South-East Commonwealth Marine Reserves Network Management Plan Evaluation

Final Report

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CONTENTS

Acronyms and abbreviations

Acronym / Abbreviation	Description
AFMA	Australian Fisheries Management Authority
AIMS	Australian Institute of Marine Science
AMP	Australian Marine Parks
AMPACs	Australian Marine Park Advisory Committees
AMSA	Australian Maritime Safety Authority
ARMADA	Australian Region Marine Data Aggregation information management tool
ASAE 3000	ASAE 3000 Assurance Engagements Other than Audits and Reviews of Historical Financial Information Standards
AUV	Autonomous Underwater Vehicle
BRUV	Baited Remote Underwater Video
CEA	Communications Education and Awareness
CEMS	Compliance Enforcement Management System
CFA	Commonwealth Fisheries Association
CMRN	Commonwealth Marine Reserves Network (changed to AMP Network after 2017)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAWE	Department of Agriculture, Water and the Environment
DIIS	Department of Industry, Innovation and Science
DNP	Director of National Parks
DPSIR	Drivers, pressures, state, impact and response model
EPBC	Environment Protection and Biodiversity Conservation
GRTS	Generated Random Tessellated Stratified
IUCN	International Union for Conservation and Nature
KNV	Key natural values
MBC	Maritime Border Command
MBES	Multi-beam echo sounder
MERI	Monitoring, Evaluation, Reporting and Improvement
MOU	Memorandum of Understanding
MSPS	Marine Science Program Strategy
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NRSMPA	National Representative System of Marine Protected Areas
NERP	National Environmental Research Program
NESP	National Environmental Science Program
PA	Parks Australia

Acronym / Abbreviation	Description
PIRSA	Primary Industries and Regions South Australia
RUM	Random utility model
SE CMRN	South-East Commonwealth Marine Reserves Network
SE Forum	South-East Forum
SEMPAC	South-East Marine Park Advisory Committee
SE Network	South-East Australian Marine Parks Network (or Commonwealth Marine Reserves Network prior to 2017)
SE Management Plan	the South-East Commonwealth Marine Reserves Network Management Plan 2013-2023
SE management staff	South-East Marine Reserves Network staff / Marine and Island Parks Branch
SETFIA	South East Trawl Fishing Industry Association
The Atlas	Australian Marine Parks Science Atlas
TSIC	Tasmanian Seafood Industry Council
VMS	Vessel Monitoring System

Note: the 58 Commonwealth Marine Reserves were renamed Australian Marine Parks through a proclamation in 2017. This document mainly refers to Australian Marine Parks.

EXECUTIVE SUMMARY

On 24 August 2021, Sustineo was engaged by the Director of National Parks (DNP) to conduct an evaluation of Parks Australia's (PA's) implementation of the South-east Commonwealth Marine Reserves Network Management Plan 2013-2023 (the SE Management Plan). The SE Management Plan is the primary tool for the conservation and management of the South-east Australian Marine Park Network (SE Network) It sets out the approach to management activities for the 10-year period commencing 1 July 2013.

The primary aim of this evaluation of the SE Management Plan is to inform the development of the next SE Management Plan. As this is the first Management Plan for the SE Network, there is not a complete data set of natural values baselines against which to measure change. The evaluation methodology therefore places emphasis on contextual monitoring and achievement of intent of the DNP, rather than simple summation of trends in the protection and conservation of biodiversity and other natural and cultural values of the SE Network. The technical audit incorporated in this evaluation is a more zero-sum analysis which gives binary ratings based on whether there was evidence that prescribed actions and outcomes have been commenced or achieved, with less emphasis on the broader context of progress towards the management goals of the SE Management Plan. This combined audit/evaluation approach involves acquisition and mixed-methods synthesis of large amounts of data from diverse sources in a structured format that enables comparison and conclusions to be drawn across the span of the SE Management Plan. This emphasis on cross-cutting higher-level evaluation of outcomes also recognises the importance of assessing the SE Management Plan as a blueprint for the management of other Australian Marine Park (AMP) networks.

The most significant finding overall is that while the SE Network might not feature amongst the most well-known Commonwealth Reserves across Australia, it is a fulcrum of innovative conservation management activity and in-depth research in an area of previously low knowledge. These combine to generate profound scientific energy and new understanding of a unique region of the Commonwealth Reserves estate. In this respect, the SE Network and the progress made against planned outcomes in its Management Plan are exemplars for PA's management approach.

In relation to progress against the SE Management Plan, most (four) of the seven Strategies have been implemented to a 'good with some concerns' standard. One Strategy (education and enforcement) was assessed as 'good', whereas two Strategies (assessments and authorisations; and Indigenous engagement) were assessed as 'significant concern' and have the most room for improvement.

Of the 32 prescribed Actions in the SE Management Plan, 87.5% have been implemented to some degree. Similar, 95% of the 20 Outcomes were assessed as ongoing or achieved to some degree.

This does not mean that it is perfect or that development of Management strategies is complete. It means that what has been put in place, the way it has been implemented to date, and the flow on effects of activities it has stimulated among external researchers and other stakeholders, is a very good start for an enduring and evolving management approach.

1. INTRODUCTION

Evaluation purpose and scope

On 24 August 2021, Sustineo was engaged by the Director of National Parks (DNP) to conduct an evaluation of Parks Australia's implementation of the South-east Commonwealth Marine Reserves Network Management Plan 2013-2023 (the SE Management Plan). The SE Management Plan is the primary tool for the conservation and management of the SE Network. It sets out the approach to management activities for the 10-year period commencing 1 July 2013. It was designed to provide certainty to users of the marine reserves by giving effect to decisions on zoning and allowable activities that were made at the time of proclaiming the marine reserves following an extensive consultation and planning process.

At the time of this evaluation, management of the SE Network had recently transitioned out of the Consolidation phase (Year 5-8) into the Review Phase (Year 9-10). This is a pivotal moment whereby an evaluation of this management plan is required to inform adaptive management of the marine parks and development of a new management plan for implementation after the cessation of the current management plan on 30 June 2023. The SE Management Plan is structured around seven management strategies. Strategy 7 of the SE Management Plan—*Evaluate and report on the effectiveness of this Management Plan through monitoring and review*—outlines the DNP's commitment to evaluating the implementation of the SE Management Plan before its expiry.

The primary aim of this evaluation of the SE Management Plan is to inform the development of the next SE Management Plan. An assessment of the comprehensiveness and effectiveness of the seven management strategies nominated in the SE Management Plan are addressed where possible within the overarching achievement of progress, and in responding to a series of evaluation questions. The evaluation has been structured around five evaluation themes:

- Direct management actions
- Enabling management actions
- Condition and trend of natural, cultural and heritage values
- Status and trends of pressures and drivers
- Status and trends of social and economic benefits.[1,2]

[1] Director of National Parks, *Management Effectiveness Framework - Draft,* July 2021.

[2] The original Terms of Reference for the evaluation sought an assessment of implementation progress of the SE Management Plan aligned with achievement against the four overarching themes, as described by the then Parks Australia's draft Management Effectiveness Framework at the time. On commencement of the task, the most recent draft of the Parks Australia Management Effectiveness Framework (September 2021) refers to five Evaluation Themes, with the rephrasing of the fourth theme listed above as Direct management actions, and the addition of a fifth theme Enabling Management Actions. To maximise comparability with this new framework and subsequent evaluations of progress against National Park Management Plans, this evaluation also assesses achievement against all five Themes.

The Sustineo evaluation team is cognisant of two broader issues of interest that have been raised by Parks Australia. Specifically, these are:

- Assessment of progress made in addressing the concerns raised by the 2019 ANAO Report[3], and
- Understanding the extent to which the SE Management Plan aligns with the comparable 2018 Marine Park Management Plans[4] and the implementation progress of the National Priority Actions within these Plans as they relate to the SE Network.

While not the core focus of this evaluation, the evaluation team have considered these two broader issues as part of the context in which evaluation findings are reached and, where appropriate, the evaluation highlights evidence of progress, or otherwise, and makes recommendations relevant to these areas of interest.

As this is the first Management Plan for the SE Network, this is a baseline evaluation which does not have data to make detailed comparative assessments of changes in trends in conservation of values. Therefore the methodology places emphasis on contextual monitoring and achievement of intent of the DNP, with a view to setting a baseline from which future evaluations can assess change. This is in recognition of the fact that measurement of the success of any large-scale program or system intervention must consider the sustainability of achievements, and the flow on (i.e. secondary) effects of activities upon the environment and society in which they are conducted. This approach incorporates acquisition and synthesis of large amounts of data from diverse sources in a structured format that enables comparison and conclusions to be drawn across the span of the SE Management Plan. This emphasis on cross-cutting higher-level evaluation of outcomes also recognises the importance of assessing the SE Management Plan as a blueprint for the management of other AMP Networks and includes the consideration of alignment with national program actions articulated in the 2018 Management Plans. Where applicable, monitoring of indicators of progress in the SE Marine Park environment has been coupled with evaluation of the effectiveness of types of management strategies and insights that can be generalised across these 2018 Management Plans.

Approach and methodology

The approach taken for this evaluation has centred on creating open, responsive interactions with PA staff and those SE Network stakeholders consulted. This has been critical for establishing a natural vehicle for regular feedback on the execution of the evaluation, including timeliness, quality and relevance of project deliverables, and information sharing.

The importance of a collaborative endeavour is heightened during the COVID-era when the ability to conduct independent primary field research has been disrupted, and even travel to meet with program staff to access information management systems has been prohibited. Notwithstanding the current operating constraints for social distancing, reduction in domestic travel and community

[3] ANAO, *Management of Commonwealth National Parks,* Report No. 49 of 2018-19, pg. 7-8.

[4] 2018 Marine Management Plans refers to the five management plans promulgated on 1 July 2018 relating to: Coral Sea Marine Park, North Marine Parks Network, North-west Marine Parks Network, South-west Marine Parks Network and Temperate East Marine Parks Network. Each of these plans share the same seven management programs and national actions. The implementation of the SE Management Plan has been influenced by the terminology and design of these later plans.

isolation rules associated with the COVID-19 outbreak across Australia, efforts have been made to engage with the identified key stakeholders throughout the evaluation process. The benefit of this collaborative evaluation practice is supported by abundant evaluative science that demonstrates greater results for program and likelihood of relevant, practical, and useable findings from evaluations that are co-created with those who are responsible for developing and executing the program.[5]

This collaborative evaluation practice will be crucial to the DNP, and other key stakeholders, in getting the most out of the evaluation findings and for building support for and acceptance of any recommendations leading into the development of the new SE Management Plan. This type of engagement has also enabled a deeper understanding and insight into the challenges being faced in the management and compliance against the prescribed management actions and outcomes as outlined in the SE Management Plan for the Sustineo evaluation team.

The evaluation approach was developed in consultation with PA staff, and relies on documentation provided by them, augmented by documents found in the public domain and stakeholder interviews conducted by the evaluation team. It is a combination of a technical audit technique and mixed-methods cross validation of a variety of data sources (both of which are detailed further below). The outputs of these techniques have been collated into a synthesised data set which was analysed to reveal answers to the evaluation questions posed in the assessment of progress against the SE Management Plan and insights on positive or negative trends towards the planned outcomes for each management strategy.

Technical Audit standards and approach

A technical audit approach was used to underpin the assessment of progress against the current SE Management Plan. The technical audit element forms part of the evaluation of the five themes, but particularly for the *Direct management actions* and *Enabling management actions* themes. The technical audit approach has also been conducted against the actions and outcomes listed in the current SE Management Plan. The audit methodology is based on PA's internal audit framework for technical audits of management plans, which has been in place since 2012. This methodology was updated to reflect the new developments and assessment classifications contained in the draft PA Management Effectiveness Framework, as well as being tailored to the language used in the SE Management Plan.

The technical audit component of the evaluation has been conducted in accordance with *ASAE 3000 Assurance Engagements Other than Audits and Reviews of Historical Financial Information Standards* (ASAE 3000). The full Assurance Report, including the audit approach, auditing framework and audit findings, is attached at Annex A to this report.

Additional reporting tools such as break out information boxes have been incorporated into the evaluation report to highlight issues of relevance and of particular interest to the report audience.

[5] Patton, M. *Qualitative Research and Evaluation Methods,* Sage Publications 2002. *What Counts as Credible Evidence in Applied Research and Evaluation Practice,* S. Donaldson, C. Christie and M. Mark (Eds), Sage Publications 2009. *Foundations of Program Evaluation: Theories of Practice,* W. Shadish, T. Cook and L. Leviton (Eds.), Sage Publications 1991. J. Owen, *Program Evaluation: Forms and Approaches,* 3rd Edition, Allen & Unwin 2006.

Mixed-methods evaluation approach

In addition to the technical audit component, the evaluation team has employed a mixed-methods data collection and analysis approach in response to the evaluation questions.

Specifically, this involved categorisation of all relevant qualitative and quantitative data found in a desk review of all DNP provided documents and other publicly available reporting. The highest-level categories were the five evaluation themes. Within each category, analysis focused on evidence of application of the relevant management strategies and evidence of the achievement of outcomes through prescribed activities or otherwise.

The seven management strategies contained in the SE Management Plan that have been evaluated are:

1. Improve knowledge and understanding of the conservation values of the marine reserves network and of the pressures on those values.
2. Minimise impacts of activities through effective assessment of proposals, decision-making and management of reserve specific issues.
3. Protect the conservation values of the marine reserves network through management of environmental incidents.
4. Facilitate compliance with this Management Plan through education and enforcement.
5. Promote community understanding of, and stakeholder participation in, the management of the marine reserves network.
6. Support involvement of Indigenous people in management of Commonwealth Marine Reserves
7. Evaluate and report on the effectiveness of this Management Plan through monitoring and review.

Where appropriate, these seven strategies have been considered in relation to the revised seven program area titles used in the 2018 AMP Management Plans, as well as the national actions. In this way, the evaluation provides insights into effective management and monitoring approaches that can be applied to AMP network management plans across PA.

Concurrent with secondary source data collection, primary source data was collected by the evaluation team through a series of key stakeholder interviews. Three primary groups of stakeholders were engaged:

1. Internal PA staff
2. Key scientific stakeholders
3. South-East Marine Park Advisory Committee (SEMPAC) members.

Specifically, the evaluation team has conducted 16 one-on-one virtual interviews. Engagement with key scientists was guided by PA and included approximately 5-6 scientists for input on natural values and pressures and delivery of the first management strategy.

The 15 SEMPAC members and observers were engaged through a 15-minute presentation of preliminary evaluation findings at their scheduled meeting on 16 November 2021. During that meeting, members also had opportunities to provide feedback on specific questions.

Views expressed during the stakeholder consultations that are used in this report have not been attributed to individuals or positions.

Additional stakeholder engagement will be conducted by PA through the comprehensive 'Have your say' stakeholder engagements on development of the new SE management plan, which are scheduled to be carried out after completion of this evaluation. This involves inviting the public, as well as people and organisations with a special interest in the SE Network, to comment on issues raised in the report and broader topics they believe are of interest for developing the next management plan for the SE Network.

2. THE SE MANAGEMENT PLAN AND SE NETWORK CONTEXT

Australia's marine parks make up one of the largest and most sophisticated networks in the world, covering representative examples of all of Australia's marine bioregions. These protect the diversity of life in our oceans, from astonishing coral reefs in our tropical seas to deep ocean canyons and undersea mountains in temperate marine regions.

PA is part of the Federal Government Department of Agriculture, Water and the Environment (DAWE) portfolio and supports the DNP who has responsibility under Federal environment law for six Commonwealth National Parks, the Australian National Botanic Gardens and 59 Australian Marine Parks.

Scale of the SE Network

The SE Network is the first of a national network of Commonwealth Marine Reserves established to protect Australia's ocean resources, and at the same time to allow for sustainable use. The SE Network extends from the far south coast of New South Wales, around Tasmania and as far west as Kangaroo Island in South Australia. It includes the Commonwealth waters of Bass Strait and waters surrounding Macquarie Island in the Southern Ocean. It protects 388,464 square kilometres of Commonwealth waters in 14 reserves. They are managed for the primary purpose of conserving biodiversity, while allowing for the sustainable use of natural resources in some areas[6].

The oceans of SE Australia support a rich diversity of marine mammals and birds, more than four thousand species of fish, and tens of thousands of species of invertebrates, plants and microorganisms, many of which are globally significant and found nowhere else in the world. The 14 marine parks of the SE Network were established in 2007 to ensure that representative examples of the variety of marine habitats and the marine life they support are protected.

The SE Network comprises 14 Commonwealth Marine Reserves, of which 13 were proclaimed under s. 344 of the Environment Protection and Biodiversity Conservation (EPBC) Act, and one, Macquarie Island Commonwealth Marine Reserve, which was proclaimed under the National Parks and Wildlife Conservation Act 1975. Together, these reserves represent examples of the ecosystems of the SE Marine Region. The 14 reserves are:

- Apollo Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Beagle Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Boags Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- East Gippsland Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Flinders Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Franklin Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Freycinet Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Huon Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Macquarie Island Commonwealth Marine Reserve (proclaimed on 27 October 1999)
- Murray Commonwealth Marine Reserve (proclaimed on 28 June 2007)

[6] Director National Parks, *A Guide for Users of the South-East Commonwealth Marine Reserves Network,* July 2013, pg. 1.

- Nelson Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- South Tasman Rise Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Tasman Fracture Commonwealth Marine Reserve (proclaimed on 28 June 2007)
- Zeehan Commonwealth Marine Reserve (proclaimed on 28 June 2007).

Management of the SE Network

The DNP is required to prepare a Management Plan for each Commonwealth reserve under the EPBC Act (ss. 366), but the Act allows a single Management Plan to be prepared to cover a number of reserves. This approach has been adopted for CMRs as it allows reserves to be managed strategically at a scale that accommodates the dynamics and connectivity of marine ecosystems. The network approach also establishes consistent management arrangements across all reserves within the network providing certainty for users. The 2013-2023 Management Plan for the SE Network is the first of these.[7]

As the first of five national networks, the SE Network was in many ways the test case and possibly the most difficult because at the time that it was initially being designed in the late 1990s, it overlapped with some of the nation's biggest fisheries areas including trawling areas. Therefore, attempting to manage it as a Marine Reserve Network was a somewhat contested endeavor. One of the reasons for selecting the SE Network as a test case was that it was less used by recreational stakeholders and its environmental values were little known, so it was considered to be something of a blank canvas. As a result, many of the design principles had to anticipate what was there, with a large portion of the knowledge on boundaries and constraints coming to light since the design of the SE Network. This is some of the challenging context that the managers of the SE Network have had to grapple with.

A management plan for a Commonwealth reserve has effect for ten years, subject to being revoked or amended earlier by another management plan for the reserve. The DNP must give effect to a management plan in operation for a Commonwealth reserve. The Commonwealth and Commonwealth agencies must also not perform functions or exercise powers in relation to the reserve inconsistently with the plan.[8]

The SE Management Plan is operational from 1 July 2013 – 30 June 2023. The implementation of the SE Management Plan is divided into three phases:

- Years 1–4: Foundation Phase (foundation activities and immediate activities and outcomes)
- Years 5–8: Consolidation Phase (intermediate and longer-term outcomes)
- Years 9–10: Review of SE Management Plan (continuing achievement of longer-term outcomes and preparation for next 10-year management plan).[9]

[7] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 6-7.

[8] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 95.

[9] Parks Australia, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23: Implementation Schedule 2013/14 – 2016/17,* pg. 3.

The objectives of the SE Management Plan are intended to provide clear direction for management of the SE Network for the 10-year life of the plan. Specifically, the objectives of the SE Management Plan are to:

1. provide for the protection and conservation of biodiversity and other natural and cultural values of the SE Network, and
2. provide for ecologically sustainable use of the natural resources within the SE Network where this is consistent with objective 1.[10]

[10] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 9.

3. SE MANAGEMENT PLAN IMPLEMENTATION THROUGH DIRECT AND ENABLING MANAGEMENT ACTIONS: TECHNICAL AUDIT AND EVALUATION FINDINGS

There is a lack of clarity in the documented definitions and understanding of the distinction between the *Direct management actions* theme and *Enabling Management* theme. Apart from separate subheadings in annual progress reporting, there is currently no distinction between the two themes in SE Network management reporting, division of activities or discussion of progress. For monitoring and reporting purposes there appears to be significant overlap in actions allocated to each theme, so that attribution of achievement or adequacy of levels of effort against one or the other is not clearly delineated. For example, given the SE Network's indirect role in research, surveillance and enforcement actions, it could be argued that almost all of their actions could be classified as 'enabling'. Therefore, it is not apparent that the definition of these two themes is a useful construct for management or effectiveness monitoring purposes. Clarification of the distinction between the two themes in any future Management Plan may be helpful in promoting understanding of logic, intent and scope of the SE Network's roles and priority responsibilities. Nonetheless, findings and corresponding evidence is presented below separately against each of the two themes as requested in the Evaluation terms of reference.

These two themes incorporate all of the SE Management Plan's seven strategies and are therefore paramount in assessing whether the Management Plan approach has been effective and the extent of implementation progress. The technical audit showed that these strategies are cohesive and comprehensive in covering all aspects of both themes and in fact provide greater clarity on what is expected under each of the themes and what their intended goals are. However, the outcomes listed under each strategy do not provide comprehensive scope under which to report on the successes and constraints of all activity occurring under the themes. Particularly for the *Enabling Management* theme, much of the relevant activity and achievements are not captured within the prescribed outcomes. Therefore, it is recommended that in future the Management Plan's outcomes are reconsidered to better align with the scope of activity achieved under these two themes.

Specifically, based on the auditing procedures performed, and the evidence obtained, progress has been made on the implementation of the SE Management Plan, as evaluated against the criteria. The SE Management Plan had seven overarching Strategies with 32 actions and 20 outcomes. Of the 32 actions, 9.4% (3) have been assessed as completed with no further action, 50.0% (16) as implemented but ongoing, 15.6% (5) as partially completed or implemented, 12.5% (4) as implemented with modification, and 12.5% (4) as not having been commenced. For the 20 outcomes, 0.0% (0) have been assessed as completed with no further action, 70.0% (14) as implemented but ongoing, 25.0% (5) as partially completed or implemented, nil (0) as implemented with modification, and 5.0% (1) as not having been commenced.

The overall result shows that considerable management action has commenced, and the seven Strategies of the Plan have guided implementation activities. Many actions undertaken by PA are consistent with but not articulated in the current Management Plan, but support the achievement of the prescribed outcomes. Noting this is the first Plan for any marine network in Australia, many actions and outcomes are assessed as implemented but ongoing as more information becomes known about the SE Network and some actions will always be ongoing. Audit findings noted the need to adjust and refine the wording of prescribed management actions and outcomes in the next Plan to better align

with the specific needs of the SE Network as well as the more recent introduction of nationally-consistent terminology.

The full Assurance Report is provided at Annex A.

Direct management actions Theme

Theme key findings
• The technical audit of actions relating to authorisations and compliance processes found that over the life of the SE Management Plan, authorisation processes have been streamlined to improve efficiency and effectiveness, and to avoid duplication. However, evaluation findings including interviews with key PA staff consistently highlighted shortcomings with the existing online authorisation system which is considered out-dated, inaccessible and inadequate for the quantity of data and variety of users that seek to upload information onto it. The necessity for prioritisation of overhaul and improvement of online authorisation system is a clear finding of the evaluation.
• The online authorisation system used for the SE Network is not effective or efficient and is a source of frustration for users, PA staff and scientists trying to contribute information to authorisation processes. It needs to be improved or replaced as a priority.
• Establish clarity of terminology and consistency in the levels referred to in the SE Management Plan structure.
• Therefore it is recommended that in future the SE Management Plan's outcomes are reconsidered to better align with the scope of activity achieved under these two themes.
• Minimise or mitigate consequences wherever possible with high staff turnover and prioritise retention efforts for staff with Marine Parks literacy and experience.
• Protect and grow relationships with National Environmental Science Program (NESP) and research Hubs.
• Continue to invest in Indigenous values education initiatives and reward these efforts to increase their visibility across the DNP with a view to expanding the approach with similar initiatives throughout the National PA domain.
• Further, the new SE Management Plan should review legal terms, natural values labels and categorisation to align with the 2018 Marine Management Plans, and the recent AMP management effectiveness system (Marine Biodiversity Hub Monitoring, Evaluation, Reporting and Improvement (MERI) model)[11].

[11] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia.

Discussion of evidence

Authorisations and Enforcement

Authorisations and enforcement of permit and prohibited zone limitations is perhaps the most tangible and publicly visible aspect of the management of the SE Network. Review of source documents provides evidence indicating that PA has established effective and transparent processes for assessment, decision-making and authorisation of activities, with some room for improvement.

