff, previous TWG lead
MASC (Transport for NSW) & Initiative 7	Initiative lead, TfNSW and Maritime Director and staff
Initiative 6 & Initiative 5 Group B	Initiative and project leads, DPIF staff
Initiative 5: Group A	EES Initiative co-lead, EES Project lead
Initiative 4 & MIMP Cultural TWG	Initiative and project leads, DPIF staff, community member
Initiative 3	DPIF Project lead, EES Initiative lead
Initiative 2 & Initiative 1(B)	Initiative leads
Initiative 1(A): Group A	EES Sub-Initiative lead and EES Project lead
Initiative 1(A): Group B	EES Project leads
Initiative 1(A): Group C	EPA Project lead, EES Project lead
Initiative 1(B)	LLS Project lead, DPI Agriculture Project lead, EES Project leads
Initiative 2	DPIF Project lead, DPIE Crown Lands Project lead, DPIE Planning Project lead, DPIE Water Project lead, NRAR Project lead

## Appendix C - Data availability against MEMS indicators

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A summary of data availability for each indicator is provided on the following page (Table 14). Further detail on data availability, including results, is provided in Section 4.1 of this report and in the outcomes findings sections in the *Baseline evaluation of the Marine Estate Management Strategy: Findings and recommendations from the first evaluation (initiative-level supplementary report)*.

Data availability is summarised according to the categories in the key shown below. Those indicators that will draw on data from surveys or from the upcoming TARA review, as well as those indicators that have been identified to review and refine, are denoted in the table according to the categories shown in the key.

### Key

*Data availability:*

-  Baseline and additional
-  Baseline
-  Data available for some, but not all, measures
-  Data available, but not provided for this evaluation
-  Not available

*Commentary on reason for data availability:*

- 1) Denotes indicators that draw on data from the coastal residents and visitor surveys (conducted in early 2021)
- 2) Denotes indicators that draw on data from Sea Country (marine estate) survey (conducted in early 2021)
- 3) Denotes indicators that draw on data from responsible agency/staff survey
- 4) Denotes indicators that draw on data from other targeted stakeholder surveys (event-based, or as required)

^Denotes indicators that draw on scheduled five-year TARA review

\* Denotes where indicator and/or measures have been proposed for review

Table 14 Data and information gaps against MEMS indicators

Code	KPI / LI	Initiative	Data availability
KPI 1	Water quality supports community values and uses	1*	 Baseline and additional
KPI 2	National Litter Index results for NSW (to be replaced with Key Littered Items Study (KLIS))	1*	 Baseline and additional
KPI 3	Community wellbeing indicator	8	 Not available (1, 2)
KPI 4	Biodiversity and habitat indicator	2*	 Data available, but not provided for this evaluation
		1*	 Data available, but not provided for this evaluation
KPI 5	Key stressors to threatened coastal and marine species in NSW	5*	 Baseline and additional
KPI 6	Aboriginal people report satisfaction with Sea Country management	4	 Not available (2)
KPI 7	Aboriginal employment in industries relating to the marine estate	4	 Data available for some, but not all, measures
KPI 8	Trend in ecological sustainability, economic viability and community wellbeing measures for fishing and aquaculture	6	 Data available for some, but not all, measures
KPI 9	Boating provides increased social and economic benefits for NSW communities while supporting sustainable social, economic, cultural and environmental benefits of the marine estate	7	 Data available for some, but not all, measures
KPI 10	Number of strategic plans and operational activities that reflect climate change science, including risks, consequences and appropriate management responses	3*	 Not available
KPI 11	Economics benefits indicator	8	 Baseline

