Introduction

The South-east Commonwealth Marine Reserves Network was renamed the South-east Marine Parks Network in 2017 along with the other Commonwealth marine reserves managed by the Director of National Parks. The renaming of the individual marine parks and network did not affect or change the South-east Commonwealth Marine Reserves Network Management Plan 2013-2023 which remains its primary legislative instrument, setting out the rule relating to the network.

(Diagram 1 – SE Network)

The *South-east Commonwealth Marine Reserves Network Management Plan 2013-23* (the management plan) has two objectives supported by seven management strategies and a range of actions (listed in Attachment 1 – Implementation Schedule 2013/14 – 2016/17).

The management plan objectives 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.
The management plan strategies to achieve the objectives are:

**Strategy 1**: Improve knowledge and understanding of the conservation values of the marine reserves network and the pressures on those values.

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

**Strategy 3**: Protect the conservation values of the marine reserves network through management of environmental incidents.

**Strategy 4**: Facilitate compliance with the management plan through education and enforcement.

**Strategy 5**: Promote community understanding of, and stakeholder participation in, the management of the marine reserves network.

**Strategy 6**: Support involvement of Indigenous people in management of Commonwealth marine reserves.

**Strategy 7**: Evaluate and report on the effectiveness of the management plan through monitoring and review.

Each of the management plan strategies has a number of activity outputs detailed in the implementation schedule for each phase, these were established to provide guidance for specific project development and ensure alignment with the long term (ten year) outcomes as articulated in the management plan. The connection between the management plan and the implementation schedule is further reinforced as each activity output is also directly referenced to management plan actions which provide suggestions as to how outcomes (long and short term) could be achieved.

**The management phases**

The implementation of the management plan has been 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 management plan** (continuing achievement of longer-term outcomes and preparation for next 10 year management plan)

Through the life of the management plan the implementation schedules should identify priority activities, within each management phase, which will focus on the delivery of the long term outcomes and respond to lessons learned from earlier activities.

**The Status report**

This Status report on the first implementation schedule covers the ‘foundation phase’ (Year 1 - 4) of implementing the 10 year management plan. It is intended to:

- assess the extent to which agreed activities were completed
- provide insights into the effectiveness of those activities in achieving desired four year outcomes where possible
clarify whether or not actions undertaken were consistent with achieving stated four year outcomes and that these were also aligned with the long term 10 year outcomes as detailed in the plan, and

inform the development of the ‘consolidation phase’ (years 5-8) Implementation Schedule.

The requirement for the status report is described in the foundation phase implementation schedule as follows:

“A substantial activity in year 4 will be to review our performance effectiveness based on annual outcomes and draft an implementation schedule to guide our progress against the objectives of the management plan in consolidating our activities in years 5-8 from 2018-2021”.

Consistent with this direction Parks Australia have drafted this status report as a working document for further discussion with the South-east Forum (SE Forum) participants. It uses a monitoring, evaluation, reporting and improvement (MERI) approach in considering progress in delivering seven strategies and associated actions/activities outlined in the management plan and implementation schedule.

The MERI process

This foundation phase status report does not seek to assess the overall effectiveness of the management plan in delivering against its objectives as this will be the focus of a formal future 10 year review. However the outcomes of the progress report will contribute to the future overall review through its assessment of the extent to which agreed activities were completed and will shape the development of the consolidation phase implementation schedule.
Development of the Consolidation Phase (years 5-8) Implementation Schedule

A key element of this status report is the identification of information gaps, actions that need to be undertaken, and changes in activity, scope or timing to achieve long term outcomes. The main purpose of this status report is to inform the development of the next implementation schedule for the SE Network, but it may also result in the transfer of ‘lessons learnt’ for park managers of other Australian Marine Parks networks.

Development of the 5-8 year Implementation Schedule (consolidation phase) will:

- guide the development of priority activities for the consolidation phase; and
- ensure alignment with the 10 year plan outcomes.
South-east Commonwealth Marine Reserves Network Management Plan 2013 - 2023

Strategy 1:

*Improve knowledge and understanding of the conservation values of the marine reserves network and of the pressures on those values.*

End of management plan outcomes (10 years):

3. **Understanding and knowledge of those conservation values identified as a priority for management improvement over the life of the Plan.**

   - Understanding and knowledge of priority conservation values for the South-east Network is improving over time as a result of science delivered through the Marine Biodiversity Hub (MBH) of the National Environmental Science Program (NESP; formerly NERP (National Environmental Research Program)), direct commissions by Parks Australia, independent non-commissioned research and opportunistic data gathering by vessels transiting through the reserves.

   - 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). For further details on projects see foundation phase outcomes and Case Studies 1.1 and 1.2).

   - While our understanding of reserve values is increasing, 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.

4. **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.**

   - During the foundation phase of management there has been some increase in knowledge and understanding of pressures affecting conservation values (see foundational phase outcomes for specific projects) but this remains a significant knowledge gap. Gaining a better understanding of pressures and ecosystem condition/health is necessary to inform an adaptive management approach.

   - 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.

5. **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.**
The NESP MBH is contractually obliged by the Department of Environment and Energy to make its information outputs available to the public. The MBH has two separate mechanisms to provide access to its research outputs. The first is the MBH website (https://www.nespmarine.edu.au/) which provides access to reports, papers and other communications products. The second is the Australian Ocean Data Network (AODN; http://catalogue.aodn.org.au/geonetwork/srv/eng/main.home), which provides access to spatial and non-spatial data including maps, video, images and models.

In May 2017 the Parks Project Board approved a project to develop an Australian Marine Parks Science Atlas, an online science communication tool. Initial discussions have occurred between Parks Australia and the supplier, Australian Institute of Marine Science (AIMS).

6. Research and monitoring needs are met in partnership with relevant research organisations and marine reserves users.

- Parks Australia’s engagement with the scientific research community is continuing to improve through time. Strong relationships exist with the NESP Marine Biodiversity Hub and discussions with researchers about NESP projects have increased in depth each year.

- The South East Forum provides an opportunity for reserve users to provide input into research and monitoring needs.

- A strong partnership with the NESP Marine Biodiversity Hub has been critical for progressing priority research and monitoring in the South-east Network in the foundational phase and will continue to be in the consolidation phase. Over the next four years the new South reserve management team needs to establish and maintain relationships and partnerships with the broader scientific community, including researchers interested in delivering research and monitoring for the subantarctic Macquarie Island Marine Park and social, cultural and heritage values and pressures.