From 2013, under the initial implementation of the SE Management Plan, the process for issuing permits and licences became much clearer and easier to manage because criteria and classifications were clearly articulated in the Plan. This was especially beneficial for researchers who were able to better understand the definition of boundaries, priorities and basis for decisions, than under previous interim arrangements. Those involved in the development of the Plan highlight that its clarity and acceptance was enhanced because it was based upon around 10 years of discussion and negotiation with fisheries, oil & gas and other user groups, so they were comfortable with the terms of the plan.[12]

The SE Management Plan sets out the range of activities allowed, or allowable under a class approval or permit, or prohibited in the different zones within marine reserves, however the PA Director Compliance and Authorisations can make, amend or revoke the rules outlined in the SE Management Plan in response to emerging management needs[13]. Class approvals are used to authorise persons, or a class of persons, to carry on a type of activity specified in the approval. Permits are used to authorise the person(s) named in the permit to conduct an activity. The evaluation team did not find any indication that the range of activities and restriction specifications in the SE Management Plan required significant or frequent amendment. It was noted that PA staff considered it critical for legislative longevity on authorisations and compliance that the SE Management Plan has a 10-year life span which sets long-term standards, enabling enduring efficiencies such as class approvals.[14]

A review of reference documents, PA's website and policies indicates that best-practice approaches to regulation and decision-making in the authorisation of activities in Australian Marine Parks (AMPs) has been developed and applied in the SE Network. Most recently, the development of the 2021 AMP Assessment and Authorisation Policy has enhanced the standardisation and consistency of assessment processes across AMP reserves. While this policy is framed at the national level, it provides mechanisms for consideration of the objectives of respective Network Management Plans when decisions about authorisations are being made[15].

Over the life of the SE Management Plan the majority of authorisation requests in the SE Network were for research activities. In 2015, in the early phase of the SE Management Plan, requests for charter fishing were second only to research requests[16]. However, as Table 1 shows, in later years these dropped off once charter fishing companies had established their authorisations to operate

[12] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[13] Director National Parks, *A Guide for Users of the South-East Commonwealth Marine Reserves Network,* July 2013, pg. 5.

[14] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[15] Parks Australia, *Australian Marine Parks Assessments and Authorisations Policy*, July 2021.

[16] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 4-5.

under the new SE Management Plan. Between 2013 and 2021 there have been a total of 63 authorisations issued, 48 of which were for research and 14 for monitoring.

Table 1: Total authorisations issued in the SE Marine Parks between FY 2018/19 and FY 2020/21[17]

Type of authorisation	Number
Commercial media	2
Research and Monitoring	24
Structures and works	3
Total	**29**

The technical audit assessed that the publishing of authorisations issued on PA's website provides a unified and transparent approach to manage and document authorisations across all AMPs.[18]

In line with the requirement of the SE Management Plan's Strategy 2, it is evident that opportunities for streamlining authorisation processes have been a consistent consideration.[19] Streamlining through the creation of new class approvals has been one of the most common streamlining approaches. Class approvals are issued to authorise "a specified class of activities by a specified person, a group of persons or a class of persons where the activities are generally done in the same way by all persons conducting the activity" as this minimises red tape, costs or administrative overheads for operators and Government authorising staff[20]. For example, the class approval for commercial fishing came into effect on 1 July 2013 and will remain in effect for the term of the Plan. It serves as an important template for other AMP networks not only for commercial fishing, but for other sectors, to improve efficiency while improving social, economic and environmental outcomes.[21] A class approval for commercial tourism (charter fishing operations) was under consideration in 2016/17, but it was concluded that commercial tourism operators are operating satisfactorily with long-term permits and are not impeded by the need for class approval.[22] Since then, the DNP has issued class approvals for commercial fishing, mining and some structure and work activities[23]. In addition, the commercial fishing class approval was amended twice. PA is currently in the process of bringing in a class approval for low impact research which is now at the consultation stage.

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[17] Parks Australia, *List of authorisations issued*, https://parksaustralia.gov.au/marine/activities/authorisations-issued/ accessed on 3 November 2021.

[18] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17*; Parks Australia, *List of authorisations issued*, https://parksaustralia.gov.au/marine/activities/authorisations-issued/ accessed on 3 November 2021.

[19] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 4-5.

[20] https://parksaustralia.gov.au/marine/activities/, accessed on 3 November 2021.

[21] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 2.

[22] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 5.

[23] https://parksaustralia.gov.au/marine/activities/, accessed on 3 November 2021; Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17;* and Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21.*

The assessment of permits and other authorisations in the SE Network was found to be consistent with AMP national policy, centrally coordinated through PA in Canberra. This is enabled by periodical risk reviews (See also *Risk assessment and compliance monitoring* section below) and consultations to define and maintain standardised conditions for authorised activities[24]. The intent of this centralised management is to "make our individual authorisations more efficient and deliver a timely outcome to AMP users" [25]. The evaluation found that this team is successfully liaising closely with Maritime PA Management South Section for proposed activities within the SE Network. However, shortcomings of the online authorisations system (described below) detract from the transparent and efficient contribution of localised expertise on authorisation proposals.

In July 2018, the rollout of new Management Plans across the PA estate included the implementation of a customer focused online authorisation system for marine park users, the Customer Relationship Manager (CRM)[26]. The PA website also provides customer focused information on authorisations, as well as links to portals on the DAWE website where users can access CRM[27]. This was a significant effort towards streamlining and was expected to reduce the regulatory burden on users and similar to systems already used by other marine resource management agencies.[28] However, it has been found that the user interface and information inputs capacity of the online authorisation system has major shortcomings. Given that the majority of authorisations for activities in the SE Network are for research activities this is a source of frustration for research activity applicants and needs to be rectified. It was expressed that the:

> Authorisations portal is not at all effective for researchers to put in useful information. Does not work to pull out info for a given location or topic for those doing authorisations. And is a very poor user interface for public applications.[29]

For PA Compliance and Authorisation staff, CRM is outdated and obsolete. As a result, they must process everything manually via spreadsheets. It was asserted that the CRM cannot cope with decades of data to enable them to drawdown necessary insights.

Risk assessment and monitoring

A review of source documents and interview narrative data provides evidence that PA has implemented a range of reliable methods for monitoring compliance with the specifications of the SE Management Plan. In line with Strategy 4, which requires management through a "risk-based" approach, the SE Network's risk assessment and compliance monitoring has been driven by risk-based biannual Compliance Risk Assessments which are undertaken for each network. Reviewed and revised on a biannual basis, the resulting annual Compliance Plans are intended to document and prioritise

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[24] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 11.

[25] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Implementation Plan 2 Consolidation Phase 2017/18 – 2021/22*, pg. 5.

[26] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21,* pg. 11.

[27] https://onlineservices.environment.gov.au/?destination=eform/submit/env-eform-parks-form-selector, accessed on 3 November 2021.

[28] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 23.

[29] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

compliance activities so that they can be coordinated between participating regional compliance agencies in a cost-effective, streamlined manner which prioritises those areas of reserves most at risk to non-compliant activity. Compliance Plans include treatments to reduce compliance risks covering awareness and education initiatives through to monitoring and surveillance efforts. Nationally, this commenced when preliminary discussions with counterpart agencies were hosted by PA in 2014/15 in preparation to developing a compliance risk-based activity audit pilot framework. PA then sought SE Forum advice/support for using the SE Network for a pilot in 2016/17.[30]

Since then, the biannual risk assessment informs the rate of effort in the SE Network of surveillance measures in each zone by both surface and aerial surveillance patrols.[31] In 2015/16, PA completed a Compliance Plan and a tactical plan for South-east operations which contributed to significant advancement of partnered surveillance arrangements (as discussed under *Partnered Surveillance* below).[32] The technical audit of the relevant Strategy 5, Action 18 also concluded that risk assessments and Compliance Plans were completed for 16/17, 17/18, 18/19 and 19/20. The implementation of these plans is evidenced by quarterly Compliance Reports provided to the South-east Marine Park Advisory Committee (SEMPAC) and uploaded to the PA website.[33] The audit observed that there is limited evidence to confirm that these plans are translated into a risk-based approach to actual management activities by the DNP and subsidiary SE Network management. However, evaluation findings provided assurance that practical risk treatments resulting from these assessments have included:

- Marine Parks information in Commonwealth fisheries management booklets
- The Australian Marine Park Alert Service for Commonwealth fishers
- A Vessel Monitoring System for Commonwealth fishing vessels
- Aerial and vessel patrols.[34]

Further, the 'adaptive management' style (which is examined further under *Management Plan evaluation and information flows into policy review* below) that pervades SE Network management practices appears to effectively translate the risks identified in Compliance Plans into responsive management activities.

It was found that the pillar of PA compliance monitoring in the SE Network, is the Vessel Monitoring System (VMS) which became operational in the SE Network on 1 July 2014 and is mandatory on Commonwealth commercial fishing vessels.[35] Since that time the system has provided alerts to vessels' skippers, operators and owners as well as immediate alert notifications to the PA Compliance Team and Australian Fisheries Management Authority (AFMA) when a vessel enters into a marine park

[30] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 7.

[31] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17,* 2017, pg. 30.

[32] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 7.

[33] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 14-18.

[34] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 14.

[35] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 30.

zone in which the vessel's fishing gear-type and concession is prohibited.[36] This information is used primarily for compliance purposes, and in 2016 began being consolidated and desensitised to obtain a long-term view of AMP use by commercial fishers in SE Network.[37] The VMS Alert Service has been available to all Commonwealth licensed fishers at no cost to the industry. However, outside of the Commonwealth fleet, there has been limited uptake, including very limited VMS in Tasmanian and Victorian fleets. PA Compliance and Authorisations Branch currently has no access to Victorian or Tasmanian VMS data which is closely held by non-Commonwealth vessels. There is currently a national grants program where states can bid to upgrade fisheries systems including VMS instalment aimed at increasing the consistent use of and sharing of data from VMS.[38]

For fishing vessels fitted with VMS, it has proven to be very successful in significantly reducing the frequency of unintended potentially non-compliant activity in AMPs. This in turn has reduced compliance related investigation effort required by both PA and AFMA as well as for the commercial fishing fleet due to reduced unintended non-compliance.

The evaluation team verified that all VMS alerts for vessels traveling below 5 knots are examined by the compliance team to determine if any enforcement action is required.[39] Investigations of, and responses to, this type of non-compliant activity are documented, including in publicly available quarterly compliance reports. The compliance team generates Media Releases on all civil litigations and prosecutions in order to raise awareness of AMP rules and to encourage compliance. An example of the type of enforcement action that VMS alerts have brought about is the successful prosecution in June 2017 of a case of illegal fishing for southern bluefin tuna within a no fishing zone of Flinders Marine Park, which resulted in substantial fines of $81,900 and $12,000 imposed on the company and skipper (respectively) under section 354 of the EPBC Act 1999 (Cth) by the Federal Court.[40] This has since been reported in the Tasmanian Seafood Industry Council magazine in March 2020.[41]

In conjunction with VMS, it was reported that there is now an Electronic Monitoring system which includes cameras and is far more advanced that VMS, although very few vessels have adopted it so far. PA has also established a reporting system for users and visitors of the SE Network to report suspected non-compliant activity. However, it is unclear what has been done to promote and support users and visitors to utilise this reporting system, apart from a reporting phone line provided on the PA website. At a national level, any suspected non-compliant activities can be reported by users and visitors of an AMP via a phone hotline or email.[42] However, it is not clear what steps have been taken

[36] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Implementation Plan 2 Consolidation Phase 2017/18 – 2021/22*, pg. 8-9.

[37] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 11.

[38] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[39] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 15.

[40] https://parksaustralia.gov.au/marine/news/tough-penalty-for-illegal-fishing-in-australian-marine-parks/, accessed on 4 November 2021.

[41] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 15.

[42] Reporting hotline: 1800 852 975 where users can talk to a Marine Compliance Officers or via an email to marine.compliance@awe.gov.au (https://parksaustralia.gov.au/marine/pub/qtr-compliance-reports/amp-qtr-compliance-report-4-2020-21.pdf).

to assess the effectiveness of this reporting system, including the effectiveness of support provided to those trying to report non-compliant activity.

The National Program Action for Strategy 2 sets a goal for collaboration with industry to investigate innovative compliance and monitoring technologies and systems. A review of source documents provides evidence that new technologies and systems such as VMS and the CMR Alert system have been implemented to assist businesses and individuals to comply with regulatory requirements. However, there is no evidence to demonstrate that PA collaborates with industry in any other ways to investigate innovative technologies and systems (including vessel monitoring systems). While there is some limited evidence that the VMS technology was discussed with industry partners as part of SE Forum Meetings[43] there is no documentation in recent years of PA collaborating with industry to investigate *new* technologies and systems.

Partnered surveillance

Over the life of the SE Management Plan significant progress has been made in improving CMR awareness through partnership with commercial fishing industry and other government agencies to establish on-going surveillance and monitoring, in line with collaborative compliance risk planning requirements.[44]

Early on in the life of the SE Management Plan, it was recognised that effective enforcement through risk-based planning incorporates "targeted monitoring and surveillance (e.g. aerial and vessel based)…[through] strong links with Commonwealth and state enforcement agencies to share information and cooperate in joint enforcement activities" [45]. For the SE Network this meant that in 2013:

> the Director has agreements with the Australian Customs and Border Protection Service for the provision of surveillance services in marine reserves and with the Australian Fisheries Management Authority for fishing vessel monitoring. Wardens are appointed under the EPBC Act to enforce compliance with the EPBC Act and Regulations. All Australian Federal Police and Australian Customs officers are wardens for the purposes of the EPBC Act. Officers of other Commonwealth agencies and of Victorian, South Australian and Tasmanian government agencies may also be appointed as wardens in relation to the South-east Marine Reserves Network.[46]

The evaluation has found that one of the most important mechanisms for progress in partnered surveillance since 2013 has been a number of South-east Marine Region Compliance Risk Assessment Workshops. The first of these was held on 20 March 2013 in Hobart and was attended by representatives from Australian Customs & Border Protection Command, AFMA, South Australian

[43] SE Forum, *Meeting Record*, March 2015; SE Forum, *Meeting Record*, November 2015; SE Forum, *Meeting Record*, November 2017.

[44] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 3.

[45] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 32.

[46] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 32.

Department of Environment, Water & Natural Resources, Primary Industries and Regions SA, Tasmanian Police, and PA representatives. Agencies shared information on their respective roles, responsibilities and capabilities in relation to compliance and enforcement in the SE Network. The workshop achieved an agreement to share marine compliance patrol reports and data, awareness of agencies' patrols and space (when available) in patrol vessels and aircraft plus VMS information to support patrols. This was considered a break-through in inter-agency collaboration and support[47]. A second iteration of the workshop held on 20 March 2014 in Adelaide enabled PA to work through initiatives agreed between agencies which directly informed annual risk planning for the SE Network for 2014/15. The value of these consultative risk assessment workshops has been described as follows:

> The Risk assessment workshops and cooperation on Compliance Plans do bring people together that doesn't happen otherwise. Face to face forums definitely need to be held as part of planning processes. Those workshops brought even scientists that wouldn't otherwise talk, together as well as antagonists in a non-threatening environment. Apart from anything else, it's a valuable opportunity for outreach that may not otherwise be pro-Parks. Having attendees who represent varied constituents is a rare and important opportunity.[48]

A Compliance Risk Assessment workshop was scheduled to be held in 2015, with an intention of reconvening annually.[49] However, the evaluation team was informed that either reprioritisation or PA efficiency measures resulted in Compliance Risk Assessment Workshops for the SE Network being deprioritised and ceased.[50] It is evident that these workshops were valuable and demonstrated a high level of commitment from DNP and industry representatives to engage and work through issues. The consideration of acceptable levels of risk and assessment standards for fishing gear was a standout achievement of the risk workshops. Consequently some believe that

> It was premature to discontinue these risk workshops. Particularly missing opportunities for collaboration between research and fisheries industries. They provided an important informal mechanism for frank negotiation on standards and policy.[51]

However, there are also views that there is not a need for face-to-face workshops since the internal SE Network risk assessment process has matured and AMPACs were introduced. From this perspective, any risks raised by AMPAC members are fed into regional risk assessments in consultation with state agencies. In addition, the SE Management Plan's prescribed collaborative annual risk assessments have been effective in determining the rate of effort of surveillance measures in each CMR/zone by both surface (Tasmania Police patrol) and aerial (MBC and 'in-house' charter aircraft) surveillance patrols. The patrols are predominantly overt in nature to inform all users that the CMRs are actively patrolled. It was reported in 2017 that SE Network surveillance flights previously provided by MBC have reduced over the past few years and "are now curtailed due to higher national priorities

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[47] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 9.

[48] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[49] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 10.

[50] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[51] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

for maritime surveillance".[52] However, on-going contractual arrangements with the Tasmanian Police (an Annual Business Agreement formally commenced on 28 September 2017[53]) and Primary Industries and Regions South Australia (PIRSA) for the delivery of surface surveillance patrols in the SE Network are evidentially considered adequate. The benefits of this arrangement were significantly enhanced in 2016 when PA developed a new Memorandum of Understanding with PIRSA to better support ongoing compliance and reserve management services with an added mechanism for sharing of VMS data between the agencies.[54]

Compliance training

The evaluation has identified that a pillar of SE Network achievement of Strategy 4 (Action 22)—supporting initiatives and programs which promote best practice standards that guide use and minimise impacts on the marine environment—is the delivery of SE Network compliance training and education resources. One such resource is *A Guide for users of the South-east Commonwealth Marine Reserves Network* released in July 2013 to provide user-specific information for complying with the prescriptions in the SE Management Plan[55]. It was evidently reviewed in 2016/17 to update content and has recently been reviewed and updated again.[56] While this example is notable, PA recognises there is more that could be done under this action.

Building on this preparatory work PA has worked in collaboration with South East Trawl Fishing Industry Association (SETFIA) to develop an online training program for commercial fishing industry in the SE Network. The training course was scheduled for completion and delivery in late 2015, and after undergoing user testing to ensure that content and platform is appropriate for industry needs it was launched online in 2016. The online training program, delivered via contract with Federation Training, provided essential information on the SE Network for South-east trawl fishers operating within the South-east Shark and Scalefish Fishery. PA undertook to cover enrolment costs for the first 100 students each year for the next three years to encourage fishers to enrol and complete the course.[57] However,

> While provision was made for up to 300 participants to be funded under this contract, the cessation of the compulsory AFMA modules which were offered alongside this course meant that SETFIA had difficulty providing an incentive for fishers to complete this course on a 'stand alone' basis. SETFIA's contract with Federation Training (the Provider) has now ceased (as per cessation date of the project- EoFY 16/17).[58]

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[52] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 30.

[53] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 31.

[54] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 10.

[55] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 8.

[56] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[57] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 9.

[58] Director of National Parks: Marine Protected Areas Branch, MPA Management (South) Section, *Project Finalisation Report, South-east network Commercial fishing on-line training,* 2018.

Despite its curtailed lifespan, the training was considered a successful model for potential application in other marine networks.[59] As an early indicator of success in 2016 it was reported that of the 116 individual fishers who had attended the training, none were involved in any compliance incidents.[60] It was found that there were some issues with the delivery of the training modules through TAFE accredited formats which presented some issues with software system access, additional standardised information requirements and cumbersome enrolment.[61]

Another example of consultation with commercial fishing stakeholders was PA staff consulting with the Tasmanian Seafood Industry Council, when considering vessel surveys for CMR user charting needs. A shared conclusion that the project was too expensive and risky was reached, and this lead to a new approach of mailing-out a SE Network user guide to both stakeholder groups.[62] Around this time, as an indicator of success PA reported that "in the last four years there have been no reports of suspected non-compliant activity; however, we have had instances of commercial fishers self-reporting or otherwise adjusting their fishing run when they have realised that they may be within a marine park zone for which they are not authorised to operate within. This self-reporting has occurred predominantly post-implementation of the Marine Parks Alert Service."[63]

To further enhance collaboration on compliance monitoring, SE Management staff developed a warden training package to be delivered to South Australian and Tasmanian wardens in 2014. To compliment this, an online warden toolbox was developed and a boarding quick reference guide was also distributed to all state agency wardens is being compiled to assist in warden capacity building including all relevant templates and guidelines[64]. The training consisted of three TAFE accredited training modules and was reported to have achieved "greater understanding of purpose and values of SE MP's, improved knowledge of location and allowable activities within CMR's, and increased awareness of class approval conditions and requirements for compliance"[65]. The training package was first delivered during 2013/14 and was reviewed and revised based on attendee feedback before being delivered again in 2014/15. It was also delivered to Tasmanian Police in 2015/16[66]. SE CMRN reporting indicates that it was completed by participants over the 2 year period, ending in 2017, but

[59] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 9.

[60] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 30.

[61] Director of National Parks: Marine Protected Areas Branch, MPA Management (South) Section, *Project Finalisation Report, South-east network Commercial fishing on-line training,* 2018.

[62] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17.*

[63] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 29.

[64] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 10.

[65] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 16.

[66] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 11.

then considered "completed" and discontinued.[67] However, the evaluation team was advised that the training toolbox remains open and accessible to all new wardens as they commence.

In conjunction, an industry compliance workshop was held on 2 April 2014 to understand commercial compliance perspectives and training needs and to formulate the following year's schedule of compliance activities. This was intended to be repeated in subsequent years, but the audit was not able to ascertain whether this occurred[68]. Informal interview narrative suggested that this reflects the success of early awareness raising which has led to low rates of compliance incidents making this type of dedicated compliance training and activities unnecessary to date.

Since these formative initiatives, it is not clear the degree to which PA continues to invest in initiatives and programs to promote best practice standards on compliance and collaborative surveillance.

Mapping values and pressures

Given the remoteness and the predominance of offshore deep sea marine parks in the SE Network, one of the most challenging direct management responsibilities contained in the SE Management Plan is to increase knowledge and understanding of the values and pressures within them (Strategy 1). These challenges are further discussed under *Visibility* in Chapter 4 below, however there is evidence of direct management activity in collaborating with research and commercial stakeholders to enable mapping of increasing portions of the SE Network.

In the last 10 years there has been extensive work to map the area. For example, in the early phase of the SE Management Plan, a survey to assess needs for future mapping products (e.g. different formats) to took place in late 2014.[69] Shortly after, a National Environmental Research Program (NERP) project collated and mapped existing information on environmental pressures in Commonwealth waters (e.g. fishing, shipping, seismic surveys and oil and gas infrastructure, pollution, population and sea surface temperature) on a national scale.[70]

Then in 2019, approximately 150 km^2 of the shelf in the Huon Marine Park was opportunistically mapped, as part of the Tasman Fracture and Freycinet mapping project. In January 2020, Deakin University's marine mapping group completed eight days of bathymetry mapping within the Apollo Marine Park. The mapping work was undertaken onboard the MV *Yolla* which travelled more than 884 kilometres within the marine park and mapped more than 119 square kilometres of seabed, or 10% of the marine park. The data reveals fine-scale seabed features and habitat characteristics including the deep reefs, ancient shorelines and river systems that would have flowed when the sea level was lower, many thousands of years ago. This voyage has provided baseline information that will allow PA to develop a habitat inventory of the park and will help target future research efforts, including where to deploy underwater cameras [71] Most recently, in 2021 extensive shelf reef surveys were completed

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[67] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 16.

[68] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Implementation Plan 2 Consolidation Phase 2017/18 – 2021/22.*

[69] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 8.

[70] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 11.

[71] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 4-5.

in the Tasman Fracture AMP, adding a further data time-step to a baseline established in 2015.[72] It is noted that these are just a sample of the many mapping and research activities that that have been undertaken in the SE Network over the Management Plan's implementation period.

It is also evident that the SE Network continues to work with the scientific community to encourage the generation and sharing of mapping and other scientific data and to convey their priority requirements as an end user through membership of the Australia Ocean Data Network Technical Advisory Group, AusSeabed Steering Committee, Reef Life Survey Foundation Advisory Committee. Branch staff also convey PA managers/end-users needs directly to leaders of key programs such as AusSeabed, Seamap Australia, Global Archive, Integrated Marine Observing System, and also via multiple NESP projects, and most notably the NESP workshop on marine data portals.[73]

Identification and management of monitoring priorities for values and pressures

One of the key tasks identified by the evaluation team for the effective management of the SE Network is prioritisation of human activity pressures and natural values for compliance monitoring and tracking of ecosystem indicators. Identification of priorities helps to direct PA science funding and highlights management actions that are likely to have the greatest benefit. The monitoring program for natural values and pressures in the marine parks is largely driven by management priorities articulated in the SE Management Plan and the need for PA to assess management effectiveness. As one researcher expressed:

> The [SE Management] Plan has definitely helped understanding of what is happening or should happen amongst the research community. Identification of knowledge gaps and what would be required to implement the plan – it has emphasized knowledge needs. The Plan provided a really clear context for those needs.[74]

In the first four years of the SE Management Plan, significant research effort was dedicated to identification of monitoring priorities at the ecosystem-zone level through a structured and data-driven approach:

> In the foundation phase of management the vast majority of our increase in understanding of priority conservation values has been due to research delivered via the NESP MBH (e.g. shelf reefs, canyons, abyssal depths) and the CSIRO (e.g. seamounts).[75]

However it is clear that despite these attempts to identify monitoring priorities particularly through workshops and other mechanisms during 2015 and 2016, it was understood that gaps remained a significant management challenge, and better identifying research priorities and long-term monitoring needs, and helping facilitate priority science was anticipated to be a critical aspect of management in the years 5-8 Consolidation Phase of the SE Management Plan.