Code	KPI / LI	Initiative	Data availability
KPI 12	Community and stakeholders report satisfaction with governance of the marine estate	2	■ Not available (1, 3, 4)
		9	■ Not available (1, 3, 4)
		1	■ Not available (1, 3, 4)
KPI 13	Community members report awareness and appreciation of the significance of Sea Country value	4	■ Not available (2)
KPI 14	Agency staff report using decision-making and approvals processes for foreshore and coastal land use management, design and development that balances social and economic benefits with enhancing coastal and marine habitats	2*	■ Not available
KPI 15	Adoption of best practice approaches and processes for undertaking activities related to the marine estate among the community and targeted stakeholders	2*	■ Not available (1, 4)
		8	■ Not available* (1, 4)
		1*	■ Data available for some, but not all, measures (1, 4)
KPI 16	Responsible agencies report satisfaction with efficiency and effectiveness governance of the marine estate	2	■ Not available* (3)
		9	■ Not available (3)
LI 1	Water quality supports community values and uses at targeted sites	1*	■ Data available for some, but not all, measures
LI 2	Relevant agency staff demonstrate use of the risk-based framework and other relevant frameworks, policies and processes for managing water quality	1*	■ Data available for some, but not all, measures
LI 3	Knowledge gaps adequately addressed. Knowledge gaps relate to threats, stressors, risks, condition, value and management approaches.	1*	■ Not available^
		2*	■ Not available^

Code	KPI / LI	Initiative	Data availability
		3*	■ Not available^
		8	■ Not available^
LI 4	Aquatic and marine habitat connectivity	1*	■ Baseline
		2	■ Baseline
LI 5	Responsible agencies demonstrate clarity of roles, responsibilities and accountabilities for managing the marine estate	2*	■ Not available (3, 4)
		5*	■ Not available (3, 4)
		9	■ Not available (3, 4)
		1	■ Not available (3, 4)
LI 6	Responsible agencies report improved processing times for regulatory processes and approvals	2*	■ Not available (4)
		9	■ Not available* (4)
LI 7	Agency staff report using information relating to social, cultural, economic and environmental values in their strategies, plans, programs and decision-making processes	5	■ Not available (4)
		8	■ Not available (4)
LI 8	Improved understanding and sharing of information across stakeholders of threats to threatened and protected species	5	■ Baseline
		9	■ Baseline
LI 9	Community and targeted stakeholders demonstrate improved capacity to anticipate and adapt to climate change impacts	2*	■ Not available (1, 4)
		3*	■ Not available (1, 4)
LI 10		3*	■ Not available (1)

Code	KPI / LI	Initiative	Data availability
	Community members and targeted stakeholders demonstrate awareness of benefits of, and threats to, the marine estate	5*	 Not available (1)
		6*	 Not available (1)
		8	 Not available (1)
		1*	 Not available (1)
LI 11	Responsible agencies report confidence with capacity to fulfil governance roles and responsibilities	9	 Not available (3)
		1*	 Not available (3)
LI 12	Non-compliance among the community and targeted stakeholders with rules, regulations, guidelines and their responsibilities for undertaking activities related to the marine estate	5	 Baseline
		7	 Data available for some, but not all, measures
		9	 Not available
		1*	 Data available for some, but not all, measures
LI 13	Aboriginal group or individual participation in Sea Country management, planning and monitoring	4	 Baseline and additional
		5*	 Data available for some, but not all, measures
LI 14	Area of Sea Country under formal management agreements	4*	 Baseline and additional
LI 15	Aboriginal participants satisfaction with events, activities or programs for involvement in Sea Country management, planning and monitoring	4*	 Not available
LI 16	Number of programs or agreements initiated by Aboriginal groups or individuals for managing Sea Country	4*	 Baseline and additional
LI 17	Responsible agencies recognise and demonstrate understanding of Aboriginal cultural values, roles and responsibilities in managing Sea Country	4	 Not available (3)