Foundation phase outcomes (4 years):

1. Targeted research and monitoring is in place to understand conservation, cultural and heritage values and pressures, establish ecological baselines and detect changes in them over time to inform management responses.

- In the foundational phase there has been 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). Knowledge gaps remain a significant management challenge. For example, several South-east 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). Although higher resolution mapping has enabled identification of canyons, little is known about their ecological communities. Very little is known about shelf soft sediment ecosystems throughout the South-east Network.

- Establishing effective monitoring programs relies on a detailed understanding of the Australian Marine Park values and pressures on those values. Based on research undertaken since the reserves were declared there is now sufficient information for several values to inform the development of monitoring programs. While there have been some workshops focussed on identifying potential monitoring indicators, formal and systematic monitoring programs and ecological baselines are yet to be established. These would also need to align with the Monitoring Evaluation Reporting and Information (MERI) framework. This will be a focus for the consolidation phase.

- To date 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.

- Clearer articulation of key management questions, needs and priorities is required to assist the scientific community in delivering research and monitoring directly applicable to management.
Reef habitats on the continental shelf are a high priority for management as they are habitats with high biodiversity, and are often subjected to higher extractive human use (such as fishing) and other pressures. When the reserves were declared in 2007 very little was known about the extent or structure of these habitats or the impact of pressures on them but our understanding has improved over the last four years as a result of NERP/NESP MBH projects including:

- The collation and synthesis of existing fine-scale mapping data from a variety of providers including NESP MBH researchers, the Navy, CSIRO, Geoscience Australia, State agencies, and commercial fishers (Monk et al. 2017).
- The collation and synthesis of existing data for reef associated biological assemblages, including sessile marine species, mobile invertebrates and demersal fish (Monk et al. 2017).
- 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 Case Study 1.1 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. See Case Study 1.2 for further details.

Seamounts are also 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. 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 is a research and monitoring focus. Over the last four years there has been further analysis of data collected during previous field surveys conducted by CSIRO in 1997 and 2006. Key findings are:

- Trawling had a dramatic impact on the deep-sea coral communities and there was no consistent and clear signal of recovery in the megabenthos 5-10 years after fishing had ceased, suggesting that recovery is likely to be very prolonged (Clark et al. 2016; Althaus et al. 2010; Williams et al. 2010) and it is unrealistic to expect them to recover within the time spans of typical management plans.
- Seven biotic zones occur on the seamounts: Enallopsammia zone (~700-<1000m); live Solenosmilia reef (1000-<1500m); Dead Solenosmilia reef (1500-<2000m); Anemone/barnacle/coral zone (2000-<2500m); moderate speciose deep rock/rubble zone (2500-3200m); species poor deep rock zone (3200-3900m); deep sand/rubble plain 3900-4000m) (Thresher et al., 2014)
- Ecosystem modelling (Atlantis -Small Pelagic Fish) indicates that fishing small pelagic fish species (e.g. sardine, anchovy, red bait, blue mackerel and jack mackerel) within the Huon Habitat Protection Zone is unlikely to have a discernible or measurable impact on the deepwater benthic community, over a range of fishing activity from low to very high exploitation rates (Bulman and Fulton, 2015)
- A state-of-the-art coupled ocean-atmosphere biogeochemical model predicts that if global CO2 levels continue to rise as predicted under an IPPC 'business as usual' model, a shoaling carbonate saturation horizon could push the deep-water corals to the tops of seamounts, and with no-where else to go, they may simply disappear (Thresher et al, unpublished)
- Orange roughy (Hoplostethus atlanticus) from the Huon and Tasman Fracture seamounts are thought to migrate to winter spawning sites at St Helen’s Hill and St Patricks Head off the Tasmanian NE coast. Positive signs of a population recovery include increased biomass at the spawning site since fishing ceased and large changes in the age structure of the population with younger and smaller fish at the spawning grounds. However, given the age at maturity for this species (30 years) it is likely that these changes represent pre-fishing recruitment entering the fishery (Kloser et al., 2015).
The solitary coral *Desmophyllum dianthus* has considerable gene flow indicating that the seamounts are acting as stepping stones for dispersal. In contrast the matrix-forming *Solenosmilia variabilis* across the same set of seamounts are genetically differentiated and there is limited gene flow and larval dispersal even on relatively small spatial scales indicating that the seamounts act as isolated islands for this species. Different strategies will be required to protect the two species. The Marine Parks may function as a network for *D. dianthus*, but not for *S. variabilis*. There was no evidence that fishing activity had reduced the genetic diversity of either species. (Miller and Gunasekera, 2017).

Submarine canyons can also be areas of high biological productivity and biodiversity and are potentially vulnerable to the effects of fishing. Although common geomorphic features on continental margins, when the reserves were declared the location and structure of canyons was poorly known for the south-east marine region. A NERP project has built on the work of Heap and Harris (2008) to further increase our understanding and knowledge of submarine canyons in the south-east and nationally (Huang et al, 2014; Nichol, 2015).

- Based on updated bathymetry datasets 187 canyons have been identified and mapped in the South-east marine region. 54 of these occur within Australian Marine Parks.
- Of the known 95 shelf incised canyons nation-wide, 50 occur in the South-east marine region. Shelf incised canyons extend onto the continental shelf and typically provide more diverse marine habitats and are more biologically productive than slope confined canyons.
- In order to understand whether, and to what extent, canyons are connected to the deep ocean, to the continental shelf and to other canyons nearby the MBH built a dynamic model of larval dispersal (driven by ocean currents) for the entire Exclusive Economic Zone (EEZ). The degree to which an area contributes to other areas is its source capacity; the degree to which it receives from other areas is its sink capacity. Canyons with high sink capacity are likely to have high resilience due to their strong connectivity with larval sources. Canyons with a high source capacity can boost ecological resilience by exporting larvae to other locations.

As almost nothing is known about life in the abyss (>2000m) gaining a better understanding of values and pressures is a management priority. *In May-June 2017* a month-long voyage aboard CSIRO Marine National Facility research vessel INVESTIGATOR, led by Museums Victoria and supported by the NESP Marine Biodiversity Hub, visited abyssal waters in seven Australian Marie Parks between Tasmania and Queensland including three marine parks in the South-east Network - Freycinet, Flinders and East Gippsland Marine Parks. Large areas of the marine parks were mapped using multi-beam sonar. For example see: [https://www.nespmarine.edu.au/we%E2%80%99ve-created-first-full-street-view-map-australian-commonwealth-marine-reserve](https://www.nespmarine.edu.au/we%E2%80%99ve-created-first-full-street-view-map-australian-commonwealth-marine-reserve). The deep-towed camera system also provided the first views of seafloor habitat at great depths in many of the marine parks. For example see: [https://www.nespmarine.edu.au/first-peek-deep-end-freycinet-commonwealth-marine-reserve](https://www.nespmarine.edu.au/first-peek-deep-end-freycinet-commonwealth-marine-reserve). 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.