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[72] Institute for Marine and Antarctic Studies, J. Monk, N. Perkins and N. Barrett*, Tasman Fracture Marine park MNPZ shelf reef surveys 2021, Interim Report to Parks Australia*, November 2021.

[73] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 3.

[74] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[75] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17*, pg. 7.

The roll out of periodical SE Network Science Plans to implement Strategy 1 in the SE Management Plan is considered an important advance. The identification of monitoring priorities at the ecosystem-zone level through a structured and data-driven approach, and development of a SE science plan, occurred during 2020 and 2021. The SE Network Science Plan is still out for external consultation and it is expected to be published in early-mid 2022[76]. These Science Plans were the first mechanism for setting out regional values and definitions have provided a vocabulary for communication with other national and state level government agencies, raising the level of understanding and awareness of AMPs. Further, it is believed that the current SE Science Plan was instrumental as a basis for information provided on the negative impact of seismic testing for oil and gas exploration in the Zeehan Marine Park (See SE Network information impact on decisions text box under Section 3.2 below). This is in contrast to the less formal mechanisms for research prioritisation and aggregation in other networks, where it is observed that

> You can see how under other Management Plans where there is an absence of Science Plans, it is harder to have negotiations with stakeholder groups and inform decisions.[77]

These Science Plans, in addition to the research endeavours of the NESP, CSIRO and other institutions, and the catalogue of discovery research on marine landscapes established in the SE Network that made it the ideal candidate for a pilot demonstrator of the AMP management effectiveness system: a national Monitoring, Evaluation, Reporting and Improvement system developed by PA in collaboration with the Marine Biodiversity Hub.

During 2018-2019 the AMP management effectiveness system study was commenced and is approaching finalisation during the Review Phase of the SE Management Plan at the end of 2021. To date, application of the AMP management effectiveness system in the SE Network including a monitoring prioritisation process has led to classification of 21 priority ecosystems as Category 1 (primary) and Category 2 (secondary) monitoring priorities taking into consideration:

- areas of historic and ongoing pressure/s
- representation of key natural values, provincial bioregions and key characteristic values
- drivers
- availability of baseline information
- ability to test the effects of zoning
- available resources
- management information needs
- established monitoring programs and partnership opportunities.[78]

The outputs from these steps have helped to identify the priorities for monitoring to measure the effectiveness of management of the SE Network going forward:

- The particular ecosystems in specific marine parks and zones where the highest pressures are currently occurring (termed ongoing impacts), or where the largest changes due to management are expected to be seen (termed historic impacts).

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[76] Parks Australia, *South-east Marine Parks Network Science Plan 2022-27* (Draft provided by PA staff), November 2021.

[77] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[78] Parks Australia, *SEMPAC Update: Management Report Update,* June 2021, pg. 1.

- Pressures or biophysical drivers that are less responsive to management that are expected to influence and be important considerations when assessing management effectiveness (e.g. climate change).
- Areas that are most suitable for evaluating management effectiveness, including testing the effectiveness of zoning and possible reference sites (depending on the conservation goals and monitoring questions).[79]

The development of this prioritisation process for CMR management and its application to identify priority values and pressures for monitoring is a very significant achievement against Strategy 1 and Strategy 7 of the SE Management Plan. However, it does not signal mission accomplished for PA. The consensus amongst scientific and parks management experts is that it is merely a start point. This evaluation has identified that there are three key areas for emphasis in risk assessment and prioritisation in the next SE Management Plan. These are:

1. The capacity to actually monitor the priorities identified using valid techniques and verified research operating procedures applied to establishing a baseline, followed by periodical monitoring frequency to produce sufficient data points for tracking their status. How is PA going to ensure consistent and continuous measurement of how a given value is improving as a result of being in a protected zone?
2. Establishing understanding of spheres of influence, particularly in relation to values affected by cumulative effects of multiple pressures.
3. Where this monitoring of priorities reveals negative trends in the status of values or concerning impacts of pressures, what actions is PA willing to take, or willing to facilitate?

These are challenging next steps that herald the maturation of the SE Network management, which need to be adopted if Management Plans are going to continue to be progressive and proactive, rather than settling into maintaining an observational status quo.

[79] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia. Pg. 40.

Enabling management actions Theme

Theme key findings
• The question of whether CMRs and Networks have responsibility for their own communications and education initiatives or whether they must defer to a whole-of-Parks approach has been especially problematic. The evaluation found that this issue has not been adequately resolved to date and continues to be an obstacle to efficient progress on some of the SE Management Plan's actions. This uncertainty should be resolved by DNP.
• There is only minimal evidence of the consultation, aggregation of research and education activities of PA staff and associated researchers having contributed to DNP understanding of the SE Network and having impact on decision making. The evaluation team found that all reporting requirements from the SE Network were being met, and there was consistent awareness amongst PA staff interviewed of the importance of communicating scientific information in an accessible way to policy makers, community decision makers and commercial stakeholders. Therefore, it cannot be assumed that the lack of clear evidence of actions under the SE Management Plan resulting in improved understanding in DNP is due to any shortcoming of regional staff efforts.
• The effectiveness of information management, reporting obligations and impact of information flows to and from the SE CMRN could be much better understood through the creation of a clear depiction of all SE Network reporting obligations and information flows upwards and outwards. It is suggested that this would be a valuable shared visual reference in the next SE Management Plan, similar to the one included in the current draft AMP management effectiveness system[80].
• This suggests a need to better align reporting formats to provide options for reporting on information that is relevant to marine parks.
• Consideration of streamlining the Australian Marine Parks Advisory Committees (AMPAC) process for nominating and on-boarding new SEMPAC members, without compromising probity, would be an improvement.
• The production of annual implementation reports against the SE Management Plan changed after the first 4 years to the provision of running 6 monthly reports to SEMPAC which are documented in the Committee's internal minutes. Externally, this is reflected in published "Communiques" which provide a brief summary of proceedings on the public PA website. This was acknowledged as a potential gap in providing publicly available detailed progress reporting.
• Consultation on the topic of PA and DNP executive information needs and decision points would be a useful inclusion as part the development of a new SE Management Plan.

[80] Parks Australia, *Monitoring, Evaluation, Reporting and Improvement system: South-east Marine Parks Network Pilot*, MERI update – SEMPAC, November 2020, pg. 4.

Discussion of evidence

Education and Communication

The SE Management Plan prescribes that:

> a well-developed education and risk-based enforcement program tailored to people and industries that use marine reserves is a critical component for effectively managing marine reserves. As a priority, relevant information about the conservation values of the South-east Marine Reserves Network and the zoning and prescriptions will be produced to support the needs of marine reserve users. Voluntary compliance with this Management Plan will be promoted by increasing users' understanding of the conservation values of the network and the purpose of the South-east Marine Reserves Network.[81]

The recognition in the SE Management Plan that "Marine reserve users can significantly contribute to management of the marine reserves network through sharing their knowledge and understanding of the marine environment and human use of the marine environment"[82] is a considered a statement of expectation and intent. The evaluation found that this is carried through by progress reports documenting that:

> Parks Australia assists marine park users to adhere to management arrangements by promoting awareness of the marine parks. Online training tools, the introduction of a free Marine Parks Alert Service for Commonwealth commercial fishers fitted with VMS, the mail-out of SE CMR Network User Guides to fishers active in the South-east, information sessions at fishing association annual meetings and full-page articles and adverts in the Tasmanian Seafood Industry News magazine have assisted in raising user awareness and understanding of compliance requirements of the South-east Management Plan.[83]

It is evident that an enduring inhibitor to progress in this space has been uncertainty around authority for the development of public communications material:

> the question of whether CMRs and Networks have responsibility for their own communications and education initiatives or whether they must defer to a whole-of-Parks approach has been especially problematic.[84]

The evaluation found that this issue has not be adequately resolved to date and continues to be an obstacle to efficient progress on some of the SE Management Plan's actions. Some staff agreed that this obstacle potentially reflects two separate issues over the life of the SE Management Plan. Firstly, pre-2018, when the DNP Executive focus was on the establishment of new networks, and there was considerable political sensitivity around how this was done and how they were perceived. Secondly,

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[81] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 30.

[82] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 30.

[83] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 29.

[84] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

post-2018, during the 'settling in' period for the entire estate and standing up of management processes and programs, which is commonly affected by Marine and Islands Parks Branch challenges of gaining access to PA corporate resources, and staff turnover.

In spite of this, preparation of a Communications Education and Awareness (CEA) Strategy was made a priority activity to deliver in 2014/15. Through out of session collaboration with members of the SE Forum a draft plan was developed that was discussed at the SE Forum meeting in March 2015. As extensive revision was required, a new draft was tabled in November 2015.[85] The further development of a SE Network CEA Strategy has been hindered by staff turnover and lack of clarity on the scope and governance of the program:

> Capacity to access information and incorporate it into advice and decision on Activities has been significantly impacted by staff turnover. Is a common thing across all networks.[86]

As a result, a 'final' version of the CEA Strategy was eventually made available on the public website once final comments from the SE Forum had been included by end of 2016.[87]

The aim of the 2016 CEA Strategy was described as "outlining the approach and provide guidance for communication and education activities related to the South-east Commonwealth Marine Reserves Network". The Strategy identifies:

- target audiences
- communication needs
- key messages for target audiences
- recommended methods of communication.

The CEA Strategy was informed by an online survey that was conducted in June 2015 of 1,122 residents of the SE marine region (South Australia, Victoria and Tasmania) and was undertaken to identify the public's knowledge and perceptions of the SE Network, and to investigate the values that they hold for various features protected by the SE Network. An initial analysis of the publics' knowledge, understanding and perceptions data showed that the protection of marine ecosystems is seen as an important issue. However, the overall level of knowledge about AMPs was quite low, with only 23% of respondents saying that they had heard of them before.[88]

Another survey of East Coast Tasmanian communities was conducted in late 2016 to ascertain levels of knowledge about the adjacent South-east reserves (Freycinet and Flinders). Most recently, a national survey carried out in 2020 showed that awareness of the AMPs varied somewhat across user groups, and in general was lower than awareness of adjacent State Marine Parks. Key findings include:

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[85] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 121.

[86] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[87] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 11.

[88] Burton, M. (UWA), S. Jennings (UTAS), L. Fragnol (AgroParisTech), J. Marre (Secretariat of the Pacific Community), S. Parades (QUT), S. Pascoe (CSIRO), A. Rogers (UWA), S. Yamazaki (UTAS), *The South-east Commonwealth Marine Reserves Network — Public Knowledge, Perceptions and Values Survey. Theme 2: Supporting management of marine biodiversity,* Marine Biodiversity Hub, June 2015 (amended April 2018), pg. 1.

- 44% of the general public stated being aware of the CMRs. This proportion differed significantly across the six networks, being highest in the Coral Sea Marine Park (48%), and the North (52%) and North-west (52%) networks.
- 22% of recreational fishers in the boat ramp survey reported being aware of a CMR in the survey area. In comparison 86% of recreational fishers in the boat ramp survey were aware of adjacent state marine parks.
- 26% of non-extractive recreational users in the boat ramp survey reported being aware of a CMR in the survey location, but no significant differences were detected across locations. In comparison, 92% of non-extractive recreational users in the boat ramp survey reported knowing about state marine parks in the area.
- 80% of charter operators indicated being aware of the CMRs. 38% indicated being very or extremely familiar with the location of National Park Zones.[89]

The latest version of the SE Network Education and Awareness Action Plan was developed in 2020/21 and incorporates advice and priorities identified by the SEMPAC and aligns with a new national CEA program for CMRs which includes activities such as:

- Australian Marine Park website upgrade
- Filming and promotion of management activity
- Social media
- Promotion of grant outcomes and projects
- Attendance at selected national events, in 2021, subject to easing of COVID-19 restrictions
- Development of national presentations, banners, merchandise, event signage and publications
- A media and public relations campaign, focusing on feature articles and paid media placements.[90]

Concurrently with the development of the CEA Strategies, in 2018/19 PA collaborated with the Tasmanian Seafood Industry Council (TSIC) magazine 'Tasmanian Seafood Industry News' to publish four separate advertorials throughout the financial year to remind commercial fishers of the SE Network zoning and regulations, specifically highlighting where they can and cannot fish. TSIC assisted PA with a mail-out of the SE Network User Guide to all Tasmanian commercial fishing license holders.[91]

Another component of the SE Network's education and communication efforts was a signage audit that was conducted early in the life of the SE Management Plan, which confirmed that there were no signs being used to promote the SE Network. This led to endorsement of a signage project to develop signs and other communications products for Freycinet CMR by end of 2014.[92] A report on the Freycinet signage project was presented at the SE Forum meeting in November 2015. The scope of

[89] Navarro, M., Langlois, T.J., Burton, M., Hegarty, A., Aston, C. Kragt, M.E., Rogers, A. Social and economic benchmarks of the Australian Marine Parks. Report to the National Environmental Science Program, Marine Biodiversity Hub. The University of Western Australia, 2020, pg. 14.

[90] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 20-21.

[91] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 16.

[92] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 11.

the signage program was then extended in 2016 to include signs at Deal Island in Beagle CMR and investigate other locations around Tasmania and possibly Wilsons Promontory in Victoria.[93] Final signs for the original project in partnership with Tasmania Parks and Wildlife were installed at Maria Island in June 2016 and Wilsons Promontory.[94]

Further, the evaluation found that the SE Network has made significant achievements against Strategy 5 and Strategy 6 through partnership with the Tasmanian Department of Education for the development and delivery of a curriculum on exploring the concepts of Indigenous sea country, as detailed below.

More broadly, in May 2017 the Parks Project Board approved a project to develop an Australian Marine Parks Science Atlas (the Atlas).[95] The Atlas is now developed and is the result of a collaboration between PA and the Australian Institute of Marine Science. The Atlas is designed to help communicate the historical science and research underpinning the design of Australian marine parks and share information about new and ongoing scientific research in these parks[96].

[93] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 12.

[94] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 11.

[95] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 8.

[96] See https://atlas.parksaustralia.gov.au/amps/

Explore Sea Country cultural values education program

The Explore Sea Country project has been implemented in the classroom and through field-based excursions so that all Tasmanian learners develop a respect for, and understanding of, Aboriginal and Torres Strait Islander Histories and Cultures through the Early Years Framework and the Australian Curriculum. In this way students have increasing awareness and understanding of Aboriginal traditional knowledge and cultural values of Sea Country throughout the earlier years of childhood which is intended to help increase future generations participation in the management of Sea Country in the SE Network and elsewhere. It is expected that this will help to protect Sea Country from threats and pressures, to minimise damage, and to rehabilitate and improve the resilience of Sea Country.

The resources and professional learning experiences that teachers receive appear to be extensive and practical. Including topics such as the importance of Indigenous connection to coastal and marine territories, traditional craft such as shell necklace making, kelp water carriers and muttonbirding, relationships and trust between Parks Australia (primarily through the responsible Senior Marine Parks Officer) and Tasmanian Indigenous communities have been developed and continue to strengthen. It was observed that

> The development of the education program has been a conduit for beginning to build relationships with Indigenous communities and creating trust so that they can share knowledge about their cultural values in forms that they feel comfortable. Much better than cold calling community representatives and asking them to share their culture.

These connections are assessed as invaluable for ongoing collaborations and Indigenous engagement and demonstrate the potential benefits of commitment to Indigenous communication and education initiatives.

Another emerging initiative is the Tasmanian-Victorian ancient land bridge project. Within the SE Network the Beagle Marine Park lies in Bass Strait between Victoria's Wilsons Promontory and Tasmania's Flinders Island and covers an area of the sea floor that was once dry land and that formed part of a land bridge connecting Tasmania to Victoria during the last ice age, when sea levels were much lower. As the ice age ended, glaciers melted and sea levels rose, isolating Tasmania about 11,000 years ago. The higher parts of that land bridge are now Bass Strait islands. Aboriginal people lived and hunted in this area for tens of thousands of years before rising sea levels cut them off from the Australian mainland at the end of the last Ice Age. The waters of the marine park continue to be culturally significant for Bass Strait Aboriginal communities, and many still rely on the natural resources provided by the sea in this area. Through the Apollo Our Marine Parks Grants Round 2 (OMPG2) project, an augmented reality learning initiative is being created which will expose users to an immersive virtual experience of what the ancient land bridge might have looked like.

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[97] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

Collaboration and Consultation on Research and Enforcement

The National Program Actions relating to the SE Management Plan's Strategy 1 require the SE Network to:

- establish an authorisation system for scientific research and monitoring by third parties, and encourage data to be made publicly available through the appropriate information portals such as the Australian Ocean Data Network
- collaborate with the science community (including through the National Marine Science Committee and the National Environmental Science Program) and other marine park users to assist in improving the understanding of marine park values, pressures and management effectiveness
- collaborate with the science community and other government agencies to increase the use of innovative and effective technology and systems including sensor technology.

The evaluation found that there has been significant effort and progress towards achieving the first two of these actions and some effort on the third one.

As discussed under *Authorisations and Enforcement* above, the majority of authorisations for activities in the SE Network is for research activities and the PA has sought to improve the efficiency, effectiveness and transparency of processes for assessment, decision-making and authorisation of activities. However, it has been found (see discussion on streamlining authorisations above) that the user interface and information inputs capacity of the online authorisation system has significant shortcomings which are a source of frustration for research activity applicants and needs to be rectified.

The development of risk assessments and monitoring priorities (discussed in detail under *Management of priorities for monitoring of values and pressures* above) has been an important advancement in collaboration with the science community to progress understanding of the SE marine environment. To accompany these collaborative efforts, the development of periodical Science Plans is intended to refine monitoring objectives and investigation of cost-effective ways to undertake research. The first of these is expected to be published in early 2022.

The strongest achievement of SE Network management over the life of the SE Management Plan has been the development and consolidation of research collaboration and consultation partnerships with numerous research and science organisations. These include CSIRO, Geoscience Australia, IMAS, UTAS and Deakin University. The technical audit found that attendees recorded in SE Forum/SEMPAC meeting minutes are a good indicator of who is engaged with the SE Management staff / PA on a regular basis and demonstrate good working relationships.[98]

At the centre of these research partnerships is the Marine Biodiversity Hub of the NESP which worked with PA staff to make substantial early progress towards SE Management Plan goals. For example, in 2013/14 the partnership delivered projects including: provision of an online data catalogue and metadata records for data from Hub agencies that are relevant to the SE Network; a report on the evidence and data likely to be needed to monitor the values and pressures in the SE Network; and a methodology to apply general monitoring and research outcomes for a regional context (with

[98] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21*, pg. 2-3.

examples of performance indicators), focusing on the SE Network.[99] It was consistently communicated to the evaluation team that research relationships with the Marine Biodiversity Hub have grown in strength every year over the life of the SE Management Plan.[100] The technical audit found references to the Marine Biodiversity Hub in nearly every SE Forum/SEMPAC meeting report since their inception. It is clear they are a key partner in conducting research and are involved in identifying the priority research areas and values, as well as in the development of the new AMP management effectiveness system, SE Science Plan, and other management resources.

The impact of PA staff involvement, availability and knowledge was a consistent thread in relation to collaborative research. One interviewee observed that in the early days of the SE Management Plan:

> Poor research products in the past were largely a result of PA not spending enough time articulating needs and questions. The value of dedicating this time is in better research products and also having researchers available for ad hoc questions, being highly responsive in helping build literacy of PA managers who started out as policy people. Hard to ask for what you need if you're not familiar with the subject matter. The recent AMP management effectiveness MERI project is the culmination of this shared understanding as the basis for valuable research.

And another asserted that:

> In the early days there was constant changing of managers and PA staff so it was really hard to establish relationships and understand info needs as a researcher. In the SE and other networks that has stabilized a lot which has meant that the knowledge base has vastly improved. This has greatly been due to the work of the NESP and the biodiversity hubs to educate PA staff.[101]

Whilst the levels of interaction and collaboration now evident in the SE Network demonstrate that this lesson has clearly been learned, the previously mentioned issue of high staff turnover and lack of staff availability was raised in relation to research collaboration with some impediments to getting collaborative arrangements finalised:

> There were things that didn't get done in SE Network last year because there were not enough staff to even write a contract.[102]

Since the commencement of the SE Management Plan, the primary mechanism for formal consultation and attempting to encourage collaboration with the science community and other marine park users, was the SE Forums which were held "twice yearly or as needed until future

[99] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 3.

[100] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021; and Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17*, pg. 13.

[101] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[102] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

consultative structures are formalised consistent with other Networks".[103] In 2019, and to align with PA's introduction of Australian Marine Parks Advisory Committees (AMPACs), the SE Forums became South East Marine Parks Advisory Committee (SEMPAC), with largely the same range of attendees. These forums are attended by representatives from peak bodies of all potential users ranging from commercial fishers, recreational fishers, charter fishers, tourism operators, and shippers to help raise awareness of the SE Network and how it is being managed in accordance with the SE Management Plan. These forums have provided peak body experts the opportunity to clarify what is required to comply with the network management arrangements.[104] To date, six SEMPAC meetings have been held:

- Meeting 1: Hobart – 16 May 2019
- Meeting 2: Melbourne – 31 October 2019
- Meeting 3: videoconference – 28 May 2020
- Meeting 4: videoconference – 5 and 18 November
- Meeting 5: videoconference – 1 June 2021
- Meeting 6: videoconference – 16 November 2021

SE Forum and SEMPAC attendees have also contributed to management decisions out of session. For example:

> the South-east Forum played a crucial role in identifying and prioritising activities for the implementation schedule and has also guided the structure of the annual progress updates. Forum members have championed the interests of their broader user groups and have relayed information from the forum back to their user groups. Members of the SE Forum provided valuable feedback to the Independent review of CMRs and also to Parks Australia through a member survey in 2016. This feedback will help to guide the process for establishing formal consultative committees in each of the networks around Australia.[105]

At SEMPACs, and at SE Forums before them, it has often been agreed there was a need for flexibility around meetings to enable as many members to be involved as possible. Options such as teleconference or videoconference were considered to address travel and time constraints on members, particularly those who have to take unpaid time out of their employment to attend.[106] It was observed that in the past, difficulty with attendance impacted on the comprehensiveness of representation at consultative forums. For example, SEMPAC minutes capture the observation of:

> ongoing difficulty of having all representative stakeholders on the AMPAC and actually attending. For example, yesterday we were without Indigenous representation or the rock

[103] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 11.

[104] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 29.

[105] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 36.

[106] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 12.

lobster folks who have a strong interest in seismic, although acknowledging that space was covered well by TSIC.[107]

This issue has temporarily been solved by COVID travel restrictions forcing all meetings to be held online, but it has been communicated that it has also raised issues with reduced effectiveness of meetings. SEMPAC meetings that used to go for a whole day, including valuable morning, lunch and afternoon breaks in which attendees could network and discuss important issues not on the agenda. Since being held online, the meetings have been reduced to 3 hours (or two sessions of 1.5hrs each over 2 days) so that participants are not being asked to sit through excessive screen time, but this has greatly reduced the number of agenda items that can be covered, particularly when lists of required authorisations need to take priority.[108] Feedback on SEMPAC Meeting 3 that was held via teleconference on 28 May 2020 during COVID restrictions commented on teleconference being unstructured and very difficult to follow, without being able to see who is presenting or commenting.[109] A positive observation that has come out of the adaptive and adjusted online format is that it has established a precedent for the use of virtual meeting mechanisms so that when meetings return to the normal longer face-to-face format, there are options for SEMPAC to have brief meetings out of session as necessary to progress plans or table reports.

A concurrent issue in terms of flexibility for SEMPAC attendees is that the way the AMPACs were set up across PA is very inflexible in terms of clearing, approving and inducting new members. This presents a challenge for regional stakeholder groups where there is high staff turnover, or an unexpected absence, or inability to manage consistent attendance over a 4-year member term. Consideration of streamlining the process for nominating and on-boarding new members, without compromising probity, would be an improvement.

Some PA staff have identified potential for reviewing the terms of reference of SEMPAC with a view to attendees being more than individual expert representatives, and potentially presenting the views of their respective stakeholder groups and increasing the responsibility to back brief them. However, it is understood that the Advisory Committee has deliberately avoided requiring members to present the views of the stakeholders they may represent, and to remain individual experts, because participation may become too political and be distracted by impetus to be heard, rather than listening to updates on the status of the CMRs contributing unique perspectives on management approaches.