Code	KPI / LI	Initiative	Data availability
LI 18	Compliance with conditions in aquaculture permits and consents, and commercial fishing licences	6	 Baseline
LI 19	Number of new maritime infrastructure projects delivering new or upgraded infrastructure to support improved waterways access	7*	 Baseline and additional
LI 20	Greater community, government and industry awareness and understanding of guidelines and regulations for safe and sustainable boating	7	 Baseline
LI 21	Community and targeted stakeholders report awareness and clarity of rules, regulations, guidelines, best practice and their responsibilities for undertaking activities related to the marine estate	2	 Not available* (1, 4)
		6*	 Not available* (1, 4)
		8	 Not available* (1, 4)
		1*	 Data available for some, but not all, measures (1, 4)
LI 22	Community and stakeholder participation in decision-making and management of the marine estate	5*	 Not available
		8	 Data available for some, but not all, measures
		9	 Not available
LI 23	Community and targeted stakeholders report enhanced opportunities and experiences for activities relating to marine estate	6*	 Not available (1, 4)
		7	 Not available* (1, 4)
LI 24	Community members report awareness and clarity of agencies' respective roles and responsibilities in managing the marine estate	2	 Not available (1)
		8	 Not available (1)
		9	 Not available (1)

Code	KPI / LI	Initiative	Data availability
LI 25	Rate and timeliness of response to reported animal strandings or entanglements	5*	 Not available
LI 26	Community and stakeholder satisfaction with experience participating in decision-making and management of the marine estate	5*	 Not available
		8*	 Not available
		9	 Not available
LI 27	Community members report awareness and appreciation of the benefits and significance of fishing and aquaculture	6*	 Not available (1)
LI 28	Area of coastal landscape managed for habitat or to reduce diffuse source water pollution	1	 Baseline
LI 29	National Litter Index results for NSW (to be replaced with Key Littered Items Study (KLIS))	1*	 Baseline and additional

## Appendix D - Proposed changes to indicators and outcomes

Table 15 Proposed changes to indicators and outcomes

Initiative	Outcomes	Indicators
Initiative 1 Water quality and litter	Refine outcomes to better reflect: the complexity and long-term nature of achieving improvements in water quality.  the emphasis of management actions in the short-term.  alignment with community values.	Review LI 1, LI4  Refine measures for 9 Indicators (LI 1, LI 21, LI 10, LI 2, LI 4, KPI 15, LI 12, LI 29, LI 3, LI 29, KPI 2).  Complete specifications for 5 indicators (LI 21, KPI 15, LI 1, KPI 2, KPI 1), plus indicators with refined measures, as needed.
Initiative 2 Healthy coastal habitats	None	Add 8 indicators (LI 7, LI 8, LI 10, LI 11, LI 12, LI 26, KPI 5, KPI 10).  Refine measures for 5 Indicators (LI 3, LI 5, LI 9, KPI 15, LI 6).  Complete specifications for KPI 14, plus above indicators as needed.
Initiative 3 Climate change	Adjust timeframes.	Review LI 9, LI 10  Refine measures for LI 3
Initiative 4 Aboriginal cultural values	Consider more ambitious outcomes or adjust timeframes.	Include additional, more culturally appropriate indicators to complement the existing quantitative indicators.  Review 2 indicators (LI 14, LI16).
Initiative 5 Threatened and protected species	Adjust timeframes for some outcomes.	Remove LI 22 and LI 26.  Review LI 10, LI 5  Refine measures for LI 13, KPI 5, LI 25.  Complete specifications for LI 12, KPI 5.
Initiative 6 Sustainable fishing and aquaculture	Adjust timeframes, some refinements to reflect initiative's scope.	Identify alternative to LI 21 to reflect available quantitative data.  Refine measures for LI 10, LI 23, LI 27, KPI 8.  Complete specifications for 5 indicators (LI 23, LI 10, LI 27, LI 18, KPI 8).
Initiative 7 Safe and sustainable boating	Review to reflect initiative's intent and scope, or remap actions to outcomes.	Include more qualitative indicators.  Further refinements following outcomes review.  Review measures for LI 19, KPI 9.

Initiative	Outcomes	Indicators
Initiative 8 Enhancing community benefits	Remove one outcome (8D). Remove reference to “stakeholders” from outcomes, reflecting Initiative 8’s focus on community.	Add LI 21. Remove LI 26.
Initiative 9 Effective governance	Review all outcomes to reflect initiative's intent and scope.	Refinements following outcomes review.

## Document History

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