Key research activities undertaken during the foundational phase that relate to pressures include:

- A 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.
- A NERP project modelled the effects of the bottom trawl fishery on 15 spatially unique species assemblages and 10 habitat forming species (e.g. sponges, hard corals, gorgonians, sea pens) in the SE marine bioregion. This showed that all 10 habitat forming species declined in abundance in trawled areas until the mid-2000’s when fishing effort declined due to economic pressures, licence buy backs and closure of large areas to trawling. The effect of closures (fishery closures and Australian Marine Parks) on the status of habitat forming
species was variable with a few leading to improvements, most having little detectable influence and some worsening the status of habitat forming species because the trawl effort moved to areas in which some taxa were more abundant.

- Since 2014, Parks Australia has utilised information from the mandatory Vessel Monitoring Systems (VMS) on Commonwealth commercial fishing vessels to monitor vessel activity in the South-east Network. This information is used primarily for compliance purposes, and is currently being consolidated and desensitised to obtain a long-term view of marine park use by commercial fishers in South-east Network.

Parks Australia commissioned a literature review to identify existing research publications relevant to Australian Marine Parks nationwide. This identified a total of 148 scientific reports and journal publications directly relevant to the South-east Network reserves. Of these 67 relate to Macquarie Island and the remaining 59 to the remaining 13 reserves. The number of publications relevant to the South-east Network has more than doubled since 2010. This is a coarse indicator of increasing knowledge and understanding.

Progress against Activities:

<table>
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<tr>
<th>Activity/output</th>
<th>Status</th>
<th>Progress summary</th>
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<tbody>
<tr>
<td>1.1 Knowledge gaps identified and a scientific research and monitoring strategy developed that includes priority research areas.</td>
<td>Partially complete</td>
<td>A Research and Monitoring Strategy for the South-east Network was drafted and circulated to the South-east Forum for consideration in 2016. Finalisation of this strategy has been overtaken by a draft estate-wide (i.e. all networks) Marine Science Program Strategy (MSPS) currently being prepared. The MSPS will help ensure that science is undertaken to address marine park management needs. It is anticipated that the MSPS will be finalised and widely available about mid-2018. Science priorities and projects for inclusion in the consolidation phase implementation schedule for the South East can be guided by the draft documents as and if appropriate.</td>
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| 1.2 South-east priority research and monitoring commenced | Partially complete | Throughout the foundation phase NESP MBH have provided advice on existing information for conservation values and pressures and implementing a monitoring program. Parks Australia commissioned the following research and monitoring projects in the southeast during the first 4 years of management:  
  - Benthic-pelagic coupling in the Habitat Protection Zone of the Huon Commonwealth Marine Reserve (2014-15)  
  - Literature review (2016-17) – to identify and collate existing research reports and publications relevant to CMRs and summarise findings in a report. |
|                  |        | Parks Australia contributed financially to the following research and monitoring projects in the southeast during the first 4 years of management: |
- Deployment of a hydrophone in the Huon Marine Park to record marine mammal vocalisations (three-year monitoring project) – the first 6 month deployment was unsuccessful; second deployment due to be collected in November 2017.
- AUV surveys in Freycinet Marine Park in 2016.

Over the last 4 years NESP/NERP projects specific to the South-east Network include:
- High-resolution multi-beam mapping, autonomous underwater vehicle (AUV) and deep Baited Remote Underwater Video (deep BRUVs) surveys of the Flinders and Freycinet Marine Parks to identify the extent and status of reef habitats on the shelf.
- A study in the Tasman Fracture Marine Park that investigated the response of reef associated biota to seven years of protection (following fishing) compared to adjacent fished areas.
- Public knowledge, perceptions and values survey for the south-east Network (2015).

National NESP/NERP projects that have increased our understanding of values and pressures in the South-east Network include:
- Abyss: High-resolution multi-beam mapping, deep towed camera images and samples of fish and benthic invertebrates from Freycinet, Flinders and East Gippsland Marine Parks in May 2017.
- Canyons: identifying connectivity patterns for management (Huang et al. 2014).
- Collation of existing pressure data (e.g. oil and gas, shipping activity, seismic surveys, sea surface temperature) to show the pressures facing Australia’s marine environment and their potential for cumulative impact.

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.
Other NESP projects have developed:

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

Further information about the NERP projects can be found in the final report of the NERP research 2011-2015 (Bax and Hedge, 2015):

Further information about NESP projects can be found at:
https://www.nespmarine.edu.au/

Other research undertaken in the SE Network includes:

- Seamounts – further analysis of data collected during surveys in 2006.
- Multi-beam echo sounder mapping of Freycinet Marine Park in 2015, as part of RV Investigator sea trials.
- Deployment of acoustic receivers in the multiple use zone of Flinders Marine Park as part of the IMOS animal tracking program.

<table>
<thead>
<tr>
<th>1.3 Partnerships are identified and in place to actively support and deliver identified South-east research and monitoring priorities.</th>
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<tr>
<td>Strong relationships exist with the Marine Biodiversity Hub, and discussions with researchers about NESP projects have increased in depth each year. Several staff have effective relationships with key scientific organisations (e.g. CSIRO and the Institute for Marine and Antarctic Studies (IMAS)).</td>
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Case Study 1.1 Establishing shelf reef baselines

To collect detailed and accurate information about seafloor habitats, benthic species and fish for all the marine parks in the South-east Network would take decades. A more pragmatic and cost-effective sampling approach, known as GRTS (Generalised Random Tessellation Stratified) design, has been developed to establish interim baselines against which to assess the status and trend of shelf reef habitats, sessile biota and demersal fish species. It has been successfully trialled in Flinders and Freycinet Marine Parks (Hayes, 2015; Hayes, 2015a).

Phase one of the GRTS design used a drop camera to characterise habitats at 40 sites. In phase two, further habitat and biological samples were obtained from 12 of these sites using high resolution multi-beam sonar, Autonomous Underwater Vehicles (AUV) and Baited Remote Underwater Video (BRUVs).