Another domain for collaboration and consultation in the SE Network is with a number of Commonwealth agencies that enter the network reserves for purposes relating to defence, border protection, law enforcement and emergency response. These agencies include the Australian Defence Force, the Australian Border Force, Australian Fisheries Management Authority, the National Offshore Petroleum Safety and Environmental Management Authority and the Australian Maritime Safety Authority.[110] It is evident that PA has collaborated and consulted well with these agencies as required, albeit infrequently. Most notably, staff have worked closely with Commonwealth and state fisheries management agencies to standardise as much as possible requirements for commercial fishers and to

[107] Parks Australia, *SEMPAC Meeting 5 Attendee survey response summary*, 2021, pg. 2.

[108] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[109] Parks Australia, *SEMPAC Meeting 3 Attendee survey response summary*, 28 May 2020, pg. 2.

[110] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 53.

arrange for on-going sharing of information regarding vessel monitoring and compliance.[111] Early in the SE Management Plan a Memorandum of Understanding (MOU) was signed with the Australian Fisheries Management Authority to agree on collaborative actions going forward. Specifically, the 2014 MOU comprised three schedules: sharing of VMS data management (including the CMR Alert Service); industry training; and ghost net retrieval and disposal. This laid the foundations for the significant achievement of 100% of the Commonwealth fleet in the SE Network to be under VMS arrangements by 1 July 2014.[112]

Information management

The actions and collaborative activities that have occurred under the SE Management Plan have led to multiple achievements in ensuring that data arising from monitoring and research conducted within the SE Network and the findings of the research can be easily accessed and shared. Several NESP/NERP projects have developed, or are developing, consistent data collection and analysis methods critical to the success of future monitoring programs in the SE Network and nationally, including:

- An accurate and cost-effective survey design (known as GRTS – Generated Random Tessellated Stratified) to infer the extent and status of benthic habitats in extensive and data poor Australian Marine Parks
- An agreed national standard for classifying substrates and biota in marine imagery, known as CATAMI
- Standard Operating Procedures for survey design, collection methods and data analysis for monitoring the marine environment in depths greater than 40m.[113]

More recently, other NESP projects have developed:

- a catalogue and search engine (known as ARMADA) that provides a single entry point to major marine databases held by a variety of research organisations to enable collation of existing survey data
- a Fishmap, which generates customised, illustrated lists of fishes by area, depth, ecosystem or family.[114]

Additionally, there is extensive publicly available content in the Australian Marine Parks Science Atlas online, and for NESP projects, the Marine Biodiversity Hub website holds project information and reports.

[111] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 2.

[112] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 7.

[113] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17*, pg. 12.

[114] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17*, pg. 13.

ARMADA Information management tool

The Australian Region Marine Data Aggregation (ARMADA) tool was developed under the Marine Biodiversity Hub with funding under the NESP (formally NERP). ARMADA enables government agencies, industry and other stakeholders to locate and access biological and physical data within Australia's national marine estate. It is an example of a data portal established to assist the sharing of information.

The web-based interface serves a specific user-case of the Australian Government Department of the Environment and Energy and its stakeholders that are involved in seeking or providing approval of proposed activities in the Commonwealth Marine Area. More specifically, these research-users require a simple and quick option for understanding what data exists, including the date, location, number of samples, together with the sampling methodology.

ARMADA acts as a search engine that locates and retrieves data from the existing repositories that host Australian marine data, then serves to the user a synthesis and summary of this information in a manner that meets the user case described above.

This tool enables visibility of all longitudinal marine research data sets and where and when they were collected in all Marine Parks over the past few decades. This required an attempt to harmonise terminology and vocabulary so that the algorithms could categorize them in a useful way. This harmonization process requires periodical manual updating which is made more difficult by the fact that there is still no standardization in controlled language for research location (latitude and longitude) and observational platform (equipment descriptions). However, to date ARMADA has surfaced a very large amount of historical information that can now be mined to achieve new baselines for natural values and longitudinal trend analysis of pressures and threats.

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Another development during the life of the SE Management Plan that is often referred to as an important step in data and research sharing, was the direction from the then Department of Environment and Energy that institutionalised a requirement that all funded or co-funded research must be made publicly available. This applies to the NESP, Marine Biodiversity Hub and all other research entities.

> The PA mandate that all funded research must be made publicly available has been a huge benefit for the entire research community. It is only because hubs and PA has pushed for a range of national shared databases that this has been possible. As the data bases develop, it has only been in the last year or two that various ones have reached maturity that annotations from shipping machinery, volunteer survey divers has been able to be uploaded and shared.[116]

[115] Marine Biodiversity Hub, *ARMADA: A marine data aggregator and visualization tool. D3 Milestone report 8,* June 2017, pg. 2.

[116] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

PA has also served as a hub for drawing together information relevant to the SE Network and other CMRs and Networks and enhancing its accessibility. To this end in 2016 PA commissioned a literature review to identify existing research publications relevant to CMRs nationwide. This identified a total of 148 scientific reports and journal publications directly relevant to the SE Network. Of these 67 relate to Macquarie Island and the remaining 59 to the remaining 13 reserves. The number of publications relevant to the SE Network has more than doubled since 2010.[117] This is a form of activity that is of interest to everyone in the SE Network research community and encourages the sharing of further research, as well as gauging how sharing of data and research is increasing interest and understanding of the region.

There is consensus that over the life of the SE Management Plan, sharing of information and access to data has improved a great deal. In fact, the sharing of research and data encouraged under the SE Management Plan has led to what one interviewee described as "a sea of portals", and another referred to the "portals soup". This paradox was articulated by another in the following terms:

> sharing and access to data has definitely increased and improved to the point that there is actually so many data sets now that the user's ability to find what they are looking for has decreased. For example if you go into a given portal you can't retrieve all of the data sets relevant to a given geographic boundary. The search criteria process needs to be automated across portals and data sets.[118]

The evaluation has found that the effectiveness of information management, reporting obligations and impact of information flows to and from the SE CMRN could be much better understood through the creation of a clear depiction of all SE Network reporting obligations and information flows upwards and outwards. It is suggested that this would be a valuable shared visual reference in the next SE Management Plan, similar to the one included in the AMP management effectiveness system shown below[119].

[117] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 11.

[118] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[119] Parks Australia, *Monitoring, Evaluation, Reporting and Improvement system: South-east Marine Parks Network Pilot*, MERI update – SEMPAC, November 2020, pg. 4.

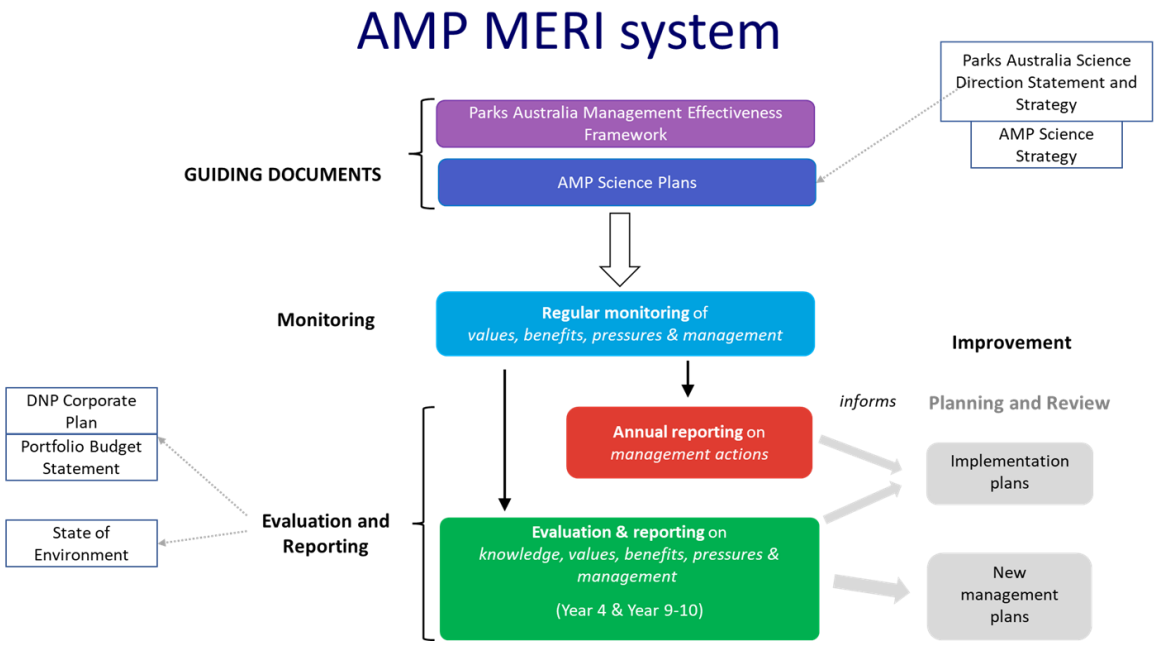

Figure 1: The AMP management effectiveness system

The inclusion of a SE Network information flows map similar to the AMP one above would enable assessment of effectiveness of management processes by presenting an opportunity to periodically map the "ground truthed" reality of reporting activities and information flows and compare it to the SE Management Plan's intended version.

Management Plan evaluation and policy influence

The technical audit of actions under Strategy 1 found that to date SE Network staff have achieved the SE Management Plan's requirements for reporting on the effectiveness of management approaches and attempting to increase understanding of the SE Network and its management needs. This occurred whilst there were some changes in priorities and influence from PA and at the DNP level (e.g. regarding whole estate strategising), over the life of the SE Management Plan.

There is only minimal direct evidence that the consultation, reporting and education activities of PA staff and associated researchers has contributed to DNP understanding of the SE Network and having subsequent impact on decision making. The technical audit noted that PA and DNP annual reports did not include any detail on the management of the SE Network apart from a line on budget. Anecdotal evidence referred to positive feedback from the DNP executive in response to briefings and reports provided and the SE Network's ability to provide ad hoc aggregated data on request. The evaluation team found that all reporting requirements from the SE CMRN were being met, including short notice briefs for Senate Estimates. The production of annual implementation reports against the SE Management Plan changed after the first four years to provision of running six monthly reports to SEMPAC which are documented in the Committee's internal minutes. Externally, this is reflected in published "Communiques" which provide a brief summary of proceedings on the public PA website[120]. This was acknowledged as a potential gap in providing publicly available detailed progress reporting.

[120] Communiques published on the Parks Australia website at https://parksaustralia.gov.au/marine/management/partnerships/south-east-advisory-committee/#meetings.

In addition, it was observed that most DNP corporate reporting requirements are based on information categories relevant to terrestrial parks standards and language.[121] This suggests a need to better align reporting formats to provide options for reporting on information that is relevant to marine parks.

Notably, there was consistent awareness amongst PA staff interviewed of the importance of communicating scientific information in an accessible way to policy makers, community decision makers and commercial stakeholders.

The challenge of demonstrating impact was acknowledged in 2017 at the end of the Foundation Phase of implementation of the SE Management Plan with the following observation:

> *Despite considerable investment in science during the foundation phase its use by Parks Australia to inform management decisions remains limited for a variety of reasons. In order to meet the desired 10-year management outcome, over the next 4 years it will be important to:*
>
> - *Focus research and monitoring on key management questions.*
> - *Ensure management decisions are based on an adaptive management approach and informed by science.*
> - *Ensure scientific information is available on systems easily and quickly accessible to managers and is in appropriate formats to answer management questions.*[122]

Consequently, it cannot be assumed that the scarcity of direct evidence of actions under the SE Management Plan resulting in improved understanding in DNP is due to any shortcoming of reporting structures or SE management staff efforts. Consultation on the topic of PA and DNP executive information needs and decision points would be a useful inclusion as part the development of a new SE Management Plan.

Among the assessment mechanisms for the SE Network under the SE Management Plan is a process for annual cycle of review, revision and implementation of the Compliance Plan.[123] Beyond this, a SE Research and Monitoring Strategy was drafted[124] and circulated to the SE Forum for consideration in 2016. Finalisation of this Strategy was overtaken by a draft estate-wide (i.e. all networks) Marine Science Program Strategy (MSPS) which was intended to ensure that science is undertaken to address marine park management needs. It was anticipated that the MSPS would be finalised and widely available about mid-2018 [125] but was also not finalised. Prior to finalising the MSPS it was decided to develop a Parks Australia Science Direction Statement and much of the information from the draft MSPS was put into the Parks Australia Science Direction Statement which was published in 2018. The Science Direction Statement is now being updated and changed to the Parks Australia Science Strategy

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[121] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[122] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 5-6.

[123] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17.*

[124] Parks Australia, *South-east Marine Parks Network Research and Monitoring Strategy 2013-2023 (Draft)*, accessed October 2021.

[125] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17*, pg. 11.

(which is waiting to go to joint boards of management for consultation prior to finalisation), and the Marine and Island Parks Branch science team made major contributions to both the Science Direction Statement and the new Parks Australia Science Strategy.

Also, as previously mentioned, the SE Network Science Plan which is in draft consultation stage,[126] does provide specific research and monitoring priorities for the SE Network. In both of these documents, there is emphasis on understanding key natural values of the reserves, and evidence of work in prioritising areas and activities for research and monitoring.

This evaluation acknowledges that there have been several causes of delay at the national and regional level in the development of strategic documents. This includes an extension of timelines and resourcing requirements for the independent Review of Commonwealth Marine Reserves which resulted in delays to some planned activities, including the meeting of the SE Forum scheduled for August 2015. The Review provided an opportunity to gather the views of Forum members on structure and function of consultative arrangements. Other Activities that were delayed into Year 4 included the development of an audit framework and a web-based tool for reporting non-compliance and the establishment of a performance monitoring program. Further, the Federal election in the beginning of July 2016 also impacted on activities in the SE Network, with some activities being delayed due to the potential for interactions with caretaker conventions. For example, the community survey planned for May–June 2016 was delayed until later in 2016.[127]

At the national level, an Australian Marine Parks Assessment and Authorisation Policy exists which helps to provide standardisation and consistency across AMP reserves for assessment processes. However, it is understood that there are also instances where reserve specific issues need to be at the forefront of management responses. For instance, when the DNP is making decisions about authorisations, decisions must be "consistent with the objectives of the relevant management plan, objectives of the zone or zones in which the activity will be or is being conducted, and the applicable reserve management principles".[128]

Now that the SE Management Plan has entered the Years 8-10 Review Phase, the requirement for the conduct of an evaluation of the effectiveness of the plan (Strategy 7, Action 32) is being met through the engagement of Sustineo to undertake this limited assurance audit and evaluation of the implementation of the SE Management Plan. This resulting report is intended to address all aspects of this action. Concurrently, in preparation for SE Management Plan renewal, it has been reported to the SEMPAC that a program of community engagement and stakeholder consultation will be commenced.[129]

Perhaps the most significant progress in this domain is the current development of the AMP management effectiveness system by PA in collaboration with the Marine Biodiversity Hub (as described under *Management of monitoring priorities for values and pressures* above) to monitor the health of the parks and evaluate the effectiveness of management actions. This has included:

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[126] Parks Australia, *South-east Network Science Plan*, accessed October 2021.

[127] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 2.

[128] AMP Assessments and Authorisations Policy, 2021, pg. 10.

[129] SEMPAC proceedings, as noted by Sustineo member attending, 16 November 2021.

- Developing the Parks Australia Management Effectiveness Framework[130] including key evaluation questions
- Developing network level monitoring plans that 'operationalise' the Parks Australia Management Effectiveness Framework using the SE Network as a pilot
- Work largely completed to date as part of the AMP management effectiveness system includes:
    - Adaptive Management Cycle
    - Conceptual model for park management (aligns with the DPSIR model)
    - Common language for values, benefits, activities and pressures
    - Mapping ecosystems, key natural values, activities and 'pressure hotspots'
    - Developing a robust data driven process to identify monitoring priorities. [131]

As will be discussed in relation to conservation of natural values below, the AMP management effectiveness system is a very significant development for structuring and aggregating marine research. The inclusion of an adaptive cycle approach as part of the system is also a significant development for the management of marine reserves. It is recognised by those who were interviewed that this will enable PA staff and their collaborators to be responsive to new scientific knowledge as it is acquired, without the need to wait for the next management review or planning forum.

> The MERI is a very appropriate first pass to start to try to quantify things. But it is important that it is a living document that can have new knowledge incorporated or niggle points refined. MERI is about informing adaptive management, but the monitoring component of it needs to be equally adaptive. It's a learning process. As understanding increases and measures are aggregated, greater understanding of quantifying cumulative pressures will change.[132]

[130] Initially an AMP MERI Framework was developed and just prior to publication Parks Project Board requested that it be made into a Parks Australia Management Effectiveness Framework to cover both marine and terrestrial parks. The Marine Parks Management Effectiveness team have made a major contribution to the development of the Parks Australia Management Effectiveness Framework.

[131] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 27-28.

[132] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

4. Findings on SE Management Plan effectiveness for protecting values and benefits against pressures and drivers

Condition and trend of natural, cultural and heritage values Theme

Theme key findings
• The collaborative mechanisms and activities encouraged by the SE Management Plan have consistently contributed to growth of awareness and capacity to monitor the condition and trends of natural values in the SE Network.
• The recent AMP management effectiveness system (MERI prioritisation model) has been a flagship achievement for not just the SE Network but PA and national marine research more broadly.
• The Explore Sea Country project is an exemplar that should be praised and promulgated as an ideal approach to Indigenous engagement and promoting cultural values. The success of this project is even more significant given the challenges of Indigenous engagement in the SE Network under Strategy 6. The considered prioritisation process initiated by Marine and Island Parks Branch staff examining all potential SE Network cultural value conservation activities against consistent criteria has succeeded in developing projects that are both practical and uniquely valuable.
• An updated SE Management Plan might seek to reconsider actions on heritage and cultural values under this theme that are relevant and achievable in the SE Network context.
• The SE Network is unique amongst AMPs because it comprises mostly deep-sea environments and a lesser degree of user activity and human-driven pressures. Whilst it was evident throughout the evaluation that it has lower rates of authorisations, compliance and incident reporting, it has some notable significance due to its uniqueness. Specifically, because of a long period of absence of external human impacts in many areas of SE Network, it is a good research opportunity to track the effects of climate change with less other external variables present. Similarly, it is a rare example of the timeframes and dynamics of seabed recovery from external human-driven pressures such as trawling. There is an opportunity for the SE Network to serve as a control group for comparison against the impacts of human-driven pressures in other CMRs.

There appears to be quite clear definitions and understanding of the scope of this theme. However, the required actions relating to cultural and heritage values do not seem to be well matched with the SE Network as a predominantly deep-sea environment with only a few identified and acknowledged heritage values located within the AMRs, and challenges with achieving direct engagement with Indigenous communities. An updated SE Management Plan might seek to reconsider actions under this theme that are relevant and achievable in the SE Network.

Strategy 1 and Strategy 6 relate to this theme, but it is assessed that they do not provide comprehensive, practical guidance for the conservation, research engagement and heritage and cultural considerations covered under this theme. To address this, the scope of the theme could be clarified to give a more specific indication of intent. Otherwise, another strategy that specifies what PA expects to achieve by monitoring trends in these values in the SE Network may be necessary.

Considering the actions that sit beneath Strategy 1 and applying them to this theme, the evaluation found that there is not a clear distinction between what is sought under the research and increased understanding actions that relate to the *Direct Management* theme and the same actions applied to natural values under this theme. The only difference with natural values referred to under this theme appears to be that the research achievement under the *Direct Management* theme is documented in more detail. Added to this, as mentioned above, is the fact that the actions relating to heritage and cultural values are not well suited to the deep-sea environment of the SE Network.

Discussion of evidence

A challenge for partners in implementing the strategies under this theme is that the SE CRMs are located in offshore environments, typically between three nautical miles off the coastline to the outer boundary of the Economic Exclusion Zone. Reserve values are remote, lie beneath the surface, not easily accessed or appreciated. This makes it difficult to engage audiences and impart the importance of reserve values. It follows that partnerships will need to consider and utilise innovative and targeted methods in their approach.[133]

The conservation values protected by the SE Network include representative examples of the:

- ecosystems, habitats, communities, species and sea-floor features found within the provincial bioregions of the SE Marine Region
- ecological features with high biodiversity value, species richness and endemism
- cultural and heritage sites (e.g. shipwrecks).[134]

Zoning

Zoning is a fundamental tool for managing marine reserves and defines what activities can occur in which locations to protect the marine environment and to provide for ecologically sustainable use. The SE Management Plan assigns an International Union for Conservation and Nature (IUCN) category to each marine reserve in accordance with the requirements of s.367(1)(a) of the EPBC Act. When a reserve is divided into zones, each zone is also assigned an IUCN category. The Australian IUCN reserve management principles, prescribed in Schedule 8 of the EPBC Regulations 2000, provide administrative guidance for managing Commonwealth reserves, and also define what activities are allowable in each reserve and zone and under what circumstances they may be undertaken.[135] To this

[133] Parks Australia, *South-East Commonwealth Marine Reserves Network Communication and Education Strategy, 2016, pg. 5.*

[134] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 18.

[135] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 9.

end, the SE Management Plan is underpinned by SE CMR maps, which users can refer to for information on zones within specific marine reserves.[136]

Natural Values

There is abundant evidence that understanding and knowledge of priority natural conservation values for the SE Network has improved over the life of the SE Management Plan as a result of science delivered through the Marine Biodiversity Hub of the NESP, direct commissions by PA, independent non-commissioned research and opportunistic data gathering by vessels transiting through the reserves. However, increased understanding has come with consensus that

> knowledge gaps remain a significant management challenge. Better identifying research priorities and long-term monitoring needs, and helping facilitate priority science will be a critical aspect of management in the consolidation phase to support park managers achieve desired 10 year management outcomes.[137]

The evaluation has found there were consistent efforts over the life of the SE Management Plan to address knowledge gaps on natural values, by attempting to establish clear research terminology and criteria for research prioritisation. As noted above under *Information management, i*n the first five years of the SE Management Plan it was reported that several NESP/NERP projects were working towards development of consistent data collection and analysis methods critical to the success of future natural value monitoring programs in the SE Network and nationally. This included:

- An accurate and cost-effective survey design (known as GRTS – Generated Random Tessellated Stratified) to infer the extent and status of benthic habitats in extensive and data poor Australian Marine Parks.
- An agreed national standard for classifying substrates and biota in marine imagery, known as CATAMI.
- Standard Operating Procedures for survey design, collection methods and data analysis for monitoring the marine environment in depths greater than 40m.[138]

The outcomes report of a science workshop held in January 2018 outlined strategies for choosing priority research tasks to be undertaken over the Consolidation Phase of the Plan, which were then included in the implementation plan for years 5–8.[139]

More recently, identification of key natural values (KNVs) for the SE Network was the focus of a workshop in Hobart on the 23rd of June 2020, which informed the development of the AMP management effectiveness system (described under Section 3.2). Participants in the workshop were tasked with identifying habitats or species that met a given criteria and occurred in any one of the SE CMRs, which were designated locations and ranked using further prioritisation criteria. This information was entered into a template that gave a brief description of the area, and the rationale

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[136] Director National Parks, *A Guide for Users of the South-East Commonwealth Marine Reserves Network,* July 2013, pg. 5.

[137] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 7.

[138] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 12.

[139] Parks Australia, *Meeting Paper 4. Planning Science Activities for Years 5-8 of the Implementation Schedule 'Consolidation Phase'*, May 2018.

for each of the rankings. This information was refined after the workshop using additional geospatial data layers that more accurately identified the locations of the KNV. A key part of the process to identify KNVs was to identify levels of knowledge on given areas, and there was a noticeable lack of expertise on the ecosystems around Macquarie Island.[140] Although was been an undertaking to address this gap in collaboration with PA, this appears to be a persistent gap in research engagement as it was noted in 2018 that "Collaboration with Australian Antarctic Division staff in relation to research at Macquarie Marine Park has been limited"[141], and there is no evidence to date that this has altered over the life of the SE Management Plan.

Following this, in September 2020 a meeting between PA staff and NESP representatives documented a number of actions to refine and fill remaining gaps in the monitoring prioritisation.[142] Since then, under the AMP management effectiveness system pilot, natural values for the SE Network have been redefined under a common language convention.

[140] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. 27.

[141] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 4.

[142] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. viii.

Consensus on natural values labels created under the AMP management effectiveness Monitoring, Evaluation, Reporting and Improvement (MERI) system

The establishment of these common language labels for the SE Network and other AMP Networks has been referred to as a landmark achievement for Australian marine research and monitoring of Australian Marine Parks which can be attributed to the strong collaborative research relationships that have been established under the Management Plan.

> *The common language of description of species and details of values and codification of activities and sub-activities was really essential and a game changer which will carry over to other networks.*

The AMP management effectiveness system common language convention defines three levels from the top to the bottom of the hierarchy:

1) ecosystem complexes

2) ecosystems

3) ecosystem components.

The natural values identified in these levels include 22 benthic ecosystems and 4 pelagic ecosystems, each allocated to an ecosystem complex (there may be multiple ecosystems in each ecosystem complex). Ecosystems are delineated by habitat, depth, and other biological and/or spatial features, in a manner that ensures that their boundaries are identifiable.

[143]

It is apparent that this achievement is widely understood in the context of several key challenges for implementing a robust AMP management effectiveness system for AMPs, including:

1. A low knowledge base for many of the CMRs.
2. The vastness, remoteness and great depths of the CMRs create logistical challenges that can lead to high costs for discovery surveys and monitoring, and other aspects of park management.
3. The need to distinguish the effects of park management from larger-scale pressures and drivers operating in complex marine ecosystems.
4. Ecological responses to management intervention can sometimes take decades to appear, and so it may not be possible to determine whether all aspects of management have been effective within the 10-year life of the management plans. With increased understanding of park values and pressures over time, the AMP management effectiveness system will be improved as part of an adaptive management approach.[144]

[143] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[144] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia.

In addition to advances in monitoring prioritisation, a great deal of progress was made in increasing understanding of natural values in the SE Network. For example, when the reserves were declared in 2007 very little was known about the extent or structure of SE reef habitats or the impact of pressures on them. Under the SE Management Plan understanding has improved over the last four years as a result of research projects including:

- The collation and synthesis of existing fine-scale mapping data from a variety of providers including NESP Maritime Biodiversity Hub researchers, the Navy, CSIRO, Geoscience Australia, State agencies, and commercial fishers.
- The collation and synthesis of existing data for reef associated biological assemblages, including sessile marine species, mobile invertebrates and demersal fish.
- Multi-beam echo sounder (MBES) mapping, Autonomous Underwater Vehicle (AUV) surveys of sessile marine life and Baited Remote Underwater Video (BRUV) surveys of demersal fish species being undertaken in the Huon, Flinders, Freycinet and Tasman Fracture Marine Parks. See: Study of the recovery of SE Network seamounts from trawling for further details.
- A study in the Tasman Fracture Marine Park that investigated the response of shelf reef associated biota to seven years of protection compared to adjacent fished areas.[145, 146]

For example, the Seamounts deep-sea corals Survey voyage in 2018 on the RV *Investigator* characterised deep-sea coral communities on seamounts in the Huon Marine Park. The survey found that the Marine Park is a very significant conservation asset for Australia and a globally significant reference site in which to monitor recovery of deep-sea coral communities following protection from impacts of fishing.[147]

Visibility

Trend analysis and monitoring the condition of natural values in the SE Network is inhibited by a lack of detailed and comprehensive information on the distribution of biodiversity, mainly due to the vastness, remoteness and inaccessibility of the deep ocean environment. Establishing baseline data for marine reserves and setting up strategic scientific monitoring programs that build on past and current research and utilise Australia's growing ocean observation capabilities have been a key focus of the SE Management Plan. For this reason, in the early days of the SE Management Plan, sea-floor features have been used as surrogates for biodiversity to design the marine reserves network. This approach was taken because research indicated that different habitats and species are associated with different sea-floor features.[148]

As almost nothing is known about life in the abyss (>2000m) gaining a better understanding of values and pressures is an SE Management Plan priority. Research voyages aboard CSIRO Marine National Facility research vessel *Investigator* are able to visit abyssal waters conducting mapping using multi-beam sonar, but access to this vessel is scarce and employment of these types of technology is costly

[145] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 9.

[146] Institute for Marine and Antarctic Studies, J. Monk, N. Perkins and N. Barrett, *Tasman Fracture Marine park MNPZ shelf reef surveys 2021, Interim Report to Parks Australia,* November 2021.

[147] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 4.

[148] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 16.

and time consuming with voyages sometimes taking weeks to months.[149] Similarly, some increased visibility has been achieved as a result of the research collaboration mechanisms facilitated under the SE Management Plan, utilising techniques such as a Baited Underwater Video technology called *Global Archive* and storage of the data on software developed in New Zealand and further developed by University of Western Australia. It was the NERP hub that did a demonstrator study to realise the application of this technology in the SE Nerwork where it is not realistic to monitor through diving.[150] Employment of a deep-towed camera system has also provided the first views of seafloor habitat at great depths in many of the marine parks[151]. Although the detailed research and data analysis are only just beginning it is likely that some of the fishes collected, and more than one third of the invertebrates collected, are new to science.[152]

In the foundational phase of the SE Management Plan there was targeted research on several key conservation values (e.g. shelf reefs, seamounts, canyons and the abyss) and pressures (e.g. benthic trawling, shipping, oil and gas infrastructure, and sea surface temperature). However several SE Network marine parks have little or no high resolution bathymetry or habitat mapping (e.g. Apollo, Beagle, Boags, Franklin and Murray Marine Parks), nor surveys of reef associated fish (e.g. Apollo, Beagle, Boags, Franklin Marine Parks). Based on research undertaken since the reserves were declared there is growing information for identifying potential monitoring indicators, formal and systematic monitoring programs and ecological baselines, which was a central focus of the SE Management Plan's Consolidation Phase.[153] During that time, higher resolution mapping has enabled identification of canyons, but still little is known about their ecological communities and shelf soft sediment ecosystems throughout the SE Network. Establishing effective monitoring programs relies on a detailed understanding of the KNVs and pressures on those values.

Cultural and Heritage values

Cultural and heritage features of the SE Marine Region include shipwrecks, sites of Aboriginal significance and built European heritage. The majority of these features are located close to shore and on land along the coastal area of the south-east, and thus fall within states' jurisdiction (rather than under the SE Network AMPs). However, their proximity to the ocean and their history indicate a strong connection between the coastal communities and the marine environment. In general, it has been acknowledged in the SE Network that the focus has been on natural conservation values and the pressures on those values and there has been little or no focus on social, cultural and heritage values and pressures. An important objective is to provide for sustainable use and enjoyment and community benefits so further work on these aspects will be required.[154]

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[149] https://www.nespmarine.edu.au/we%E2%80%99ve-created-first-full-street-viewmap-australian-commonwealth-marine-reserve.

[150] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[151] https://www.nespmarine.edu.au/firstpeek-deep-end-freycinet-commonwealth-marine-reserve.

[152] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 10.

[153] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 8.

[154] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 8.

The coastline, reefs and seabed of the state waters adjacent to the SE Marine Region are the resting places of many shipwrecks, including wooden sailing ships, early whaling ships, passenger ships and fishing vessels. Hundreds of shipwrecks have been recorded in the waters of south-eastern Australia. Heritage places include shipwrecks listed under the Historic Shipwrecks Act 1976. There are three historic shipwrecks in the SE Network, as well as many historic shipwrecks in the SE Marine Region outside the marine reserves.[155]

The waters of the Beagle Marine Park have a long European history, with Mathew Flinders sailing through the park in 1798. Beagle Marine Park is named after Charles Darwin's survey ship HMS *Beagle*, which surveyed the then uncharted Bass Strait waters in 1838 and 1839. Bass Strait is known as Shipwreck Strait, with its coasts and waters among the most dangerous in the world. Its seafloor is scattered with shipwrecks, with some locations mapped, and others yet to be discovered. We know of three historically significant shipwrecks resting on the seafloor in the Beagle Marine Park: the iron steamer SS *Queensland*, sunk after colliding with another steamer in 1876; the trading ketch *Eliza Davies*, which lies in the reserve to the east of Wilson's Promontory, sunk under tow in 1924[156] ; and the SS *Cambridge*, a British freighter, which lies in the reserve to the east of Wilson's Promontory, was sunk in 1940 by a WWII mine. The wreck of MS *City of Rayville*, the first American ship to be sunk during WWII, also lies within Apollo Marine Park.[157]

Indigenous Cultural Values

Indigenous people from at least 17 distinct Aboriginal language groups have occupied, used and managed coastal land and sea environments in and adjacent to the SE Network for thousands of years. Their relationship with the region began when sea levels were much lower, allowing Indigenous people to harvest species and use parts of the region that are now covered by deeper offshore waters.

As previously highlighted, the evaluation has found that the Strategy 6 and its prescribed actions are not well aligned with the context of the SE Network. As a result, the technical audit ratings of achievements against actions under Strategy 6 were largely negative—not because of lack of effort or achievement in relation to Indigenous engagement and acknowledgement of cultural values; but because stated prescribed actions were inappropriate for the SE Network context. For example, the predominantly deep-sea environment of the SE Network makes some actions (e.g. Action 27) unsafe and unrealistic. Undertaking marine park management including monitoring and threat mitigation activities, surveillance and through Indigenous ranger initiatives is not possible in the context of infrequent ocean research voyages which are risky and involve little to no exposure to Indigenous values. Similarly, the PA National Program Actions are not particularly relevant to the SE Network given the locations of the parks. Actions under this program at the national level include:

- Developing an Australian Marine Parks Indigenous engagement and cultural heritage strategy, to improve understanding of cultural heritage, link management with sea country plans and maximise employment and enterprise opportunities for traditional owners

[155] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 14.

[156] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 60.

[157] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 5.

- Developing agreements to support Indigenous ranger programs to deliver management in marine parks
- Providing information to Indigenous people about marine park management.

Actions under this program at the regional level include:

- Collaborating with traditional owners, Indigenous ranger groups, land councils, Indigenous advisory committees and relevant partners, to undertake marine park management such as surveillance, monitoring and threat mitigation including removing marine debris, and implementing actions identified in sea country plans
- Identifying opportunities and mechanisms to engage traditional owners and Indigenous rangers in the management of marine parks
- Implementing cultural awareness training for PA staff in association with traditional owners
- Increasing understanding of traditional knowledge and cultural values
- Mapping cultural values and managing culturally significant sites
- Establishing protocols for researchers working with PA to guide engagement with traditional owners.

Despite this, work done under the SE Management Plan has been cognisant of and aligned with the PA Australian Marine Parks Indigenous Engagement Program, and its 8 best practice principles for Indigenous engagement on Commonwealth marine reserves, acknowledging that Aboriginal and Torres Strait Islander people have been sustainably managing their Sea Country for thousands of years. In line with the SE Management Plan, it is evident that management activities have sought to recognise and respect the ongoing cultural responsibilities of Indigenous people to care for Sea Country and support multiple benefits for traditional owners.

Even prior to the declaration of the SE Network, two pilot Sea Country Plans (Kooyang and Ngarrindjeri Nation) were released in 2004 and 2006, respectively, in response to an action identified in the South-east Regional Marine Plan. These two Sea Country Plans were developed as a potential vehicle for Indigenous involvement in natural resource use and management processes. The development of these pilot plans highlighted the need to better understand and identify the cultural values of the region.[158] More recently, building on previous research work on Indigenous cultural values within the SE Network a desktop review was undertaken with the aim of informing opportunities to improve communication of appropriate cultural values. The review also helped to inform the PA Indigenous Engagement Program. While the outcomes from this review were informative there were few examples of direct overlap or linkage with the actual SE Network, a more thorough review of smaller, more relevant data sets may have been more effective.[159]

Since the SE Management Plan has been in operation, Indigenous representatives have been invited to attend and participate in the SE Forum[160] and subsequently the SEMPAC. Early SE Management Plan progress reporting records that

[158] Parks Australia, *South-east Marine Parks Network Research and Monitoring Strategy 2013-2023,* Draft, pg. 5.

[159] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17*, pg. 40.

[160] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 11.

> Despite attempts Parks Australia has been unable to attract a high level of Indigenous representation at SE Forum meetings to date. Consistent with Parks Australia's approach to engaging with appropriate Indigenous people discussion has been initiated regarding the establishment of a standalone Indigenous group to provide advice on the management the South-east network. The practicalities of such a group and its linkage to the South-east forum are currently being investigated. [161]

Since then, there has been steady progress in engaging representatives, including a current member of SEMPAC who is an Elder, keeper and protector of culture in his local community in northern Tasmania. He is an active member of the Indigenous community, taking a lead role in promoting Aboriginal culture through his work as an educator and traditional artist. This member brings a wealth of board and committee experience and is adept at proving advice to government at local, state and federal levels on wide range of Indigenous and land management issues. He currently sits on the Tasmanian National Parks and Wildlife Advisory Council, providing management advice on Tasmanian World Heritage Areas and National Parks.[162]

The flagship achievement in relation to building understanding and contributing to conservation of cultural values in the SE Network has been the Explore Sea Country Project as discussed under *Education and Communication* in Chapter 3 above. Under the leadership of SE management staff, PA has collaborated with traditional owners, Tasmania Parks and Wildlife Service and the Department of Education to develop a sea country focused education program that embeds Tasmanian Aboriginal culture and connections to sea country (particularly related to Australian Marine Parks) that can be delivered to school students and to visitors to Tasmania's national parks. This project also enables First Nations students to be able to see themselves, their identities and their cultures reflected in their learning.

One of the notable aspects of the development of this project is that it was initiated by Marine and Island Parks Branch staff from a considered prioritisation process examining all potential SE Network cultural value conservation activities against the following criteria:

- Consistency with PA's approach to managing Australian Marine Parks, as outlined in a management plan or in other management plans, such as sea country plans
- Capability of the group proposing to undertake the activity
- Collaborative partners to improve value for money, sustainability and outcomes
- Outcomes that contribute to the protection of marine park values, or address pressures on values, or increase understanding of values, or create multiple benefits for traditional owners.

This prioritisation effort has succeeded in developing projects that are both practical and uniquely valuable, and appropriate for the SE Network. Consequently the Explore Sea Country project has been successfully piloted during 2021, with an official launch to become part of the Tasmanian State curriculum in January 2022.

The innovation of this program not only offers benefits for current and future teaching staff and students, but it has also been a valuable opportunity for Indigenous representatives to work with PA

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[161] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 40-41.

[162] South-east Marine Parks Advisory Committee, Meeting 1, Australian Antarctic Division, *Australian Marine Parks Advisory Committees – Member biographies,* Paper 2, 16 May 2019, pg. 8.

staff to contribute their cultural knowledge and a diversity of expertise to the development of the program. It was reported to the evaluation team that it has resulted in several instances of significant connection between students and Indigenous communities, where a depth of understanding and communication pathways were created that would not have otherwise occurred. For example, when students reflected their new understanding of cultural values by presenting their own versions of the Acknowledgement of Country with Indigenous community members present, it was expressed that it was a deeply significant and emotional exchange for everyone involved.[163]

Further evidence of PA's determination to gain greater understanding of Indigenous structures and cultural needs and how they can be best integrated into the management of the SE Network, can be found in a number of initiatives over the life of the SE Management Plan. The Exploring Sea Country project has been promulgated in 'The Orb' website which is a collection of online multimedia resources designed to assist the teaching of Tasmanian Aboriginal histories and cultures. This portal makes Indigenous educational resources publicly available in a highly visual format which is suited to a range of learning styles.

> It embraces a number of Aboriginal ways of being, knowing, thinking and doing, including learning through narrative, connection to Country and cultural practice. The Orb reflects the holistic nature of Tasmanian Aboriginal culture and the interconnections between people, country, culture, identity and the living community.[164]

The evaluation has found no evidence to suggest PA have not complied with requirements of the Native Title Act 1993. However, in relation to Action 29, which requires PA to comply with the requirements of the *Native Title Act 1993*:

> The forum NOTED that 6.5 [activity in the implementation schedule] may not be entirely relevant given that Native Title rights and interests for successful determination under the Act being highly problematic in the Tasmanian context. It was ADVISED that Parks Australia reconsider the wording about Native Title Act at 6.5 and perhaps refer to legislation for Victoria, and the Aboriginal Lands Act 1995 and the Aboriginal Heritage Act 1975 for Tasmania.[165]

[163] SEMPAC meeting notes from Sustineo evaluation team observer attendance, 16 November 2021.

[164] Maltby, K. *Australian Marine Parks, South-east Network,* presentation on Explore Sea Country Project delivered to Sustineo evaluation team on 20 October 2021.

[165] South-east Forum, *Meeting Record*, May 2018, pg. 6.

Status and trends of pressures and drivers Theme

Theme key findings
• The use of the term 'drivers' is not clear. In the SE Management Plan pressures are defined broadly as human-driven processes, events and activities that may detrimentally affect the values of the SE Network. But there is no definition of drivers as distinct from pressures in the SE Management Plan. One can surmise what it refers to from the definition in the MEF, but for the purposes of enduring clarity of communication, the terminology in this theme might be revised in the new SE Management Plan.
• Further effort is required on other pressures, such as seismic noise and light pollution from shipping and mining, oil pollution, and invasive species and diseases to understand the specific impacts these pressures are having on SE Network values (see list of pressures on page 19 of the SE Management Plan).
• PA has self-identified the need for improving the knowledge and understanding of pressures as a priority, including the need to direct effort to adapt management actions to address recognised knowledge gaps.
• Interviews with scientific stakeholders consistently referred to cumulative impact assessment as an area for necessary on-going effort for management of the SE Network, in which climate change pressures can best be monitored.

This theme is well defined with clear intent and its actions are easily distinguished from those that relate to other themes. Strategy 1, Strategy 2 and Strategy 3 clearly provide guidance for the intended outcomes of this theme. The only component of the theme that is not entirely clear is the term 'drivers' which is not referred to in progress reporting or most research. It is included in the PA model for Marine Parks as "biophysical drivers" and is always coupled with the more frequently referred to term "pressures". This language is carried through the AMP management effectiveness system which refers to biophysical, economic and social drivers, but the distinction between these and "pressures" which are defined as "human-driven" is never made clear.

Discussion of evidence

For the SE Management Plan, pressures are defined broadly as human-driven processes, events and activities that may detrimentally affect the values of the SE Network. Pressures are characterised by two main types: those that are directly associated with human activities and those that are related to the effects of climate change.[166]

During the Foundation Phase of the SE Management Plan there has been some increase in knowledge and understanding of pressures affecting conservation values as reported in outcomes for specific projects, but this remains a challenge for scientific research to track impact trends and attribute

[166] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 19.

correlation with given pressures or determine causality. Gaining a better understanding of pressures and ecosystem condition/health is necessary to inform an adaptive management approach.[167]

The drafting of the AMP management effectiveness system prioritisation process has contributed to the future of research on pressures by standardising terminology on anthropogenic activities. In the common language they will now be defined at two levels: 1) activities, and 2) sub-activities. This hierarchy and nomenclature is based on the AMP management plans. Activities and sub-activities identify things that occur in the AMPs. The controlled language distinguishes 16 activities that are sub-divided into 58 activity–sub-activity combinations. The largest number of sub-activity categories occur within the commercial fishing activity. Together with vessel transiting, the language identifies 15 commercial fishing sub-activities. The language also identifies 24 specific pressures that arise through one or more sub-activities. For example, the language distinguishes habitat modification due to physical disturbance and removal; changes in nutrients and organic matter; and suspended sediments and smothering.[168]

The technical audit assessed that there has been considerable research and analysis on the effects of fishing as a pressure in selected areas of the parks. Additionally, some synthesising of climate change research and other environmental pressures has added to the knowledge and understanding of this pressure at a national scale. However, further effort is required on other pressures, such as noise and light pollution from shipping and mining, oil pollution, and invasive species and diseases to understand the specific impacts these pressures are having on SE Network values.[169] PA self-identified the need for improving understanding of pressures as a priority for the Consolidation Phase of the SE Management Plan, indicating some effort was being directed to adapt management in response to recognising knowledge gaps. Although a large number of research projects were successfully executed in the Consolidation Phase, they generally had a focus on demersal and benthic fish communities and coral and reef communities. There is limited reporting on pressures on those communities (apart from fishing, as mentioned).

Cumulative impacts

Interviews with scientific stakeholders consistently referred to cumulative impact assessment as an area for necessary on-going effort for management of the SE Network.

> The current process for cumulative effects is very crude and insufficient to date. This is acknowledged. In the rare instances that attempts have been made to quantify cumulative impacts and risks have likely been inadequate. Requires a monitoring framework that is sophisticated and mature enough to take account of non-linear, subtle poorly understood dynamics. Would also require more frequent and consistent periodical data points as well

[167] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 7.

[168] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. vi.

[169] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 19.

> as spatially more dense than have current capability for. Would require sophisticated comparison of similar monitoring in other off-reserve environments.[170]

The need for the completion of a vulnerability and cumulative impact assessment that accounts for the cumulative impacts of anthropogenic sub-activities on natural values is included in the last of the AMP management effectiveness system pre-requisite steps. The objective of this step is to identify and prioritise locations within the SE Network according to the magnitude of sub-activities that occur in that location, and the vulnerability of the ecosystems at that location to the pressures exerted by these sub-activities. This step therefore aims to provide a relative assessment of the cumulative impacts across the SE Marine Region. It does not aim to predict or quantify the effects of the cumulative pressures acting on the ecosystems at any location.[171] The common language identifies 26 ecosystems and 58 activities/sub-activities, leading to 1,508 possible ecosystem–activity/sub-activity combinations. The language also identifies the ecosystem components within ecosystems, and the specific pressures associated with every sub-activity. The cumulative impact assessment in this analysis began by considering all combinations of ecosystem components and specific pressures in a large (200 x 157) interaction matrix.[172] However, this is viewed as the important beginning of a recognition of the requirement, with no capacity yet established to address it in a meaningful way. The imperative to make progress on capability to monitor the cumulative impact pressures associated with climate change is highlighted in the most recent SE Network State of Knowledge summary:

> Climate change is a significant pressure for the South-east Network. The marine environments of South-eastern Australia are a global hotspot. Sea surface temperatures off Tasmania's east coast are warming at a rate of 2.3 °C per century – between two and four times the global average. The warm nutrient poor waters of the East Australian Current extend about 350 km further south than they did in the 1970s.[173]

Human-driven pressures

The SE Network is unique amongst CMRNs because it comprises mostly deep-sea environments and less user activity and human-driven pressures. While it was evident throughout the evaluation that it has a lower rates of authorisations, compliance and incident reporting, it has some notable significance due to its uniqueness. Specifically, because of a long period of absence of external human impacts in many areas of SE Network, it is a good research opportunity to track the effects of climate change with less other external variables present. Similarly, it is a rare example of the timeframes and dynamics of seabed recovery from external human-driven pressures such as trawling. It is believed by many researchers consulted that it is important to learn from monitoring values in AMPs to inform decisions on activities in all Commonwealth waters, given that it is the DNP's responsibility is to

[170] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[171] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. 28.

[172] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. 29.

[173] Parks Australia, *South-east Marine Parks Network State of Knowledge Summary,* (Draft) November 2021, pg. 22.

protect biodiversity everywhere in Commonwealth waters. Therefore, there is an opportunity for the SE Network to serve as a control group for comparison against the impacts of human-driven pressures in other AMPs as reiterated in a recent report on shelf reef surveys of the Tasman Fracture Marine Park:

> Following establishment of the Tasman Fracture Marine Park (TFMP) in 2007, habitats in the Marine National Park Zone (MNPZ) region where fishing is prohibited had the potential to demonstrate a range of changes in the abundance of commercially targeted species once fishing ceased, including southern rock lobsters (Jasus edwardsii), striped trumpeter Latris lineata and jackass morwong Nemadactylus macropterus. [174]

[174] Institute for Marine and Antarctic Studies, J. Monk, N. Perkins and N. Barrett*, Tasman Fracture Marine park MNPZ shelf reef surveys 2021, Interim Report to Parks Australia*, November 2021.

Study of the recovery of SE Network seamounts from trawling

Seamounts are considered a high priority for management as they are a unique deep-sea environment with distinctive benthic communities and vulnerable to human activities (e.g. benthic trawling) and climate change. The SE Network Huon and Tasman Fracture Marine Parks contain many small seamounts supporting deep-sea coral reefs that rank amongst the most biologically diverse on a global scale. Prior to reservation these seamounts were fished in the 1980's and 1990's and understanding the recovery dynamics of these deep-sea coral communities has been identified in the AMP management effectiveness system prioritisation as a monitoring focus.

Field surveys conducted by CSIRO in 1997 and 2006 concluded that:

- Trawling had a dramatic impact on the deep-sea coral communities and there was no consistent signal of recovery in the megabenthos 5-10 years after fishing had ceased, suggesting that recovery is likely to be very prolonged and it is unrealistic to expect them to recover within the time spans of typical management plans.
- Orange roughy (*Hoplostethus atlanticus*) from the Huon and Tasman Fracture seamounts show positive signs of a population recovery include increased biomass at the spawning site since fishing ceased.

The evaluation has found that because of the conservation efforts during the life of the Management Plan in these SE Network seamounts, they present a rare opportunity for potential observation of protected zone recovery possibilities and also a potential control group to contrast with effects of trawling elsewhere.

A 2020 study points to this type of protected zone recovery tracking which "shows the Tasman Fracture and Huon Australian Marine Parks (AMP) enclose many seamounts assessed to be lightly impacted or to have no measurable signs of fishing impacts. This indicates the dominant framework-building scleractinian coral, S. variabilis, has been protected."

Similarly, a 2021 study of the deep-sea Basketwork eel, (*Diastobranchus capensis)* numbers and spawning locations and conditions in the SE Network found that

> The aggregation was protected in a marine park in 2007 following a decades-long impact from bottom trawling, indicating that the population can be expected to stabilise and recover. Monitoring the aggregation's status, and validating seasonal spawning, provide important opportunities to examine conservation-led recovery in the deep sea as part of Australia's new national strategy of Monitoring, Evaluation, Reporting and Improvement (MERI) for conservation values within marine parks.