The Flinders Marine Park has diverse reef systems including steep canyon-head structures with underwater cliffs, flat sedimentary rocks, and unique 2m high sandstone and mudstone ledges. The different reef types support very different faunal assemblages, with those of the outcropping sedimentary ledges being the most diverse and characterised by rich epibenthic assemblages. The ledges were dominated by a bryozoan/cnidaria/hydrorid matrix which differs from sponge dominated assemblages typical of epibenthic assemblages in similar depths along Australia’s continental shelf margin (Monk et al., 2016).

Two key reef features have been identified in the Freycinet Marine Park Multiple Use Zone (MUZ). The first of these features, known by locals as Joe’s Reef, is an isolated high profile reef with black corals and sponges (Figure 1.1b). The second occurs in 85-110m depth and consists of several low profile (3-5m high) reef ridges that are likely beach ridges deposited during a lower sea level.

The GRTS approach provides a cost effective sampling methodology for establishing baselines in data poor areas. This approach should be used to provide initial mapping of Marine Parks with little or no information on seafloor habitats, sessile biota or demersal fish (e.g. Apollo, Beagle, Boags, Franklin and Murray).

![Mapping coverage of the Flinders CMR based on the Australian Bathymetry and Topography Grid, produced by Geoscience Australia in June 2009. Note the fine-scale 5-m resolution multibeam sonar (MBES depth) collected by the CSIRO and Geoscience Australia as a part of NERP. a-b] show a comparison in the detail between the Australian Bathymetry and Topography Grid and fine-scale MBES for a zoomed region surveyed in detail by the IMOS AUV. b) Platform and ledge reef geofeatures have been identified from the MBES on the outer shelf of Flinders CMR: Source Monk et al. 2017
Figure 1.1b: Examples of the seabed biota present on Joe’s reef in the Freycinet CMR. Images are from deep citizen SCUBA diver who captured the images because of NESP citizen science collaboration (https://www.nespmarine.edu.au/news/extreme-citizen-scientists-film-black-corals-spectacular-unexplored-reef-tasmania%E2%80%99s-east-coast). Top image shows two large black corals. Bottom image illustrates the variety
of seabed biota inhabiting Joe’s reef (note the schools of butterfly perch (*Caesioperca lepidoptera*) in background and splendid perch (*Callanthias australis*). Source Monk et al. 2017
Case Study 1.2 Tasman Fracture Marine Park

The Marine National Park Zone (MNPZ) in the Tasman Fracture Marine Park is a high priority for management as it is the only area of continental shelf habitat within the SE Network that completely prohibits fishing activities. This provides the opportunity to study the effectiveness of MNPZ in protecting shelf biota.

In 2013-15 multi-beam echo sonar (MBES), Baited Remote Underwater Videos (BRUVs) and Autonomous Underwater Vehicles (AUV) were used to map bathymetry and habitats, fish, and sessile benthic biota (e.g. corals and sponges) respectively. Key outputs and findings (Monk et al. 2016) include:

- The first fine-scale 3D survey of the MNPZ and nearby unprotected area (Figure 1.2).
- Reef habitat only compromises a small proportion of the MNPZ. Small, isolated reefs rising from water depths of 100-140 m occur on the north-west margin of the MNPZ, and an isolated reef rising from depths of 80-140m occurs to the east of the Mewstone (a small rocky island).
- Reefs in 100-140m water depth in the north-west section of the Tasman Fracture Marine Park were predominately covered in soft corals and differ markedly from the typical sponge dominated cover typical of cool-temperate reefs in these depths.
- Striped trumpeter, jackass morwong, ocean perch and morid cods showed protection related increases in abundance. Striped trumpeter and jackass morwong also showed increases in the abundance of large legal sized individuals.
- Model–based analyses suggest that there are significantly more southern rock lobsters within the marine park than in adjacent fished areas.

Based on the outcomes of this work, during the consolidation phase it will be important to:

- map areas in 120-160m water depth outside but near the Tasman Fracture Marine Park to identify reefs suitable to act as ‘outside marine park’ comparison sites.
- develop and implement a five yearly monitoring program to study the effectiveness of Marine National Park Zone protection for southern rock lobster, fish and sessile communities.
Considerations for year 5-8 implementation (consolidation phase):

Suggested priorities for the consolidation phase of management include:

Activity 1.1: Develop a four-year South-east Research and Monitoring Works Plan for transfer into the implementation schedule, including:

- Identify key management priorities and questions for the South-east Network.
- Identify existing knowledge and gaps for natural, cultural and heritage values and pressures on those values.
- Establish prioritisation criteria to identify research and monitoring priorities.
- Ensure monitoring priorities align with the Australian Marine Parks Monitoring, Evaluation, Reporting and Information (MERI) framework and the Parks Australia ecosystem health monitoring project.

Activity 1.2: Facilitate the delivery of priority research and monitoring

- Effectively communicate research and monitoring priorities to the NESP MBH and broader scientific community.
- Identify opportunities and negotiate with researchers to get Australian Marine Park specific add-ons to existing scientific projects.
- Work with researchers to develop new collaborative projects and funding applications.
- Provide support to research organisations to undertake high priority research and monitoring.

Activity 1.3: Continue to establish and maintain effective partnerships with the science community.
• Continue high levels of engagement with the MBH, and contribute to improving the methods for feedback and negotiation regarding NESP projects both within the Department and between the Department and the MBH.
• Continue to build and maintain effective relationships with key researchers.
• Establish and maintain effective relationships with the subantarctic Macquarie Island marine science community.
• Attend and network at relevant scientific conferences.

Activity 1.4: Improve the use of scientific information in reserve management decisions

• Encourage and support staff to improve scientific knowledge.
• Ensure management decisions are based on an adaptive management approach and informed by science.
• Parks Australia to work with researchers to ensure scientific information is available on systems that are easily and quickly accessible to managers and it is in appropriate formats to answer management questions.

Possible research and monitoring projects for the next 4 years

Below is a list of possible research projects that may be considered for the consolidation phase. It is a very preliminary list that is open to additions from the South East Forum, and is yet to be discussed with researchers and discussed and prioritised by marine park managers.