A more recent report in November 2021 also concluded that

> lobster abundance and average size continues to increase within the MNPZ in response to protection. Interestingly this has been matched by a similar increase in adjacent fished offshore waters as changes in fishery quotas and market conditions over the last decade have resulted in a significant decrease in fishing effort in remote offshore waters, allowing some significant stock recovery.

175,176, 177 and 178

The technical audit found that recreational fishing impacts, noise and marine plastics pressures are not reflected in the analysis completed for the SE Network. These are the most significant sub-activities that are not directly (rather than through proxies) reflected in the analysis to date. Recreational fishing effort can be estimated remotely[179] but information on catch location and composition will likely continue to be available only from individual interviews and surveys. Australian states and territories conduct regular recreational fishing surveys. For example, the evaluation found that marine spatial planning projects undertaken by both the Tasmanian and Victorian Governments to map values of recreational and commercial users of the marine environment are produced with the goal of producing data to support management decisions.[180] However, it is believed that these surveys do not currently gather all necessary information. The extent of this issue was described by one researcher as follows:

> [Monitoring] Recreational fisheries is very difficult. No one has come up with any clear approach to monitoring them let alone policing it. The scale of inability to act in relation to recreational fishing is demonstrated by the example that fisheries have had to cut the commercial catch of Southern rock lobster in Tasmania, because of increased amount of recreational catch. This is even though no one has been able to consistently quantify the rates of recreational fishing or its impact on fish stocks. However, it is considered to be very significant (e.g. Blue fin tuna – recreational/charter fishing accounts for 1/3 of annual catch)[181]

The Marine Biodiversity Hub report on *Social and economic benchmarks of the Australian Marine Parks*[182] describes a national random utility model (RUM) that if implemented may provide reasonable measures of line-based recreational fishing effort across Australia with uncertainties. These estimates could be improved in terms of accuracy and updated to capture changes in recreational effort over time.

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[175] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia.

[176] Williams A, Althaus F, Maguire K, Green M, Untiedt C, Alderslade P, Clark MR, Bax N and Schlacher TA (2020) The Fate of Deep-Sea Coral Reefs on Seamounts in a Fishery-Seascape: What Are the Impacts, What Remains, and What Is Protected? Front. Mar. Sci. 7:567002. doi: 10.3389/fmars.2020.567002.

[177] Williams, A.; Osterhage, D.; Althaus, F.; Ryan, T.; Green, M.; Pogonoski, J. A Very Large Spawning Aggregation of a Deep-Sea Eel: Magnitude and Status. J. Mar. Sci. Eng. 2021, 9, 723. https://doi.org/ 10.3390/jmse9070723.

[178] Institute for Marine and Antarctic Studies, J. Monk, N. Perkins and N. Barrett*, Tasman Fracture Marine park MNPZ shelf reef surveys 2021, Interim Report to Parks Australia*, November 2021.

[179]Keramidas, I., Dimarchopoulou, D., Pardalou, A., Tsikliras, A., Estimating recreational fishing fleet using satellite data in the Aegean and Ionian Seas (Mediterranean Sea), *Fisheries Research*, 2018; Dutterer, A., Dotson, J., Thompson, B., Paxton, C., 2020. Estimating Recreational Fishing Effort Using Autonomous Cameras at Boat Ramps versus Creel Surveys, *North American Journal of Fisheries Management*, 2020.

[180] Parks Australia, *South-east marine parks Advisory Committee (SEMPAC) – Meeting 1 Record*, 16 May 2019, pg. 5.

[181] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[182] Navarro, M., Langlois, T.J., Burton, M., Hegarty, A., Aston, C. Kragt, M.E., Rogers, A. Social and economic benchmarks of the Australian Marine Parks. Report to the National Environmental Science Program, Marine Biodiversity Hub. The University of Western Australia, 2020.

A review of online materials provides evidence indicating that the PA supports the removal of marine debris and ghost nets from marine parks through partnerships with Commonwealth, state and territory government agencies and other organisations involved in the management of marine debris.[183] No dedicated marine debris projects were funded through the foundation phase of the SE Management Plan because the SE Network is fortunate in that it is not subject to the level risk arising from marine debris that is a concern in other AMPs, due to low density of population, geographic displacement from activities of foreign fishing fleet activities, and in general, not being subject to marine debris carrying ocean currents.[184] In 2016 it was declared that PA will continue to seek opportunities to support relevant marine debris initiatives in the SE Network where resourcing is available[185].

Incidents

There is evidence indicating that systems for timely reporting of, and assisting with responses to, environmental incidents have been established. A South-east Critical Incident Action Plan was developed in 2017[186]. The Action Plan provides a critical incident risk assessment for each marine park in the SE Network, although the Plan remains in a draft form. In addition to this Plan, at the national-level, PA has established an Australian Marine Parks Environmental Incident and Emergency Response Strategy that came into effect In December 2018. The Strategy covers "the role of the Director [of National Parks] in prevention and preparedness, and response and recovery arrangements for critical environmental incidents and emergencies in Australian marine parks."[187]

The Plan maps out roles and responsibilities which are aligned to the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances and the National Maritime Emergency Response Arrangements. In the event of a critical environmental incident, the plan stipulates that AMSA as the lead coordinating agency, and DNP will provide "a subordinate advisory and supporting/assisting role to AMSA and a collaborative role with other agencies until the incident response is completed"[188]. The South-east Critical Incident Action Plan aligns with:

- The Department of the Environment and Energy External Critical Incident Procedure
- The Australian Maritime Safety Authority (AMSA) National Plan for Environmental Emergencies
- The Department of Industry, Innovation and Science (DIIS) Offshore Petroleum Incident Coordination Framework

[183] (https://parksaustralia.gov.au/ghost-nets-initiative/).

[184] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 27.

[185] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 6.

[186] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17.*

[187] Parks Australia, *South-east Marine Parks Network Management Plan 2012-23: Implementation Plan Report Consolidation Phase 2017-18 – 2020/21*, pg. 12-13.

[188] Parks Australia, *South-east Commonwealth Marine Reserve Network CMR Critical Incidents and DNP Action Plan 2017-18 (Draft)*, February 2017, pg. 3.

- Maritime Border Command Guide to Australian Maritime Security Arrangements.[189]

The South-east Critical Incident Action Plan prescribes that:

> DNP maintains effective liaison and communication channels with Australian government lead agencies and key stakeholders directly responsible for responding to maritime environmental incidents, in particular AMSA, National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), AAD, and ABF/MBF

As well as with:

> appropriate state government maritime environmental response agencies, particularly DPIPWE (EPA) and TasPol in Tasmania"[190].

The technical audit noted there was limited evidence from source documents to suggest that DNP maintains specific SE Network liaison and partnerships with relevant environmental incident response agencies and organisations. The evaluation team understands this is now coordinated at a national level for efficiencies.

Over the life of the SE Management Plan, there have been no serious incidents in the SE Network. There was one incident responded to since 1 July 2013 which involved advice provided on potential risks to conservation values of Tasman Fracture sanctuary zone when a commercial fishing vessel was abandoned with no estimated impacts on conservation values.[191] No incidents occurred in 2014/15[192] or 2015/16.[193]

Although multiple small incidents have been reported to PA, none were of a magnitude which required action under the Critical Action Plan. PA provided appropriate advice in line with reporting agencies.[194] For example, in 2017/18, PA assessed the risk of the CSIRO deep water oceanographic data buoy which broke off its anchor on 25 March and had been slowly drifting on the surface through Macquarie Island Marine Park waters with CSIRO proceeding to lead recovery actions.[195]

The technical audit found through a review of the South-east Critical Incident Action Plan and other source documents that potential incidents that may threaten conservation values of the Reserves have been identified and assessed. The South-east Critical Incident Action Plan contains an assessment of the critical incident risk for all 14 reserves/25 zones in the SE Network based upon their respective proximity to offshore oil and gas installations and pipelines, major shipping routes and navigation

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[189] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23: Years 1 – 4 Foundation Phase Status Report 2013/14 – 2016/17*, pg. 26.

[190] Parks Australia, *South-east Commonwealth Marine Reserve Network CMR Critical Incidents and DNP Action Plan 2017-18 (Draft)*, February 2017, pg. 4.

[191] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 6.

[192] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 7.

[193] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 7.

[194] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Years 1-4 Foundation Phase Status report 2013/14-2016/17,* pg. 28.

[195] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 12.

hazards to shipping. The Plan, does not however, prescribe or aim to implement prevention measures to reduce the likelihood or consequences of the potential risks identified through this plan. This is on the basis that "such prevention measures have already been determined and implemented through AMSA and the NOPSEMA initiatives and plans".[196]

Similarly, the evaluation confirmed that there has been some scenario-based exercises/ training to test DNP regional or national capacity for response to maritime incidents. This has included collaborative incident response training as a desk-top exercise, and by PA staff sometimes attending the Australian Marine Safety Authority 2-day incident response familiarization course or a longer 5-day oil spill scenario exercise.[197]

SEMPAC meeting minutes show that some environmental incidents response stakeholders attend SEMPAC meetings, including as observers, which is one mechanism for maintaining partnerships.

Status and trends of social and economic benefits Theme

Theme key findings
• The potential for understanding of social and economic benefits in the SE Network has been enhanced as a result of the AMP management effectiveness system prioritisation process work in partnership with NESP (as part of the D6 project) to develop social and economic baselines for the AMPs - Marine Biodiversity Hub report on *Social and economic benchmarks of the Australian Marine Parks*[198].
• SE Network management relationships with commercial fisheries and especially tourist charter industry and recreational fishing groups is very much a work in progress.
• Whilst there is substantial understanding of commercial fisheries and other economic stakeholder group activities in the SE Network, there is not substantial evidence of establishment of effective mechanisms for regular engagement in this sector.
• There are unresolved concerns about the potential for NOPSEMA to insufficiently consider marine park values, including the use of seismic testing and reservations regarding the oil and gas approval process, particularly in dealing with cumulative impacts.

The definition of this theme is not made clear in the SE Management Plan or associated documents, but it appears that it is assumed to relate to recreational and commercial users of the SE Network. There is potential for confusion with the theme's reference to 'social' benefits which are not clearly differentiated from the heritage and cultural values captured under a different theme.

[196] Parks Australia, *South-east Commonwealth Marine Reserve Network CMR Critical Incidents and DNP Action Plan 2017-18 (Draft)*, February 2017, pg. 5.

[197] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[198] Navarro, M., Langlois, T.J., Burton, M., Hegarty, A., Aston, C. Kragt, M.E., Rogers, A. Social and economic benchmarks of the Australian Marine Parks. Report to the National Environmental Science Program, Marine Biodiversity Hub. The University of Western Australia, 2020.

Similarly, there is cross over and possible duplication in the strategies and actions relevant to this theme. Strategy 1, Strategy 4 and Strategy 5 were found to be most relevant to the theme, but their prescribed actions are arguably already covered under other themes. For example, the requirement to engage in education and communication directed at social and economic stakeholders is already addressed under Strategy 4's actions in the Direct and Enabling Management Themes, as documented in Chapter 3. The same can be said of Strategy 5 actions relating to Promoting community understanding of, and stakeholder participation in, the management of the SE Network. There is an argument for this theme in emphasising the need to dedicate effort to establishing "social and economic baselines to support evidence-based decision-making and adaptive management", which was raised under *Human-driven pressures* above, and is prescribed as a National Program Action under Strategy 1.

Discussion of evidence

Whilst substantial work has been done on developing ecological baselines and improving knowledge and understanding of ecological values, less work appears to have been done regarding social and economic values. However, the SE Management Plan was written around conservation values and so the activities carried out align more to this. There is self-reported acknowledgement that more work needs to be done in the social and economic areas, and a NESP project produced recommendations for social and economic baseline metrics, but it is not clear if these are currently being implemented.

The potential for understanding of social and economic benefits in the SE Network has been enhanced as a result of the AMP management effectiveness system prioritisation process work in partnership with Marine Biodiversity Hub (as part of the D6 project) to develop social and economic baselines for the AMPs—Marine biodiversity Hub report on *Social and economic benchmarks of the Australian Marine Parks*.[199] This includes developing common language for social and economic benefits and identifying metrics to capture the change in human experience and value of the marine environment resulting from the implementation of the AMPs.[200] A report summarising metrics used by other national and international jurisdictions and recommendations for Australian Marine Parks can be found at https://www.nespmarine.edu.au/document/measures-social-and-economic-monitoring-australian-marine-parks".

Economic benefits

For more than 200 years, the territory that now sits within the SE Network has supported a variety of marine industries that have contributed significantly to the region's economic activity. Key uses of the region include:

- **Oil and gas production**: the Region has four major hydrocarbon areas, with the Gippsland, Otway and Bass basins being production areas and the Sorell Basin considered to have future potential at the time of drafting the SE Management Plan. A number of petroleum exploration licences are held over areas of the SE Network, including exploration activities.

[199] Navarro, M., Langlois, T.J., Burton, M., Hegarty, A., Aston, C. Kragt, M.E., Rogers, A. Social and economic benchmarks of the Australian Marine Parks. Report to the National Environmental Science Program, Marine Biodiversity Hub. The University of Western Australia, 2020.

[200] Parks Australia, *South-east Commonwealth Marine Reserves Network Management Plan 2013-23, Implementation Plan Report, Consolidation Phase 2017/18-2020/21,* pg. 28.

- **Commercial fishing**: there are more than 30 Commonwealth, state or jointly managed open ocean fisheries operating in the region. This includes some of the nation's most productive and valuable fisheries, such as abalone and rock lobster. Land-based activities associated with commercial fishing, such as repair yards, dock handling, transportation, boat construction, fish processing and commercial trade, and the supply of marine gear like nets and rigging, contribute significantly to the employment and economic activity of nearby coastal communities.
- **Commercial tourism**: includes charter fishing, nature and whale watching, charter boat hire and other related activities.
- **Commercial shipping**: the region has some of Australia's busiest shipping routes, with traffic from international and coastal cargo trade, and passenger, cargo and vehicular ferry services across Bass Strait.[201]

In recent decades, the SE Network also attracts a range of other economic uses, including scientific research and commercial media activities, telecommunications cables and energy transmission services (for electricity and gas) and potentially in future renewable energy (wind and wave power) and carbon storage. The shipping traffic routes that transect some of the reserves in the SE Network includes international and coastal cargo trade, passenger services, and cargo and vehicular ferry services across Bass Strait, which are considered significant for state and national economies.[202]

It is understood that commercial fishing is an important component of many coastal economies in the SE Marine Region. Associated activities, such as fish processing, trade and marketing, ship repair yards, marinas and dock facilities, transportation, boat construction, and the supply of marine equipment such as nets and rigging, are important to the region's employment and economic activity, and food security. More than 30 Commonwealth, state and jointly managed open ocean fisheries operate within the SE Network.[203] As outlined in relation to authorisations and compliance in Chapter 3, commercial fishing is generally managed by the Australian Fisheries Management Authority for Commonwealth fisheries, and relevant state fisheries management agencies for state-managed fisheries.

Cooperation with commercial stakeholders

The evaluation found that PA has engaged with SE Network economic stakeholders in a wide variety of ways over the life of the SE Management Plan in attempts to increase their awareness and participation in management actions. For example:

- In partnership with the AFMA and SETFIA, PA established a CMR Alert Service for Commonwealth commercial fishers to which commenced on 1 July 2014.[204]
- In collaboration with the Commonwealth Fisheries Association (CFA), PA undertook surveys with SE Network commercial vessels (existing technologies in use, opportunities for

[201] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 15.

[202] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 40.

[203] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 42.

[204] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2013/14 (Year 1) – Report on Progress,* 2014, pg. 2.

improvement). Results informed communications needs/products and priorities in preparation for the Consolidation Phase of the SE Management Plan.[205]

- In 2016, PA developed an agreement with the Tasmanian Seafood Industry Council (TSIC) to investigate the needs of the Tasmanian rock lobster fishing industry for electronic maps and best ways to meet these needs.[206]

The evaluation team noted a more recent issue of increasing concerns about the potential for NOPSEMA to insufficiently consider marine park values, including the use of seismic testing and reservations regarding the oil and gas approval process, particularly in dealing with cumulative impacts. It was noted that through NOPSEMA's permit application process, a proponent must consult PA prior to the submission of an environmental management plan. It was also noted that NOPSEMA approve research associated with the oil and gas industry. Committee members discussed their reservations regarding the oil and gas approval process, particularly in dealing with cumulative impacts.[207]

> Mining exploration research can be quite harmful to marine life with respect to seismic testing effects of sound. SE Network information to NOPSEMA influenced the restriction of these activities and resulted in refinement of their environmental reports. Then also results in a future research priority on effects of seismic activity.[208]

This was most recently highlighted in relation to approval of seismic testing in the Zeehan CMR as detailed in the *Examples of SE Network information and research on decisions* information box in Chapter 3.

Recreational users (social benefit)

The SE Management Plan adequately provides for commercial tourism to be conducted in most zones under either a class approval or permit from the DNP. Specific conditions apply depending on the nature of the operations. The SE Management Plan also applies to the airspace up to 3,000 metres above sea level over the SE Network. However,

> commercial aviation tours may operate in this airspace without a permit. Tour operators may land aircraft in accordance with the conditions of a permit issued for those activities. Media organisations may access marine reserves without a permit or class approval as long as they are reporting news and events of the day.[209]

Recreational fishing includes individual fishing, clients of charter fishing vessels, organised fishing competitions, and includes all forms of recreational taking of fish and other marine life, including line

[205] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2014/15 (Year 2) – Report on Progress,* 2015, pg. 8.

[206] Parks Australia, *South-East Commonwealth Marine Reserves Network Implementation Schedule 2013/14-2016/17. 2015/16 (Year 3) – Report on Progress,* 2016, pg. 8.

[207] Parks Australia, *South-east marine parks Advisory Committee (SEMPAC) – Meeting 1 Record*, 16 May 2019, pg. 5-6.

[208] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[209] Director National Parks, *A Guide for Users of the South-East Commonwealth Marine Reserves Network,* July 2013, pg. 7.

fishing, netting, trapping, spear fishing and hand collecting.[210] Recreational (i.e. non-commercial) fishing is a popular pastime in the SE Network. For example, Tasmania has a very high participation rate in recreational fishing, with almost 30 per cent of the population over the age of five years fishing at least once per year. The bulk of recreational fishing occurs in state internal and coastal waters (i.e. within 3 nautical miles of the shore), notably in bays and estuaries. However, increasingly, recreational fishing is taking place in Commonwealth-managed waters, bringing the activity within areas of the SE Network. In 2019 it was reported that there were 30,000 registered boats in Tasmania and an estimated 2-5% enter Commonwealth waters. Progressive advances in maritime technology, combined with coastal 'pinch' associated with increased recreational fishing effort along the coast, suggests that recreational visitation to the SE Network is likely to increase into the future.[211]

Complimenting the SE Management Plan actions, the technical audit found that there is a DNP National Program Action to protect CMR values and improve visitor experience by developing a mooring policy, which was published in 2021. The mooring policy includes efforts to ensure that:

> moorings support ecologically sustainable use, safe and equitable access opportunities for park users, and minimise impacts on the natural, cultural and heritage values of Australian Marine Parks [and that] [m]oorings that are well located, designed and maintained assist in preventing or minimising impacts to marine park values, while facilitating safe and equitable access to parks…[212]

The SE Management Plan's education of recreational users is also supported by general guidelines for anchoring in CMRs which are provided on the PA website[213].

[210] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 46.

[211] Parks Australia, *South-east marine parks Advisory Committee (SEMPAC) – Meeting 1 Record*, 16 May 2019, pg. 5.

[212] Parks Australia, *Australian Marine Parks Mooring Policy*, February 2021, pg. 1.

[213] (https://parksaustralia.gov.au/marine/activities/approvals/anchoring/).

5. FINDINGS RELEVANT TO PARKS AUSTRALIA'S MANAGEMENT EFFECTIVENESS FRAMEWORK AND OTHER NETWORK MANAGEMENT PLANS

General

As noted earlier, the most significant finding overall is that the SE Network is a fulcrum of innovative conservation management activity and in-depth research which both combine to generate profound scientific energy and new understanding of a particularly unique region of the Commonwealth Reserves estate. In this respect, the SE Network and the outcomes of its SE Management Plan are exemplars for PA's Management Effectiveness Framework (MEF).

This does not mean that it is perfect or that development of MEF strategies is complete. It means that what has been put in place, the way it has been implemented to date, and the flow on effects of activities it has stimulated among external researchers and other stakeholders, is a very good start for an enduring and evolving MEF.

In terms of structure, the importance of having 10-year Management Plans as part of PA's MEF was highlighted. Each new plan is a huge administrative, consultation and policy development task which would be a problematic burden to replicate too often. As mentioned under *Authorisations and Enforcement* in Chapter 3, it is also considered critical for legislative longevity on authorisations and compliance that the SE Management Plan sets long-term standards, enabling enduring efficiencies such as class approvals. Finally, it is believed that 10-year plans are more effective for setting out management approaches to emerging and long-term trends such as climate change.[214]

The AMP Management effectiveness system research which was conducted on a pilot scale in SE Network to provide an opportunity for reflection and learning, before rolling the process out nationally represents a significant enabling-step towards an adaptive, integrated and tailored, management regime. The learnings from this pilot so far have been captured in several recommendations for the national roll-out and future development of the AMP management effectiveness system frameworks.

PA has subscribed to an adaptive management approach for the MEF. It is a contemporary and widely accepted management approach that essentially means "learn as you go",[215] it is well suited to the dynamic scientific context of AMPs. The practical application of this approach in the SE Network since the beginning of the SE Management Plan in 2013 has proven optimal for using evidence to iteratively assess performance and adjust management actions and priorities so they adapt as new information and understanding is ascertained.

[214] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[215] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. viii.

Further, the recent review of the EPBC Act[216] stressed the need for a coherent framework for monitoring, evaluation and reporting on the effectiveness of the EPBC Act to support adaptive management, achieve improved environmental outcomes and maintain public trust in the environmental management systems. It has been suggested that a coherent, widely understood monitoring framework might be assisted by monitoring 'outcomes' (what has been achieved) as well as 'desired outcomes' (what remains an aim to achieve)[217].

This last point is supported by the findings of this evaluation where the value of investment in public and commercial education and collaborative engagement for participation in conservation management has been demonstrated over the life of the SE Management Plan.

Finally, the SE Network Explore Sea Country project is an exemplar that should be praised and promulgated as an ideal approach to Indigenous engagement and promoting cultural values. It is recommended that this approach and the SE management staff efforts that underpinned it be promulgated across the DAWE with a view to expanding the approach with similar initiatives throughout the National PA domain. The considered prioritisation process initiated by Marine and Island Parks Branch staff examining all potential SE Network cultural value conservation activities against consistent criteria has succeeded in developing projects that are both practical and uniquely valuable.

Consistent terminology

It is understood that the Marine & Island Parks Branch SE Management Plan terminology reference document was produced for use across all AMP Management Plans, based on the 2018 Plans.[218] Therefore, it is evident that its structure and terminology is generic. This has resulted in some management expectations and categories of action that are not relevant or fully applicable for the SE Network, with offshore deep-sea territories, low visibility of natural values and less direct connection to cultural values. In fact the SE Management Plan states that it:

> provides for the development of supporting and further detailed policies, strategies and actions over the life of the Plan. These supporting documents will provide for location-specific reserve management and for engagement of users and other stakeholders as needed.[219]

However, the evaluation did not find examples of these type of 'location-specific' supporting documents, apart from the SE Network *User Guide* and the CEA Strategy which was still hindered by confusion over the boundaries of centralised PA authority. Consequently, it is recommended that the national template for SE Management Plans incorporates a localised tailoring stage, to allow for adaptation to regional context and enable more accurate definitions of progress.

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[216] Samuel, G., Independent review of the EPBC Act, *Department of Agriculture, Water and the Environment*, 2020.

[217] Views expressed in interviews with a range of PA staff and scientific stakeholders during November 2021.

[218] Parks Australia, *Australian Marine Park terms and language for MPA Branch documents,* 2018.

[219] Director National Parks, *South-East Commonwealth Marine Reserves Network Management Plan 2013-23,* Australian Government, 2013, pg. 24.

A significant issue identified in the SE Management Plan that should be addressed across the MEF is inconsistency of terminology used to define the goals and planning structure. This is particularly evident in the most recent July 2021 draft Management Effectiveness Plan which uses the labels "component" and "theme" for a variety of different levels of the framework, sometimes interchangeably. For example, on one occasion the MEF is described as having 8 components. Then soon after the reader is introduced to a 'reserve management model' that has five key components, which are the same as the categories which are later referred to a 'themes'. Separately, the plan states that "Assessing management effectiveness is based on monitoring different components of logic chains", but these components are not clearly identified. Chapter 3 of the Plan is entitled "Framework Components", which are listed as "including" six components which have no relation to the ones previously listed but appear to be either high-level actions or standards for implementation of the plan. Within the explanation of the component called 'standards' five 'themes' are listed which are the same as the five 'components' drawn out of the management model illustrated on a previous page. These 'themes' are then later defined as "including" a list of five dot points which replicate the five themes previously listed, but with slightly different wording. The same five themes are then incorporated twice in a diagram, but they are labelled "Agency-level indicators", as well as "Park-level indicators for enabling management services"[220]. Again later, only four of the five categories previously referred to as 'themes' or 'components' are listed as 'evaluation themes'. Unfortunately, none of these terms are included in the document's glossary.

With respect to consistency of terminology, it is evident that the AMP Management effectiveness system sets an ideal standard for a controlled, common language that provides a nationally consistent, carefully defined, lexicon for: a) Natural, cultural, and heritage values; (b) Social, cultural, and economic benefits; (c) Activities and anthropogenic pressures; and (d) Biophysical, and social and economic drivers. The common language is hierarchical, and the structure has been deliberately chosen to provide a balance between sufficient detail to allow unambiguous interpretation, while being sufficiently succinct so that its role within the AMP Management effectiveness system remains practical for management[221] This is an optimal foundation for the development of all PA MEF documents and AMP plans.

[220] Parks Australia, *Draft Parks Australia Management Effectiveness Framework,* July 2021, pg. 29.

[221] Hayes, K. R., Dunstan, P., Woolley, S., Barrett, N., Howe, S. A., Samson, C. R., Bowling, R., Ryan, M. P., Foster, S., Monk, J., Peel, D., Hosack, G. R., Francis, S. O. (2021). Designing a Targeted Monitoring Program to Support Evidence Based Management of Australian Marine Parks: A Pilot on the South-East Marine Parks Network. Report to Parks Australia and the National Environmental Science Program, Marine Biodiversity Hub. Parks Australia, University of Tasmanian and CSIRO, Hobart, Australia, pg. vi.

6. RECOMMENDATIONS FOR DEVELOPMENT OF THE NEW SE MANAGEMENT PLAN

The evaluation and technical audit of the implementation and effectiveness of the SE Management Plan has yielded a variety of key findings, which are summarised in the Chapter 3 and 4 subheadings above. In addition, there are a number of findings relevant to the higher-level development of the PA MEF, as articulated in Chapter 5. Finally, in this Chapter, we reiterate the findings that are considered pertinent to the development of the next SE Management Plan, so that it builds upon the considerable achievements of the 2013–2023 Plan and reflects upon lessons to be learned.

As detailed in Chapter 5 above, the new SE Management Plan should establish clarity of terminology and consistency in the guidance categories and levels of activity referred to in the SE Management Plan structure.

The new SE Management Plan should review legal terms, natural values labels and categorisation to align with more recent Marine Park Network Management Plans, and the controlled common language created in the recent AMP Management effectiveness system.

As highlighted under *Monitoring and evaluation* in Chapter 3 above, there is only minimal evidence that the consultation, aggregation of research and education activities of PA staff and associated researchers has contributed to DNP understanding of the SE Network or AMPs in general and was having subsequent impact on decision making. The evaluation team found that all reporting requirements from the SE Network were being met, and there was consistent awareness among PA staff interviewed of the importance of communicating scientific information in an accessible way to policy makers, community decision makers and commercial stakeholders. Therefore, it cannot be assumed that the lack of clear evidence of actions under the SE Management Plan resulting in improved understanding in DNP is due to any shortcoming of SE management staff efforts. Consultation on the topic of PA and DNP executive information needs and decision points would be a useful inclusion as part the development of any new Management Plan.

The evaluation has found that the effectiveness of information management, reporting obligations and impact of information flows to and from the SE Network could be much better understood through the creation of a clear depiction of all SE Network reporting obligations and information flows upwards and outwards. It is suggested that this would be a valuable shared visual reference in the next SE Management Plan, similar to the one included in the current draft AMP Management effectiveness system[222].

An updated SE Management Plan might seek to reconsider prescribed actions relating to the conservation of heritage and cultural values in the SE Network, so that they can become relevant and achievable in the unique regional context.

It is highly recommended that PA continue to invest in, and reward PA staff innovation on, Indigenous values education initiatives such as the Explore Sea Country project, which is even more significant given the challenges of Indigenous engagement in the SE Network. The considered prioritisation process initiated by Marine and Island Parks Branch staff examining all potential SE Network cultural value conservation activities against consistent criteria has succeeded in developing projects that are

[222] Parks Australia, *Monitoring, Evaluation, Reporting and Improvement system: South-east Marine Parks Network Pilot*, MERI update – SEMPAC, November 2020, pg. 4.

both practical and uniquely valuable. This approach should be documented and replicated in the new SE Management Plan.

The development of the AMP management effectiveness system prioritisation process for CMR management and its application to identify priority values and pressures for monitoring is a very significant achievement against Strategy 1 and Strategy 7 of the SE Management Plan. However, it does not signal mission accomplished for PA. The consensus amongst scientific and Parks management experts is that it is merely a start point. The evaluation has identified that there are three key areas for emphasis in risk assessment and prioritisation in the next SE Management Plan. These are:

1. The capacity to actually monitor the priorities identified using valid techniques and verified research operating procedures applied to establishing a baseline, followed by periodical monitoring frequency to produce sufficient data points for tracking their status.
2. Establishing understanding of spheres of influence, particularly in relation to values affected by cumulative effects of multiple pressures.
3. Where this monitoring of priorities reveals negative trends in the status of values or concerning impacts of pressures, what actions is PA willing to take, or willing to facilitate?

These are challenging next steps that herald the maturation of CMRN management, which need to be adopted if Management Plans are going to continue to be progressive and proactive, rather than settling into maintaining an observational status quo.

ANNEX A: ASSURANCE REPORT

Conclusion

I have undertaken a technical audit of the Parks Australia's (PA's) implementation progress against the South-east Commonwealth Marine Reserves Network Management Plan 2013-2023 (the SE Management Plan). The technical audit component of this project was undertaken in the form of a limited assurance review. The assessment has been carried out based on a literal interpretation of the wording of actions and outcomes in the Plan.

Based on the procedures I have performed, and the evidence obtained, progress has been made on the implementation of the SE Management Plan, as evaluated against the criteria. The SE Management Plan had seven overarching Strategies with 32 actions and 20 outcomes. Of the 32 actions, 9.4% (3) have been assessed as completed with no further action, 50.0% (16) as implemented but ongoing, 15.6% (5) as partially completed or implemented, 12.5% (4) as implemented with modification, and 12.5% (4) as not having been commenced. For the 20 outcomes, 0.0% (0) have been assessed as completed with no further action, 70.0% (14) as implemented but ongoing, 25.0% (5) as partially completed or implemented, nil (0) as implemented with modification, and 5.0% (1) as not having been commenced.

The overall result shows that considerable management action has commenced, and the seven Strategies of the Plan have guided implementation activities. Many actions undertaken by PA are consistent with but not articulated in the current Management Plan, but support the achievement of the prescribed outcomes. Noting this is the first Plan for any marine network in Australia, many actions and outcomes are assessed as implemented but ongoing as more information becomes known about the SE Network and some actions will always be ongoing. Audit findings noted the need to adjust and refine the wording of prescribed management actions and outcomes in the next Plan to better align with the specific needs of the SE Network as well as the more recent introduction of nationally-consistent terminology.

The review used the following criteria:

- Consideration of each prescribed management action and determination whether or not it was successfully implemented and supported anticipated outcome(s). The assessment was based on a literal interpretation of the actions and outcomes
- Evaluation of the performance of each prescribed action and outcome in relation to the overarching Strategy
- Determination of an implementation status for each prescribed action and outcome
- Document the reason those actions and outcomes where additional reasons were relevant to the assessment, particularly where progress had been delayed or only partially completed/ implemented, or completed/ implemented with modification
- Identify where applicable impacts to SE Management Plan actions and outcomes as a result of the National Priority Actions detailed in the 2018 Management Plans
- Where possible, include an assessment of progress against the National Priority Actions as relevant to the SE Network.

The audit recognised that the SE Management Plan is the first Management Plan for any marine park network within the Australia-wide marine park estate. It also recognised that it takes time to generate information and evidence that could inform decision-making, including the ability to establish baselines and see evidence of changing condition.

The broad theme of adaptive management is evident through the early lessons emerging from the implementation of this Plan being incorporated into the development and finalisation of the 2018 Plans.[223] This in turn has highlighted the need to update certain aspects of the Strategies guiding the management of the SE Network in the next Plan.

The following report provides the findings and recommendations of this limited assurance review.

Basis of conclusion

This review has been conducted in accordance with *ASAE 3000 Assurance Engagements Other than Audits and Reviews of Historical Financial Information Standards* as a direct, limited assurance, engagement.[224]

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

A direct engagement is where the assurance practitioner measures or evaluates the underlying subject matter against the applicable criteria. In this instance, the resulting subject matter information is presented as part of the assurance report.

I believe the evidence I have obtained is sufficient and appropriate to provide a basis for my conclusion.

Management's responsibility

As a declared Commonwealth reserve, the SE Network is under the responsibility of the Director of National Parks under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The SE Management Plan is the legal underpinning of the reserve and provides the direction and intent of management action in accordance with the EPBC Act. In preparation for the development of the next management plan, the SE Management Plan requires that an evaluation and technical audit be undertaken. This report provides the results of that technical audit.

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[223] 2018 Marine Management Plans refers to the five management plans promulgated on 1 July 2018 relating to: Coral Sea Marine Park, North Marine Parks Network, North-west Marine Parks Network, South-west Marine Parks Network and Temperate East Marine Parks Network. Each of these plans share the same seven management programs and national actions. The implementation of the SE Management Plan has been influenced by the terminology and design of these later plans.

[224] Under this Standard, each assurance engagement is classified on two dimensions: either a reasonable assurance or a limited assurance engagement; and either an attestation engagement or a direct engagement. Across the range of all limited assurance engagements, what is meaningful assurance (as required by the Standard) can vary from just above assurance that is likely to enhance the intended users' confidence about the subject matter information to a degree that is clearly more than inconsequential to just below reasonable assurance. What is meaningful in a particular engagement represents a judgement within that range that depends on the engagement circumstances, including the information needs of intended users as a group, the criteria, and the underlying subject matter of the engagement. Noting the desire for having a consistent approach for auditing management plans across all national parks going forward, the technical audit is best classified as a limited assurance engagement.

Responsibility of the auditor

My responsibility is to express a limited audit assurance conclusion regarding PA's implementation progress against the SE Management Plan.

ASAE 3000 requires that I plan and perform my procedures to obtain limited assurance on this progress, as evaluated against the criteria. I have conducted my limited assurance engagement by making such enquiries and performing such procedures I considered reasonable in the circumstances. The procedures selected are based on my professional judgement and are outlined in the report.

The audit approach considered the SE Management Plan and available documentation to support an independent assessment of progress. This was not based on a documented management representation on implementation progress. Rather, it drew on additional implementation plans and associated performance tracking against those plans developed by PA. The audit procedures built on these implementation plans and performance tracking to verify accuracy and completeness, and to determine the completion status of each prescribed management action and associated outcomes. The assessment criteria and layout of findings in the report is consistent with PA's policy and framework for undertaking an audit of a management plan, though tailored for the marine park environment. The criteria used to measure the completion status and subsequent performance against actions is detailed in the report.

Use of this assurance report

This report has been prepared for the Director of National Parks for the purpose of meeting the requirements of Strategy 7 Action 32 of the SE Management Plan and may not be suitable for another purpose. I disclaim any assumption of responsibility for any reliance on this report, or any person other than the Director of National Parks, or for any other purpose than that for which it was prepared.

Independence and quality control

In addition to aligning the audit with the Standard on Assurance Engagements, in undertaking this assurance review I have complied with the independence and other relevant ethical requirements relating to assurance engagements, and applied Auditing Standard *ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements*.

Sustineo Pty Ltd

Nicola Thatcher

Nicola Thatcher
Executive Director, 24 January 2022

THE TECHNICAL AUDIT APPROACH

A technical audit approach was used to underpin the assessment of progress against the current SE Management Plan. The technical audit element forms part of the evaluation of the five themes, but particularly for the *Direct management actions* and *Enabling management actions* themes. The technical audit approach has also been conducted against the actions and outcomes listed in the current SE Management Plan. The audit methodology is based on PA's internal audit framework for technical audits of management plans, which has been in place since 2012. This methodology was updated to reflect the new developments and assessment classifications contained in the draft PA Management Effectiveness Framework, as well as being tailored to the language used in the SE Management Plan.

Procedures

The conclusions for this assurance engagement were made based on the performance of various audit procedures and making enquiries of SE Network management and staff. Concurrent to evaluation activities aligned to the five overarching evaluation themes, the audit procedures involved examination and assessment of policies, procedures and supporting documentation relevant to the implementation of the prescribed management actions and outcomes for the SE Network, including:

- examination and assessment of the governance and oversight of the SE Network
- analysis of SE Network implementation plans and overarching program management documentation associated with the delivery of the Plan
- discussions with relevant senior management responsible for the delivery of the Plan, including, as necessary, officers involved in the delivery of prescribed actions
- oral advice and responses to enquiries provided by staff of PA with responsibilities for the oversight and administration of the SE Network.

Sustineo employed a collaborative approach to the conduct of the evaluation and audit component. Recognising the current operating constraints for social distancing and community isolation rulings associated with the COVID-19 outbreak across Australia, discussions with key stakeholders occurred via telephone or virtual engagement. This verbal engagement provided a deeper understanding and insight into the challenges being faced in the management and compliance against the management actions desired outcomes as prescribed in the Plan.

Auditing Framework

The technical audit component of the evaluation has been conducted in accordance with *ASAE 3000 Assurance Engagements Other than Audits and Reviews of Historical Financial Information Standards* (ASAE 3000). Under this Standard on Assurance Engagements, each assurance engagement is classified on two dimensions: either a reasonable assurance or a limited assurance engagement; and either an attestation engagement or a direct engagement. This section and the following on technical audit criteria outlines the terms of the audit engagement as required under paragraph 27 of ASAE 3000.

The assessment of the status of the SE Management Plan prescribed actions and outcomes under the seven strategies as proposed under the *Direct management actions* and *Enabling management actions* themes have been undertaken in a manner that enables a 'limited assurance' opinion to be expressed on progress in accordance with ASAE 3000. This detailed assessment forms an important

basis in responding to the broader evaluation questions, and associated recommendation of options for improving management of the SE Network. This auditing standard is not applicable to the assessment of the *Values, Pressures and Drivers* and *Benefits* themes.

Sustineo's management systems are certified against the ISO9001 Quality Management Standard. The quality of Sustineo's service delivery is achieved through clear and comprehensive job specification, deliverable or product descriptions, and performance indicators appropriate to the assignment. Consistent with *ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements,* an independent Assurance Quality Reviewer was also engaged for the technical audit component of the evaluation, with specific focus on the assessment of the status of the SE Management Plan actions and outcomes.

Technical Audit Criteria

As noted above, the assessment criteria and layout of findings in the technical audit component of the evaluation seeks to be consistent with PA's policy and framework for undertaking an audit of a management plan. The status of each prescribed action and anticipated outcome under each of the seven strategies as identified in the SE Management Plan has been assessed using the status rating as specified in Table 2. The status categories and thresholds have been updated to mirror those anticipated in PA's draft Management Effectiveness Framework. Two additional status categories were identified as necessary for this audit as also shown in the table.

Table 2: Definition and thresholds for each status

Status	Threshold
Good	Management actions have been largely delivered as planned, with no significant gaps, or Management is efficient and effective due to adequate enabling services being in place.
Good with some concerns	Most management actions have been delivered as planned but some important actions were not delivered, or Some enabling management services are not adequate, leading to decreased efficiency or effectiveness.
Significant concerns	Some aspects of management have been adequately delivered, but many important actions have not been fully delivered, or Some enabling management services are adequate, yet many are not, leading to substantially reduced efficiency or effectiveness.
Poor	Failure to deliver most planned management activities, or Many enabling management services are not adequate, leading to greatly reduced efficiency or effectiveness.
No action yet required	Management actions have not needed to be drawn upon and there is no activity to assess.
No longer relevant to MRN	Management actions are not able to be implemented in the context of the SE Network as prescribed in the Plan

Ordinarily, based on assessment of relevant audit evidence, the trend of the status of each prescribed action is assessed using the trend rating scale as shown in Table 3.

Table 3: Definition and thresholds for each trend

Trend	Threshold
Trend stable ⇔	There has been no change in the status of this matter over the life of this plan.
Trend getting worse ⇩	There has been a negative trend in the status of this matter over the life of this plan.
Trend getting better ⇧	There has been a positive trend in the status of the matter.

As the current SE Management Plan is the first for the SE Network, and baseline information is minimal prior to the plan, a detailed assessment of trends was not always possible.

Following the assessment of the status and trend (where possible) of each prescribed action and outcome of the plan, the audit team's analysis has been summarised using the format outlined in Table 4. In addition to tailoring this table to match the SE Management Plan language, adjustments to this layout have been made to reduce duplication while enabling clear understanding of the audit findings. This is a succinct statement on progress as the broader achievement against these strategies has been addressed in response to the evaluation questions.

Table 4: Strategy summary statement layout

Strategy heading: *This is the objective or aim for that strategy from the management plan*		
Description and intent	**Status/trend**	**Rationale**
Summary statement of the strategy	*Assign the cell a colour based on the assessment of status, and an arrow based on the trend assessment where this has been able to be determined*	*Briefly describe the basis for assigning the status and trend*

In addition to the summary of achievement against each strategy, a breakdown of individual assessment results for that strategy has been presented as outlined in Table 5.

Table 5: Summary of actions and outcomes assessment

	Completed	**Ongoing**	**Partially completed or implemented**	**Implemented with modifications**	**Not commenced**
Actions					
Outcomes					

In addition to these summary results, a detailed assessment of each action and outcome was undertaken and presented in accordance with Table 6. A similar assessment of progress in relation to the SE Network of the National Priority Actions (NPA's) as articulated in the 2018 Marine Park Management Plans was also undertaken as part of the evaluation, though as these are national actions in nature the health status column is excluded.

Table 6: Detailed audit assessment of each prescribed action and outcome

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions / Outcomes				
	Detailed wording of action or outcome			

Overall Audit Findings

This technical audit evaluated Parks Australia's implementation progress against the SE Management Plan. Significant progress has been made on the implementation of the SE Management Plan, as evaluated against the criteria. The SE Management Plan had seven overarching strategies with 32 actions and 20 outcomes. Of the 32 actions, 9.4% (3) have been evaluated as completed with no further action, 50.0% (16) as implemented but ongoing, 15.6% (5) as partially completed or implemented, 12.5% (4) as implemented with modification, and 12.5% (4) as not having been commenced. For the 20 outcomes, 0.0% (0) have been evaluated as completed with no further action, 70.0% (14) as implemented but ongoing, 25.0% (5) as partially completed or implemented, nil (0) as implemented with modification, and 5.0% (1) as not having been commenced. See Table 7 and Table 8.

The overall result shows that considerable management action has commenced, and the seven Strategies of the Plan have guided implementation activities. Many actions undertaken by PA are consistent with but not articulated in the current Management Plan but support the achievement of the prescribed outcomes. Noting this is the first Plan for any marine network in Australia, many actions and outcomes are assessed as implemented but ongoing as more information becomes known about the SE Network and some actions will always be ongoing. Audit findings noted the need to adjust and refine the wording of prescribed management actions and outcomes in the next Plan to better align with the specific needs of the SE Network as well as the more recent introduction of nationally-consistent terminology.

Table 7: Summary completion assessment of all prescribed management actions

	Completed	Ongoing	Partially completed or implemented	Implemented with modifications	Not commenced	Total
Strategy 1	0	2	2	0	0	**4**
Strategy 2	1	2	0	0	3	**6**
Strategy 3	0	4	0	0	0	**4**
Strategy 4	1	5	2	0	0	**8**
Strategy 5	0	1	1	1	0	**3**
Strategy 6	0	2	0	1	1	**4**
Strategy 7	1	0	0	2	0	**3**
Total	**3**	**16**	**5**	**4**	**4**	**32**

Table 8: Summary completion assessment of all prescribed management outcomes

	Completed	Ongoing	Partially completed or implemented	Implemented with modifications	Not commenced	Total
Strategy 1	0	4	0	0	0	**4**
Strategy 2	0	2	0	0	0	**2**
Strategy 3	0	1	1	0	0	**2**
Strategy 4	0	2	1	0	0	**3**
Strategy 5	0	2	0	0	0	**2**
Strategy 6	0	0	2	0	1	**3**
Strategy 7	0	3	1	0	0	**4**
Total	**0**	**14**	**5**	**0**	**1**	**20**

For an action to be assessed as completed, it needed to be standalone and completed at the time of audit. For example, Action 5: *Establish in consultation with relevant stakeholders, efficient, effective and transparent processes for assessment, decision-making and authorisation of activities, and implement within the marine reserves network* and Action 18: *Implement a risk-based annual compliance plan*.

Most of the prescribed actions were assessed as ongoing. Some of these actions continue to apply over the lifetime of the plan with no end or completion date or would only apply if certain conditions are met. For example, Action 29: *Comply with the requirements of the Native Title Act 1993* and Action 21: *Investigate and monitor suspected non-compliant activity and, where appropriate, take enforcement action*. Additionally, many actions use terms such as 'collaborate', 'encourage' and 'maintain' and as such, by definition, cannot be assessed as completed. For example, Action 13: *Maintain effective liaison and partnerships with relevant environmental incident response agencies and organisations*. Further, some actions use dual terms such as 'develop and implement' or 'specify and monitor'. These actions are assessed as ongoing where they have completed the first implementation part of the action but require ongoing maintenance that inherently cannot be assessed as complete. For example, Action 23: *Develop and implement a communication and education plan that increases community understanding of the importance of the marine reserves network and meets reserve-specific needs for communication about the values protected and management arrangements and requirements*.

For those actions and outcomes where additional reasons were relevant to the assessment, particularly where progress had been delayed, only partially completed/ implemented, or completed/ implemented with modification, nine standardised reasons were identified:

- Sequencing issues
- Reduced capacity
- Low knowledge base
- Lack of resources
- Reduced priority
- Reliant on third parties
- Provision has not needed to be drawn on

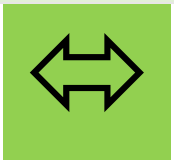
- Now coordinated at the national level
- Wording of action not able to be implemented (for SE network) / Wording of outcome not able to be assessed.

Strategy 6 contained some prescribed actions not well aligned with the context of the SE Network. As a result, the technical audit ratings of achievements against actions under Strategy 6 were largely poor—not because of lack of effort or achievement in relation to Indigenous engagement and acknowledgement of cultural values; but because the wording of some prescribed actions were inappropriate for the SE Network context. The flagship achievement in relation to building understanding and contributing to conservation of cultural values in the SE Network has been the Explore Sea Country Project Parks Australia led in collaboration with traditional owners, Tasmania Parks and Wildlife Service and the Tasmanian Department of Education. The prioritisation of this project in recent years has resulted in a successful pilot with outcomes that are both practical and uniquely valuable.

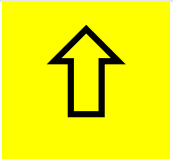
Summary of Technical Audit Findings by Strategy

This section provides the overall technical audit assessment of each strategy.

Strategy 1: Improve knowledge and understanding of the conservation values of the Marine Reserves Network and of the pressures on those values

Strategy	Status/trend	Rationale
Improving knowledge and understanding of the conservation values of the Marine Reserves Network and the pressures on those values will increase the capacity to meet the objectives of the SE Management Plan. Establishing baseline data for marine reserves and setting up strategic scientific monitoring programs that build on past and current research and utilise Australia's growing ocean observation capabilities are a key focus of this SE Management Plan.		Parks Australia has been involved in at least 18 projects focused on research and monitoring of conservation values and pressures. As least five of these were national-level projects carried out by the National Environmental Science Program (NESP) that contribute to, or influence, SE Network specific work. The projects undertaken in the SE Network included commissioned research voyages, literature reviews, analysis of existing data, surveys, and database development. As a result, the knowledge and understanding of conservation values in the network has increased. Many voyages included extensive mapping to build baseline knowledge of the parks across the SE Network. Through the NESP Marine Biodiversity Hub, data on some pressures has been compiled nationally, including for the SE Network. In 2020, the Hub also undertook a cumulative impact assessment for the SE Network. There is a strong relationship with the Marine Biodiversity Hub. They are clearly a key partner in conducting research and are involved in identifying the priority research areas and values, as well as in the development of the new AMP management effectiveness system, SE Science Plan, and other management resources as envisaged under this Strategy. Relationships with many other research and science organisations are maintained, including with CSIRO, Geoscience Australia, IMAS, UTAS, and Deakin University. These relationships have been critical in delivering on strategic information needs and informing research and monitoring programs.