Deep shelf reefs

• Deep Shelf Reefs in Flinders Marine Park Report - Document existing information about mapping, fish assemblages and sessile biota, and pressures on deep shelf reefs in the Flinders Marine Park. Identify key knowledge gaps and recommendations for future research. Provide recommendations for a long-term ecosystem health and pressure monitoring program.
• Develop and implement a formalised and systematic monitoring program for condition of, and pressures on, deep shelf reefs in the Flinders Marine Park.
• Develop and implement a formalised and systematic monitoring program for deep shelf reefs in the Freycinet Marine Park that compares the effectiveness of multiple use (IUCN VI) and recreational use (IUCN IV) zones.
• Map areas of 120-160m water depth nearby the Tasman Fracture Marine Park to identify reefs suitable to act as ‘outside marine park’ comparison sites. Develop and implement a five yearly monitoring program to study the effectiveness of protection for southern rock lobster, fish and sessile communities.
• Undertake seafloor and habitat mapping (using multi-beam echo sounder (MBES) and autonomous underwater vehicles (AUV)) and document demersal fish communities (using baited remote underwater videos (BRUV’s)) on the continental shelf in unmapped reserves (e.g. Apollo, Beagle, Boags, Franklin and Murray).
• Predicted and existing impacts of climate change on deep shelf reefs and future management options.

Seamounts

• Repeat 10 yearly monitoring of recovery on fished and unfished seamounts in Huon and Tasman Fracture Marine Parks. Opportunity exists in November and December 2018 as Alan Williams (CSIRO) has been granted 26 days on the MNF research vessel RV Investigator to visit the seamounts in and adjacent to the Huon and Tasman Fracture Marine Parks.
• Develop and implement long-term monitoring programs for condition of, and pressures on, seamount communities.
• Determine the effectiveness of the Huon and Tasman Fracture Marine Parks in providing protection for orange roughy, and impacts during potential spawning migrations.
• Predicted and existing impacts of climate change on seamounts and future management options.
• Monitor the presence, and spawning status, of basketwork eels on Patience seamount.

Canyons
• Undertake detailed seafloor and habitat mapping and associated fish assemblages of key canyon features within the south-east Network (e.g. Flinders Marine Park, Tasman Fracture Marine Park and Zeehan Marine Park).
• Predicted and existing impacts of climate change on seamounts and future management options.

Shelf soft sediments
• Establish baseline soft sediment benthic communities (epifauna and infauna) and contaminant levels (e.g. hydrocarbon, heavy metals and microplastics) for Beagle, Boags/Zeehan, Apollo and Tasman Fracture Marine Parks.

Abyss
• Continue to analyse data from Freycinet, Flinders and East Gippsland Marine Parks collected during the RV Investigator trip in May/June 2017 to provide initial and baseline information for the abyss.

Pelagic
• Monitoring of Shy albatross populations at the Mewstone and Pedra Branca (done by DPIW, Tasmania State Government)
• Monitoring of microplastics in Tasman Fracture and Huon Marine Parks (or other high priority feeding locations for Shy albatross and other priority seabirds).

Heritage values and pressures
• Condition assessment of the steamship SS Cambridge and the ketch Eliza Davies wrecks in Beagle Marine Park.
• Condition assessment of the wreck of the MV City of Rayville in Apollo Marine Park.

Cultural/Indigenous values and pressures
• Monitoring of mutton birds in collaboration with the Indigenous community.

Social values and pressures
• Recreational fishers – motivations for fishing Commonwealth waters; targeted species, effort and catch rates; fishers’ understanding of Marine Park existence, location and zoning; impacts of marine parks on fishing;

Management effectiveness
• Develop and implement long-term monitoring programs for condition of, and pressures on, key network values that align with Parks Australia’s management effectiveness framework and ecosystem health reporting.
• Using the South-east Network and Tasman Fracture as examples, develop worked examples of a marine ecosystem health reporting system that aligns with Parks Australia’s terrestrial reporting system.

Macquarie Island Marine Park
• Compile all existing research and monitoring relevant to Macquarie Island Marine Park and add to the publications database.
• Identify key management questions and knowledge gaps.
• Establish prioritisation criteria to identify research and monitoring priorities.
• Work with researchers to develop and implement priority research and monitoring projects.

Key Publications


Miller, K.J., Gunasekera, R.M., 2017. A comparison of genetic connectivity in two deep sea corals to examine whether seamounts are isolated islands or stepping stones for dispersal. Scientific Reports 7, 46103; doi: 10.1038/srep46103 (2017).


South-east Commonwealth Marine Reserves Network Management Plan 2013-2023

Strategy 2:

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

End of management plan outcomes (10 years):

2. 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.

➢ During the foundation phase of the implementation schedule, individual activities and proposals were assessed consistent with the EPBC Act and Regulations, the SE management plan.

3. Authorisation processes are streamlined to improve efficiency and effectiveness, and reduce duplication.

➢ The anticipated 2018 rollout of new management plans across the estate will include streamlining of authorisation processes. This will include the implementation of an on-line authorisation system.

➢ The development of the on-line authorisation systems is consistent with the Commonwealth Government’s approach to reducing regulatory burden on users and similar to systems already in place by other marine resource management agencies (e.g. GBRMPA).

Foundation phase outcomes (4 years):

4. Effective assessment and authorisation processes are in place for management of activities and to enable users to undertake their activities consistent with management arrangements.

➢ Applications for individual activities were assessed in an efficient manner (stakeholders were confident in the process and comfortable with the timeframes involved) and consistent with the SE management plan, EPBC Act and Regulations.

➢ Class approvals were in place (commercial fishing and mining), avoiding duplication in assessment and approval processes and providing a streamlined approach for users. The commercial fishing class approval was amended to allow poling and trolling (Nov 2013, as previously allowed under general approval), and to allow the transit of Multiple Use, Special Purpose and Habitat Protection zones by vessels engaged in towing of fish cages (Jan 2015). The SE Management Plan requirement to consult with affected parties was observed.

Progress against Outputs:

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

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<tr>
<th>Activity/output</th>
<th>Status</th>
<th>Progress summary</th>
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| **2.1** Individual activities and proposals assessed consistent with the EPBC Act Regulations, in line with the management plan and the CMR national estate policy and decision making framework. | Ongoing / complete | 29 authorisations were granted throughout the foundation phase (8 for commercial fishing charters and 21 for research).
9 international public vessel status requests were received. Individual advice was provided for those vessels wishing to undertake marine scientific research in Australian waters.
As required, a range of advice was provided towards environmental assessments under the EPBC Act on the potential impacts of activity proposals on reserves in South-east Network. |
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<tr>
<td><strong>2.2</strong> Activities subject to class approvals managed consistent with the management plan and the CMR national estate policy and decision making framework, including consultation with affected stakeholders.</td>
<td>Ongoing / complete</td>
<td>The commercial fishing class approval was amended twice, consistent with the provisions in the management plan.</td>
</tr>
<tr>
<td><strong>2.3</strong> A class approval for charter fishing for tourism purposes investigated by Parks in accordance with the management plan.</td>
<td>Complete</td>
<td>A class approval for commercial tourism was not developed. An assessment in 2014 deemed that a class approval was not currently required because commercial tourism operators in the SE already had long term permits and were not impeded by the management plan.</td>
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</table>
| **2.4** Internal Activity Audit program | Not complete | An audit program for the South East Network has not yet commenced.
An audit framework for the CMR estate is intended to be developed in 2018. The audit framework will be delivered under the new network management plans and will also be applied to the SECMR Network. |
| **2.5** Conditions placed on assessments adapted/modified to address changes in environmental risks/threats, changing marine use circumstances and in response to audit recommendations. | Ongoing / Complete | No modified conditions were required for authorisations issued during the foundation phase. Parks Australia will be reviewing activity and reserve specific conditions for all networks prior to the management plans for the other Networks being finalised. |

**Considerations for year 5-8 implementation (consolidation phase):**

➢ Activity 2.1 – continue to assess proposals and provide advice.
- Activity 2.2 – Amend class approvals as required, consistent with provisions in the plan.
- Activity 2.3 – Consider requirements to develop additional class approvals as needed.
- Activity 2.4 – Internal activity audit program developed and progressed at estate level and network level.
- Activity 2.5 - Introduce an on-line authorisations system for all permits and licences.
South-east Commonwealth Marine Reserves Network Management Plan 2013-2023

Strategy 3:

 Protect the conservation values of the marine reserves network through management of environmental incidents.

End of management plan outcomes (10 years):

5. Impacts associated with environmental incidents are identified and managed appropriately.

➢ The South-east Critical Incident Action Plan provides a critical incident risk assessment for each marine park in the SE Network. This plan considers each park’s proximity to shipping lanes, ports, navigational hazards, oil and gas wells and pipelines, as well as environmental factors that may raise or lessen the risk of impacts from a marine incident. This plan details Parks Australia’s roles and responsibilities in the event of an incident that threatens the values of reserves within the SE Network.

➢ The South-east Critical Incident Action Plan aligns with:
  o the Department of the Environment and Energy External Critical Incident Procedure;
  o the Australian Maritime Safety Authority (AMSA) National Plan for Environmental Emergencies;
  o the Department of Industry, Innovation and Science (DIIS) Offshore Petroleum Incident Coordination Framework; and

➢ The anticipated rollout of management plans across the estate in 2018 will see the development of a park protection and management program which will cover pro-active or reactive intervention actions to counter and treat threats to marine park health which are of a different nature to critical incident environment marine emergencies. This will include, but is not restricted to:
  o Operational planning and responses to combat and eradicate invasive and/or introduced species and pests that pose threats to marine park health, through the implementation of threat abatement plans;
  o Operational level planning and responses to remove or reduce marine debris from marine parks;
  o Responses to localised marine-life threatening objects or incidents such as the removal of ghost nets or the disentanglement of cetaceans in marine parks; and
  o Responses to remove large ‘flotsam and jetsam’1 or other marine debris items which pose a risk to vessel/shipping safety in marine parks (for example, semi-submerged shipping containers) and thus possibly cause polluting incidents in marine parks.

6. Systems for timely reporting of and collaboration on responses to environmental incidents are effective.

➢ Parks Australia, in conjunction with Heritage, Marine and Reef Division (DoEE), continues to partner with AMSA, NOPSEMA, DIIS and MBC to ensure smooth coordination of incident responses in the event of an incident.

Foundation phase outcomes (4 years):

7. Emerging threats of environmental incidents are identified and management response arrangements (including influencing prevention options) are clearly understood between relevant agencies.

1 Flotsam and jetsam: wreckage of a ship and its cargo (including cargo lost overboard) as is found floating upon the sea or washed ashore
A South-east Critical Incident Action Plan has been completed following a comprehensive process of review by key emergency response coordination agencies in the first half of 2017. The plan details Parks Australia’s response and roles in the event of a marine pollution incident that threatens the network. Parks Australia’s response to such incidents will be conducted under the overall umbrella of the Department of the Environment and Energy co-ordinated response. It is ready for sign off and activation in the event of an incident.

The Plan examines all 14 reserves/25 zones in the SE Network and provides an assessment of the critical incident risk each zone faces based upon their respective proximity to offshore oil and gas installations and pipelines, major shipping routes and navigation hazards to shipping.

Consistent with short term objectives the Plan will be reviewed on an annual basis or as required to keep up with changes in Australia’s maritime emergency response planning and coordination.

Progress against Outputs:

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

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<tr>
<th>Activity/output</th>
<th>Status</th>
<th>Progress summary</th>
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<tr>
<td>3.1 Hazard identification, hazard/risk assessment and control of hazards/risks evaluation.</td>
<td>Ongoing / partially complete</td>
<td>The South-east Critical Incident Action Plan was finalised in 2017.</td>
</tr>
<tr>
<td>3.2 Marine debris programs supported for identified priorities.</td>
<td>Not complete</td>
<td>No dedicated marine debris projects have been funded through the foundation phase; however the SE network is fortunate in that it is not subject to the level risk arising from marine debris is considered to be negligible (see Table 3.1) 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.</td>
</tr>
<tr>
<td>3.3 Standard Operating Procedures for incident response updated and maintained.</td>
<td>Ongoing / complete</td>
<td>Standard Operating Procedures have been detailed in the Critical Incident Action Plan and are reviewed annually through our partnership arrangements.</td>
</tr>
<tr>
<td>3.4 Environmental advice provided for incidents that may threaten conservation values.</td>
<td>Ongoing / complete?</td>
<td>Multiple small incidents have been reported to Parks Australia during the foundation phase. None were of a magnitude which required action under the Critical Action Plan. Parks provided appropriate advice in line with our reporting agencies.</td>
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</table>
Considerations for year 5-8 implementation (consolidation phase):

- Activity 3.1 – Continue to identify, assess and control risks
- Activity 3.2 – Investigate opportunities for specific park protection projects.
- Activity 3.3 – Maintaining SOP’s
- Activity 3.4 – Continue to provide advice on reported incidents
South-East Commonwealth Marine Reserve Network

Strategy 4:

Facilitate compliance with the management plan through education and enforcement.