Strategy 2: Minimise impacts of activities through effective assessment of proposals, decision-making and management of reserve-specific issues

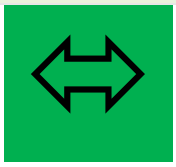
Strategy	Status/trend	Rationale
The primary purpose of the SE network is to protect and maintain biological diversity, while also allowing for the sustainable use of natural resources in some areas. This is reflected in the objectives of this Plan. As described in this Plan a range of activities		Progress against this management strategy demonstrates mixed progress on actions contributing to effective assessment and authorisations procedures. Of the six actions, three have not been commenced, two are ongoing, and one is completed. This progress reflects the fact that several actions did not have any events of relevance to commence action. This in part also reflects that certain actions have outdated terminology and lack relevance to the operations in the SE Network.

Strategy	Status/trend	Rationale
are carried on within and around the marine reserves of the SE network. Ensuring that these do not impact on the values of the reserves while also reducing unnecessary administrative burdens on marine reserve management resources and stakeholders, is a key focus of this Plan.		There is a need to further refine and reduce SE Network management actions for the next management plan to improve their relevance to the Assessments and Authorisations Team in Canberra who work across multiple networks that have more recent and standardised management plans. While the authorisations process has been streamlined, there is still a requirement to improve the useability of the authorisations portal. Both outcomes are ongoing, and overall progress towards them is mixed. Some concerns remain around the need to further streamline and automate processes for monitoring the obligations attached to licenses and permits, particularly around provision of data to improve flows of information to the DNP compliance team.

Strategy 3: Protect the conservation values of the Marine Reserves Network through management of environmental incidents

Strategy	Status/trend	Rationale
The objectives of the SE Management Plan provide for the protection and conservation of biodiversity and other natural and cultural values. An important part of the management arrangements is to protect these values from detrimental impacts resulting from unexpected or unforeseen incidents.		Progress against this management strategy demonstrates significant actions to help manage environmental incidents, a key part of which has been the development of the Critical Incident Action Plan. This Plan was a key planning document for the SE that was drafted but never finalised. It was subsequently superseded by a national Environmental Incident and Emergency Response Strategy when the remaining AMP Plans came into effect. Of the four actions under this strategy, most have been largely delivered as planned, with no significant gaps. The exception is around collaboration with responsible agencies and assisting with responding to environmental incidents for which there are significant concerns with progress made. However, this action is now coordinated at the national level. All four actions are ongoing, as they refer to long-term systems, partnerships, and strategies that support the ongoing conservation of the SEMPA network. Achievement of Outcomes is good overall, although some concerns still remain. Further evidence is needed to build up the knowledge base on impacts associated with environmental incidents, including how these are identified and managed. Additionally, the South-East Critical Incident Action Plan is a key planning document for environmental incidents in the Network but remains in a draft form and should be finalised.

Strategy 4: Facilitate compliance with this Management Plan through education and enforcement

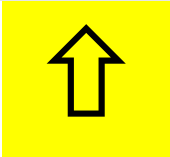
Strategy	Status/trend	Rationale
People, industries, businesses or organisations that use the marine reserves network are required to comply with this SE Management Plan. A well-developed education and risk-based enforcement program tailored to people and industries that use marine reserves is a critical component for effectively managing marine reserves. Effective enforcement is supported through risk-based planning, incorporating targeted monitoring and surveillance (e.g. aerial and vessel based), and the collection of intelligence from other sources.		Progress against this management strategy is underpinned by ongoing compliance risk assessments which inform a broader risk-based compliance plan, along with the establishment of the VMS alert system which has been significant for improving surveillance of illegal fishing activities in the SE Network. Of the eight actions under this strategy, six have been largely delivered as planned, with no significant gaps; one action has been delivered as planned but some important components of these actions were not assessable; and, one action has been partially delivered with some significant concerns. Of these actions, six were ongoing, referring to the continuous monitoring and reporting of compliance activities, and two were partially completed, referring to the conducting of consultations and implementing of reporting systems. To achieve all three management outcomes, further attention is needed for user-based reporting of non-compliant activity. Currently, there is limited evidence to suggest that other users of the SE network play much of a role in reporting non-compliant activities, and it is not clear what steps the DNP has taken to assess the effectiveness of this reporting system, including the effectiveness of support provided to those trying to report non-compliant activities. Assessing the current understanding of Marine Network Users to comply with the Management Plan has also been affected by reduced capacity and a lack of resources.

Strategy 5: Promote community understanding of, and stakeholder participation in, the management of the Marine Reserves Network

Strategy	Status/trend	Rationale
Commonwealth marine reserves protect and maintain Australia's unique marine biodiversity for the benefit and enjoyment of current and future generations. It is important that the Australian community understands the importance of the marine reserves network and why it has been established. Marine reserve users can significantly contribute to management of the marine reserves network through sharing their knowledge and		The Communication and Education Strategy was finalised in 2016. It clearly aligns with the SE Management Plan in its aims and objectives, but has not been updated since as intended, to align with the Consolidation Phase, and lacks substance in defining performance indicators and timelines. Hence, it cannot be said for sure that the Strategy has increased community understanding of the importance of the SE marine reserves network. Parks Australia is leveraging partnerships well to aid communications resources getting out into various communities and in front of various key audiences, including through SEMPAC. Park signage has been updated or installed in many locations, mainly in Tasmania. Since November 2019, AMP social media profiles have featured some SE content – arguably one of the best and most important platforms for reaching the general public, one of the key audiences identified in the

Strategy	Status/trend	Rationale
understanding of the marine environment and human use of the marine environment. Stakeholder participation is recognised as an important element of network management, particularly with respect to the delivery of actions by the Director and the review of prescriptions.		Strategy. Although implemented under Strategy 6, the partnership and pilot program with the Tasmanian Department of Education is an effective project for educating students, teachers, and the pilot school communities about the cultural values of Tasmanian sea country.

Strategy 6: Support involvement of Indigenous people in management of Commonwealth Marine Reserves

Strategy	Status/trend	Rationale
Indigenous people from at least 17 distinct Aboriginal language groups have occupied, used and managed coastal land and sea environments in and adjacent to the South-east Marine Region for thousands of years. Their relationship with the Region began when sea levels were much lower, allowing Indigenous people to harvest species and use parts of the Region that are now covered by deeper offshore waters. Indigenous people can contribute to the management of marine reserves through sharing their knowledge and understanding of the marine environment and through participation in the management and sustainable use of the resources of these reserves.		It is clear Parks Australia's understanding of cultural values and approach to Indigenous engagement has developed and improved over the life of the plan. This allowed implementation of projects and activities such as the partnership with the Tasmanian Department of Education and the curriculum pilot that is currently being successfully delivered. This project is a limited but crucial aspect of communicating cultural values and learning from Tasmanian Indigenous communities. Over the course of the project, relationships and trust between Parks Australia and Tasmanian Indigenous communities have developed and continue to strengthen. These connections are invaluable for ongoing collaborations and work in the Indigenous engagement space, such as the future Ancient Land Bridge project. However, in the scheme of the ten-year SE Management Plan, substantive actions in this space have been very limited. Significant work is still to be done to achieve the desired outcomes of this Strategy. Broadly, and particularly before 2019, Indigenous engagement was largely not sought in contextually appropriate ways, partly due to the lack of PA staff experienced in this space, and the actions under this strategy not being appropriately defined or thought through. The inclusion of this Strategy as a discreet whole has ensured concerted effort was made over time to find appropriate ways of engaging with Indigenous communities in the management of the SE Network. The projects since 2019 aptly link Strategies 5 and 6, and show great potential and momentum, but it is too early to tell what the impacts and outcomes will be.

Strategy 7: Evaluate and report on the effectiveness of this Management Plan through monitoring and review

Strategy	Status/trend	Rationale
The primary focus of this strategy is on evaluating the effectiveness of management arrangements outlined in this SE Management Plan in meeting the management objectives for the marine reserves network. Evaluations of effectiveness provide an important mechanism to identify refinements and opportunities for improvement to the SE Management Plan and its implementation.		In line with the SE Management Plan's requirements for monitoring and reporting on progress, implementation plans for each phase of the SE Management Plan have been designed and executed to date, with annual reports of progress against these plans compiled, discussed with SEMPAC, and reported up to the DNP. Management activities appear to be adaptive and, whenever possible, based on new information and knowledge – particularly regarding research priorities from SEMPAC and the science community. Sustineo has been engaged to undertake a limited assurance audit and independent evaluation of the implementation of the SE Management Plan. The resulting report will consider: an assessment of the existing measures to protect the SE Network; progress of the strategies and actions towards achieving the stated outcomes; and options for improving management of the SE Network.

Detailed Audit Assessment of Prescribed Actions and Outcomes

This section provides the detailed audit assessment of each prescribed action and outcome, by Strategy.

Strategy 1

Improve knowledge and understanding of the conservation values of the Marine Reserves Network and of the pressures on those values.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A1	As part of a national-scale program for Commonwealth marine reserves, develop and implement a South-east Commonwealth Marine Reserves Network Research and Monitoring strategy that contribute to increased understanding of the values of the reserves and provides for ongoing reporting of their condition.	Partially completed or implemented	Significant concern	Sequencing issues Reduced capacity Low knowledge base *See 'Management of monitoring priorities for values and pressures' under the 'Direct management actions' theme in Section 3 of the Evaluation Report*
A2	Develop and implement a framework for the long term scientific monitoring of changes in key conservation values protected by the Commonwealth marine reserves and on the pressures on those values.	Partially completed or implemented	Good with some concerns	Lack of resources Reduced priority
A3	Adopt standards and protocols for managing biophysical and ecological data collected within Commonwealth Marine Reserves.	Ongoing	Significant concern	Reduced priority
A4	Collaborate, including through developing partnerships, with national research facilities, science and academic institutions and, as appropriate, marine reserve users, to deliver on strategic information needs and to inform research programs and government and industry investment in marine research.	Ongoing	Good	

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Outcomes				
	Understanding and knowledge of those conservation values identified as a priority for management improve over the life of the Plan.	Ongoing	Good with some concerns	Lack of resources Reliant on third parties
	Understanding of the pressures affecting key conservation values, improves over the life of this Plan and management actions are adapted to take account of the latest available information.	Ongoing	Good with some concerns	Lack of resources Low knowledge base
	Data arising from monitoring and research conducted within the South-east marine reserves and the findings of the research can be easily accessed and shared.	Ongoing	Significant concern	Reduced priority Reliant on third parties
	Research and monitoring needs are met in partnership with relevant research organisations and marine reserves users.	Ongoing	Good with some concerns	

Strategy 2

Minimise impacts of activities through effective assessment of proposals, decision-making and management of reserve-specific issues.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A5	Establish in consultation with relevant stakeholders, efficient, effective and transparent processes for assessment, decision-making and authorisation of activities, and implement within the marine reserves network. *Note: For example, the Director will consult with the commercial fishing industry and other relevant stakeholders to establish the process for assessment of fishing methods and gear types.*	Completed	Good with some concerns	

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
A6	When the interests of a person or group are likely to be affected by a decision under this Management Plan, the Director will: a) as far as practicable consult them in a timely and appropriate way; b) provide an opportunity to comment on the proposed decision and associated actions; c) take any comments into account; d) give reasonable notice before decisions are taken or implemented (except in cases of emergency); and e) provide reasons for decisions.	Not commenced	Significant concern	Provision has not needed to be drawn on. However, a system needed to be put in place to be able to proactively respond.
A7	Comply with Division 14.3 of the EPBC Regulations in relation to reconsideration of decisions about permits. *Note: Division 14.3 of the Regulations provides that, subject to the Administrative Appeals Tribunal Act 1975, a person who has requested a reconsideration may apply to the Administrative Appeals Tribunal for review of the reconsideration.*	Not commenced	No action yet required.	Provision has not needed to be drawn on. Prior action not needed.
A8	Reconsider a decision about a class approval when requested by a person whose interests are affected by the decision. A request for reconsideration must be made and considered in the same manner as provided by Divison14.3 of the EPBC Regulations. Subject to the Administrative Appeals Tribunal Act 1975, a person who has requested a reconsideration may apply to the Administrative Appeals Tribunal for review of the reconsideration.	Not commenced	No action yet required.	Provision has not needed to be drawn on. Prior action not needed.
A9	Consider further use of class approvals where there is a sound case for effectively assessing and efficiently approving users that carry out a class of activities in a uniform way.	Ongoing	Good	
A10	Identify reserve specific issues and develop, implement and evaluate management responses where appropriate.	Ongoing	Significant concern	Low knowledge base

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Outcomes				
	Potential impacts of allowable activities on the conservation values of the marine reserves network are identified and avoided or mitigated by appropriate assessment and authorisation processes.	Ongoing	Good with some concerns	
	Authorisation processes are streamlined to improve efficiency and effectiveness, and avoid duplication.	Ongoing	Significant concern	*See 'Authorisations and Enforcement' under the 'Direct management actions' theme in Section 3 of the Evaluation report.*

Strategy 3

Protect the conservation values of the Marine Reserves Network through management of environmental incidents.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A11	Establish systems for timely reporting of, and assisting with responses to, environmental incidents.	Ongoing	Good with some concerns	
A12	Collaborate with responsible agencies and assist with responding to environmental incidents that threaten the values of the marine reserves network.	Ongoing	Significant concern	Now coordinated at the national level
A13	Maintain effective liaison and partnerships with relevant environmental incident response agencies and organisations.	Ongoing	Good	
A14	Identify and assess potential incidents that may threaten conservation values of the Reserves and implement if feasible approaches to reduce the likelihood or consequence of such incidents.	Ongoing	Good	

Outcomes				
	Impacts associated with environmental incidents are identified and managed appropriately.	Ongoing	Good with some concerns	Low knowledge base
	Systems for timely reporting of and collaboration on responses to environmental incidents are effective.	Partially completed or implemented	Good with some concerns	Provision has not needed to be drawn on

Strategy 4

Facilitate compliance with this Management Plan through education and enforcement.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A15	Implement reliable methods for monitoring compliance with this Plan.	Ongoing	Good	
A16	Develop, maintain and disseminate appropriate information to assist users of the marine reserves network to comply with the provisions of this Plan.	Ongoing	Good	
A17	Consult with users of the network to identify opportunities to improve the effectiveness and efficiency of compliance measures.	Partially completed or implemented	Good	Wording of action not able to be implemented (for SE network)
A18	Implement a risk-based annual compliance plan.	Completed	Good	
A19	Establish a reporting system that supports users and visitors of the marine reserves network to report suspected non-compliant activity.	Partially completed or implemented	Good with some concerns	Reduced priority
A20	Build effective working partnerships and agreements with Commonwealth and state government agencies for the delivery of compliance services.	Ongoing	Good	
A21	Investigate and monitor suspected non-compliant activity and, where appropriate, take enforcement action.	Ongoing	Good	

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
A22	Support initiatives and programs which promote best practice standards that guide use, and minimise impacts on the marine environment.	Ongoing	Good with some concerns	
Outcomes				
	Marine Reserves Network users have a clear understanding of what is required to comply with this Plan.	Partially completed or implemented	Good with some concerns	Reduced capacity Lack of resources
	Marine reserves network users contribute to the management of the network through the reporting of suspected non-compliant activity.	Ongoing	Good with some concerns	
	Activities within the marine reserves network are undertaken in a manner that is consistent with the management arrangements as specified in this Plan.	Ongoing	Good	

Strategy 5

Promote community understanding of, and stakeholder participation in, the management of the Marine Reserves Network.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A23	Develop and implement a communication and education plan that increases community understanding of the importance of the marine reserves network and meets reserve-specific needs for communication about the values protected and management arrangements and requirements.	Ongoing	Good with some concerns	Lack of resources Sequencing issue (AMP CEA Strategy)
A24	Maintain effective working relationships with user groups to facilitate the exchange of knowledge, understanding and participation in the management of the marine reserves network.	Partially completed or implemented	Good with some concerns	Lack of resources Reduced priority

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
A25	Within the first 12 months of the Plan's operation, establish consultative structures (e.g. committees) to guide and participate in the management of the marine reserves network.	Implemented with modifications	Good	
Outcomes				
	Stakeholders and the community understand the importance of the marine reserves network, the values it protects and management arrangements.	Ongoing	Significant concern	Lack of resources Reduced priority Wording of outcome not able to be assessed
	Stakeholders effectively participate in the management of the marine reserves network.	Ongoing	Good with some concerns	Lack of resources

Strategy 6

Support involvement of Indigenous people in management of Commonwealth Marine Reserves

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A26	Drawing on the significant body of knowledge built as part of sea country planning and similar initiatives across Australia, and in consultation with relevant representative organisations, consolidate and communicate information about cultural values protected in the South-east Commonwealth Marine Reserves Network.	Implemented with modifications	Significant concern	Lack of resources Reduced capacity *See 'Indigenous Cultural Values' under the 'Condition and trend of natural, cultural and heritage values' theme in Section 4 of the Evaluation report*

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
A27	Identify, and where feasible support, opportunities for Indigenous people to engage in the management of sea country in Commonwealth marine reserves, for example through the delivery of critical management services, such as monitoring surveillance, compliance and research.	Not commenced	No longer relevant to Marine Reserve Network	Wording of action not able to be implemented (for SE network)
A28	Build effective partnerships with Indigenous communities and organisations that have an interest in the marine reserves network.	Ongoing	Significant concern	Reduced capacity
A29	Comply with the requirements of the Native Title Act 1993.	Ongoing	No action yet required.	Provision has not needed to be drawn on
Outcomes				
	Indigenous people and organisations are partners in the management of sea country within Commonwealth marine reserves.	Not commenced	Poor	Lack of resources Reduced priority Wording of outcome not able to be assessed
	Management activities within Commonwealth marine reserves acknowledge and respect existing Indigenous governance arrangements, activities and cultural needs.	Partially completed or implemented	Significant concern	Lack of resources Reduced capacity
	Indigenous customs, practices and knowledge inform relevant management planning and activities.	Partially completed or implemented	Significant concern	Lack of resources Reduced capacity

Strategy 7

Evaluate and report on the effectiveness of this Management Plan through monitoring and review.

Action No.	Action or outcome in Management Plan	Completion status	Health status	Reasons if not implemented or which failed to achieve desired direction of strategy
Actions				
A30	Within the first twelve months of the Plan's operation, design and initiate a program to measure and monitor progress on Actions and outcomes.	Implemented with modifications	Good with some concerns	
A31	Report annually on the South-east Commonwealth Marine Reserves Network in the Director of National Parks annual report.	Implemented with modifications	Good with some concerns	Wording of action not able to be implemented
A32	Evaluate and report on the implementation of the Management Plan before its expiry. The report will consider: a. An assessment of the existing measures to protect the South-east Commonwealth Marine Reserves Network; b. Progress of the strategies and actions towards achieving the stated outcomes; c. options for improving management of the marine reserves network.	Completed	Good	
Outcomes				
	Management is improved on the basis of new information and knowledge.	Ongoing	Good with some concerns	
	Improved understanding of the conservation values, and the pressures on such values, of the marine reserves network.	Ongoing	Good with some concerns	Lack of resources Reduced priority Low knowledge base
	The establishment of a program which provides the foundation for the long-term monitoring, evaluation and reporting on the marine reserves network.	Partially completed or implemented	Good with some concerns	Lack of resources
	Effective reporting on reserve management to inform stakeholders and meet statutory requirements.	Ongoing	Significant concern	Lack of resources Reliant on third parties Low knowledge base

National Priority Actions Technical Audit Findings

This last section provides an assessment of progress against the National Priority Actions as articulated in the 2018 Marine Management Plans.

Summary of prescribed National Priority Actions assessment

	Completed	Ongoing	Partially completed or implemented	Implemented with modifications	Not commenced
Marine science program		4	2		
Assessments and authorisations program		2	1		2
Park protection and management program	2	2	1		
Compliance program		4			
Communication, education and awareness program	1	2	2		
Indigenous engagement program			3		

Detailed Audit Assessment of National Priority Actions

National Priority Action	Completion status	Reasons if not implemented or which failed to achieve desired direction of strategy
Marine science program		
Establish ecological, social and economic baselines to support evidence-based decision-making and adaptive management.	Partially completed or implemented	Lack of resources

National Priority Action	Completion status	Reasons if not implemented or which failed to achieve desired direction of strategy
Develop an Australian Marine Parks science strategy to prioritise and encourage research and monitoring of park values, pressures and management effectiveness, and foster science communication and knowledge uptake.	Partially completed or implemented	Lack of resources
Encourage and facilitate knowledge brokering to support collaboration and partnerships with the science community, private enterprise, citizen science organisations and other Commonwealth, state and territory agencies.	Ongoing	Lack of resources Reduced priority
Establish an authorisation system for scientific research and monitoring by third parties, and encourage data to be made publicly available through the appropriate information portals such as the Australian Ocean Data Network.	Ongoing	Lack of resources Reduced priority
Collaborate with the science community (including through the National Marine Science Committee and the National Environmental Science Program) and other marine park users to assist in improving the understanding of marine park values, pressures and management effectiveness.	Ongoing	
Collaborate with the science community and other government agencies to increase the use of innovative and effective technology and systems including sensor technology.	Ongoing	Lack of resources Reduced priority
Assessments and authorisations program		
Develop and apply best-practice approaches to regulation and decision-making in the authorisation of activities within marine parks. This includes developing policy to ensure assessment and authorisation requirements are clearly articulated and that decision making is robust, consistently applied, and transparent to all marine park users.	Ongoing	
Collaborate with industry to investigate innovative technologies and systems (including vessel monitoring systems) that can assist businesses and individuals to comply with regulatory requirements.	Not commenced	Not deemed necessary (at this point in time)
Develop an effective and efficient process to assess new technologies and gear types to allow for the use of new equipment during the life of this plan if appropriate.	Not commenced	Not deemed necessary (at this point in time)
Develop a guarantee of service for the regulated community that includes a commitment to work with key marine park users and interest groups whose interests are likely to be affected by regulatory decisions.	Partially completed or implemented	Lack of resources Reduced priority

National Priority Action	Completion status	Reasons if not implemented or which failed to achieve desired direction of strategy
Develop a customer focused online authorisation system for marine park users that includes publishing authorisations issued by Parks Australia on its website.	Ongoing	
Park protection and management program		
Apply a risk-based assessment process to prioritise park protection and management actions.	Partially completed or implemented	Wording of action not able to be implemented (for SE network)
Develop an Australian Marine Parks critical incident strategy in collaboration with the Australian Maritime Safety Authority and other responsible agencies to respond to critical incidents.	Completed	
Develop a mooring and anchoring strategy to protect marine park values and improve visitor experience.	Completed	
Support the removal of marine debris and ghost nets from marine parks through partnerships with Commonwealth, state and territory government agencies and other organisations involved in the management of marine debris.	Ongoing	
Contribute to actions, where appropriate, that support Australia's obligations under international agreements and national environmental law. This includes the World Heritage Convention, Ramsar Convention, recovery plans, wildlife conservation plans and threat abatement plans.	Ongoing	
Compliance program		
Apply a risk-based approach to compliance planning, targeted enforcement and compliance auditing.	Ongoing	
Collaborate with Australian, state and territory government agencies by sharing assets and information.	Ongoing	
Investigate the use of new technologies and warning systems to assist in the detection of potential illegal activities.	Ongoing	
Work with marine park users to promote understanding of the rules for activities and how to comply.	Ongoing	
Communication, education and awareness program		
Develop a marketing and communication strategy for Australian Marine Parks to raise awareness and understanding of marine park values and the contribution marine parks make to enhancing Australia’s wellbeing,	Partially completed or implemented	

National Priority Action	Completion status	Reasons if not implemented or which failed to achieve desired direction of strategy
Develop online information resources to facilitate awareness of marine park values, management arrangements and visitor opportunities.	Ongoing	
Maximise the use of new technologies and partnerships (including with schools, universities, museums and non-government organisations) to inspire people of all ages to become involved in marine park management and protection.	Ongoing	Lack of resources Reduced capacity
Establish network advisory committees to ensure users and interested stakeholders have on-going input to the management of Australian Marine Parks.	Completed	
Develop a customer focussed approach to tracking the aspirations and concerns of stakeholders in relation to marine parks.	Partially completed or implemented	Lack of resources Reduced priority
Indigenous engagement program		
Develop an Australian Marine Parks Indigenous engagement and cultural heritage strategy, to improve understanding of cultural heritage, link management with sea country plans and maximise employment and enterprise opportunities for traditional owners.	Partially completed or implemented	Lack of resources Wording of action not able to be implemented (for SE network)
Develop agreements to support Indigenous ranger programs to deliver management in marine parks.	Partially completed or implemented	Wording of action not able to be implemented (for SE network)
Provide information to Indigenous people about marine park management.	Partially completed or implemented	Lack of resources Reduced capacity

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