End of management plan outcomes (10 years):

8. Activities within the marine reserves network are undertaken in a manner that is consistent with the management arrangements as specified in the South-east Management Plan.

➢ Marine park users demonstrate a high level of compliance with management arrangements. The compliance and enforcement program focuses on prevention through improving awareness and understanding with management arrangements, while also being supported by a surveillance and monitoring program covering the SE Network. Where education and prevention tools are unsuccessful, Parks Australia implements enforcement actions as appropriate to ensure deterrence, including issuing penalty notices and pursuing criminal prosecutions or civil proceedings.

9. Marine reserves network users have a clear understanding of what is required to comply with the South-east Management Plan.

➢ 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.

3. Marine reserves network users contribute to the management of the network through the reporting of suspected non-compliant activity.

➢ Parks Australia encourages voluntary compliance. Marine park users are encouraged to report incidents of suspected non-compliance which are investigated and result in enforcement responses where appropriate. To the best of our knowledge, 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.

Foundation phase outcomes (4 years):

10. CMR users have a clear understanding of what is required to comply with management arrangements.

➢ SE CMRN User Forums have been conducted over the past few years with representatives from peak bodies of all potential users ranging from commercial fishers, rec fishers, charter fishers, tourism operators, shippers, etc., to help raise awareness of the SE CMRN and how it is being managed in accordance with the Management Plan 2013-2023. These forums have provided peak body representatives the opportunity to clarify what is required to comply with the network management arrangements.

➢ Investigations, enforcement action and subsequent court rulings following non-compliant activity in the SE CMRN over the past four years have resulted in a clear understanding of the consequences if caught breaching the SE CMRN management arrangements, especially within the commercial fishing industry.

11. Our compliance program encourages/promotes voluntary compliance through awareness, education and surveillance.
In 2015/16 Parks Australia in cooperation with the Australian Fisheries Management Authority (AFMA) and the South East Trawl Fishing Industry Association developed an online training tool for all commercial fishers operating in the SE Network region. At the time of this review, of the 116 individual fishers who have attended the training none has been involved in any compliance incident.

The Marine Parks VMS Alert Service has been available to all Commonwealth licensed fishers at no cost to the industry, and has proved to be highly effective in assisting fishers to comply with park rules. Over 2,500 alerts have been sent in the three years of its operation, with more than 30 potential compliance incidents being avoided.

Compliance and monitoring in the SE Network is assisted by an annual risk-based assessment process to prioritise those areas of reserves most at risk to non-compliant activity. The annual risk assessment informs 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. SE CMRN surveillance flights previously provided by MBC have reduced over the past few years and are now curtailed due to higher national priorities for maritime surveillance; however, an active Parks Australia aerial surveillance program has been used over the last four years to provide aerial surveillance coverage over high priority marine parks in the network.

For education components of compliance- See Strategy 5.

Progress against Outputs:

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

<table>
<thead>
<tr>
<th>Activity/Output</th>
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<tbody>
<tr>
<td>4.1 Annual compliance plans</td>
<td>Completed and on-going</td>
<td>Developed and implemented an annual Compliance Plan for SE operations (links to all other compliance-related activities). Reviewed, revised and implemented on an annual basis</td>
</tr>
<tr>
<td>4.2 &amp; 4.3 VMS</td>
<td>Completed and on-going</td>
<td>The VMS-based Marine Parks Alert Service became operational in the SE CMRN on 1 July 2014. Updated and maintained as necessary and adjusted (if necessary) based on feedback and analysis of the service performance.</td>
</tr>
<tr>
<td>4.4 Maps and data on CMR boundaries/values.</td>
<td>Not commenced ... budgeted for in 2017/18</td>
<td>Support for mobile phone App development where opportunities arise. Parks to investigate potential for Avenza maps for SE Network.</td>
</tr>
<tr>
<td>4.5 Vessel surveys for CMR marine user charting needs.</td>
<td>Not completed.</td>
<td>Project re-scoped. Mail-out of the SE CMRN User Guide to all TRLF, TSIC officer providing presentations on the SE network and management plan at annual TRLF meetings around the state. The project also includes a full page story and three separate full page advertisements spread over six editions of the Tasmanian Seafood Industry News magazine during 2017/18.</td>
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<tr>
<td>4.6 Industry understanding of compliance progressed and cooperative compliance arrangements promoted.</td>
<td>Not completed</td>
<td>A workshop of commercial fishing industry will assist identifying compliance risks and explore opportunities for cooperative compliance initiatives. Discussions with industry suggest that a workshop may not be the most effective way of engaging.</td>
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<tr>
<td>4.7 Industry training package.</td>
<td>Completed and ongoing</td>
<td>Development of on-line training modules for commercial fishing industry in SE. Online training program finalised and released for fishers to register. To date 116 fishers have completed the on-line training.</td>
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<tr>
<td>4.8 Website tool initiated and promoted for the public reporting of suspected non-compliant activity.</td>
<td>Not commenced</td>
<td>Implement a reporting tool on the Parks website</td>
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<tr>
<td>4.9 Compliance activity and enforcement data. Internal database operational.</td>
<td>Completed and ongoing</td>
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### 4.11 Training of regional enforcement partners.

Regional enforcement partners are trained to achieve a thorough understanding of their powers and are confident in executing their warden powers under the EPBC Act. Development of EPBC Act Warden training package by Parks Australia.

Delivery of EPBC Act training for state and Commonwealth agencies officers for appointment as wardens to support compliance with the EPBC Regulations and the management plan. Training will be repeated every 2 years.

Substantially completed

<table>
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<tr>
<th>Activities for year 5-8 implementation (consolidation phase):</th>
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<tbody>
<tr>
<td>➢ Activity 4.2/4.3 – VMS</td>
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<tr>
<td>➢ Activity 4.8 - Explorer Tool- Rec fishers</td>
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<tr>
<td>➢ Activity 4.11 - Training of regional enforcement partners. Next warden training for Tasmania Police to be scheduled for Year 5</td>
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Over the past four years there have been 10 separate commercial fishing incidents that have been investigated; 3 have resulted in enforcement action; 2 are currently under investigation; and 5 have resulted in no further action (NFA); see Case study.

Warden training conducted for Tasmania Police officers in Year 3 and a number of warden appointments were processed for newly trained officers. Next warden training for Tasmania Police to be scheduled for Year 5.
Case Study – SE CMRN compliance incidents since 01 July 2013

South East Shark and Scalefish Fishery

**CAS 2809 AFV** – VMS polling - transited < 5 kts on four occasions in MUZ – RFI letter sent – response received (weather/safety concerns) – NFA – 28 Apr 17

**CAS 2759 AFV** – Self-reported entering MUZ to retrieve gear after hydraulic failure – investigation indicated vessel did not enter CMR – NFA – 21 Mar 17

**CAS 2436 AFV** – VMS polling - investigated possible non-compliant activity 13 January 2016 - warning notice issued

**CAS 1967 AFV** - VMS polling – possible non-compliant activity 28 October 2014 – NFA

**CAS 1860 AFV** – VMS polling - prohibited drop line fishing 05 September 2014 – warning notice issued

**CAS 1852 AFV** – VMS polling - possible non-compliant activity 30 Jul 2014 – NFA

Eastern Tuna and Billfish Fishery

**CAS 2846 AFV** – prohibited longline fishing in Flinders CMR MNPZ - 28 Jun 17 – investigation commenced

**CAS 2793 AFV** – retrieved longline and catch after longline drifted into Tasman Fracture MNPZ – Investigation underway - 06 April 2017

Macquarie Island Toothfish Fishery

**CAS 2831 AFV** – possible prohibited longline fishing in Macquarie Island SZ - 19 Jun 17 – investigation conducted – determined fishing activity not undertaken – NFA

Note: The Marine Parks Alert Service which came into effect on 01 July 2014 for the SECMRN has resulted in a significant drop in possible non-compliant activity in the CW fisheries, with only six vessel incursions into restricted areas requiring follow-up action arising throughout the SE Network since activation.

Tasmanian rock lobster

**CAS 1674 AFV** – prohibited rock lobster fishing in MNPZ – Prosecution + fine + court costs – 6 Apr 14

Summary of High and Medium Priority Risks by Marine Park

<table>
<thead>
<tr>
<th>Priority</th>
<th>Marine Park</th>
<th>Zone</th>
<th>Sector</th>
<th>Risk Rating</th>
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Risk trend: ↑
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<th>Tasman Fracture</th>
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**South-east Commonwealth Marine Reserves Network Management Plan 2013-2023**

**Strategy 5:**

*Promote community understanding of, and stakeholder participation in, the management of the marine reserves network.*

**End of management plan outcomes (10 years):**

12. **Stakeholders and the community understand the importance of the marine reserves network, the values it protects and management arrangements.**

   Following four years of active management in the SE Network, the focus remains on increasing greater community awareness of park boundaries.

   The development of the South-east Communication and Education Strategy is a key step towards improving community understanding of the values and management arrangements in the network. The strategy will continue to guide the delivery of activities throughout the consolidation phase of active management.

13. **Stakeholders effectively participate in managing the marine reserves network.**

   - Attendees at the meetings of the South-east Forum have not been formally appointed as members of the group and there are no terms of reference or terms of engagement. This is because it was considered appropriate to trial an informal approach to stakeholder participation in management.

   - The South-east Forum informal group has developed into a central point of expertise for the operation of the South-east Network. Forum participants have worked with Parks Australia to deliver activities through the seven management strategies outlined in the management plan and will continue to do so through the consolidation phase of active management. Attendees at the meetings of the South-east Forum have effectively engaged their broader user groups in active management of the network by providing a conduit for information and feedback between those user groups and Parks Australia.

**Foundation phase outcomes (4 years):**

14. **Marine reserve users and key sector groups know where CMRs are and understand management arrangements.**

   - Parks Australia and the SE Forum attendees have been working together to design different communication products for various user groups. The online training program provides essential information on the SE CMRN for South-east trawl fishers operating within the South-east Shark and Scalefish Fishery (SESSF) and was designed and implemented in 2016 with the direct involvement and assistance of the South-east Trawl Fishermen Association (SETFIA). To date 116 separate fishers have successfully completed this online training program. TARfish has included information about SE marine reserves in their updated Code of Practice for recreational fishers.

   - Interpretive signage is a communication tool aimed at raising awareness of the CMR boundaries and management arrangements for the general public. Signage about Freycinet CMR has been installed at appropriate locations in Freycinet National Park and at other key relevant tourist locations like Governor Island (Bicheno) and Maria Island. Joint signage about Beagle CMR and the Kent Group Marine Reserve has also been installed at multiple locations on Deal Island and Erith Islands (Kent Group). CMR signage will continue to be installed in priority areas throughout the consolidation phase of active management.

15. **Advisory committee contributes to management and assists in the management of the network.**

   - The South-east Forum has convened seven times throughout the foundation phase of active management, though attendees have contributed to management decisions out of session. 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.

16. **Adjacent coastal communities are aware of the CMR network and the conservation values.**

- The South-east Network Communication and Education Strategy was finalised in 2017 and will provide a mechanism for establishing broader outreach programs throughout the consolidation phase of active management. Signage has been developed in priority areas giving access to the Freycinet CMR and opportunities for other signage projects along the coastlines of the SE network are being continually investigated.

- A 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). This survey will be a valuable input to planning future communication efforts, including type of information sought and preferred medium(s).

17. **Priority partnerships are in place and operating.**

- The South-east Forum has been a vital part of active management, by providing a mechanism to establish and maintain strategic partnerships between Parks Australia and key stakeholder groups.

- A project to help raise awareness among Tasmanian rock lobster fishers (TRLF) of where they can and cannot fish within the network has been undertaken during 2016/17 and 2017/18 with the involvement and assistance of the Tasmanian Seafood Industry Council (TSIC). This has involved TSIC providing a presentation on the SE CMRN at TRLF annual meetings in ports around Tasmania. It has also involved an article and full page advertisements in the Tasmanian Seafood Industry News magazine. This has been generally well received by TRLF and is currently on-going.

**Progress against Outputs:**

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

<table>
<thead>
<tr>
<th>Activity/output</th>
<th>Status</th>
<th>Progress summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 South-east Network communication and education plan developed and implemented.</td>
<td>Completed</td>
<td>The South-east Communication and Education Strategy was finalised and circulated to the SE forum in March 2017.</td>
</tr>
<tr>
<td>5.2 Signage audit conducted and priority signage projects delivered.</td>
<td>Completed + ongoing</td>
<td>A signage audit was completed in 2013 for the SE Network and signs were installed at several key locations giving access to Freycinet CMR. Signage for the Beagle CMR has been developed and installed at Deal Island. Further Beagle signage will be installed at Wilsons Promontory. Options for signage about Huon CMR are currently being explored.</td>
</tr>
</tbody>
</table>
5.3 User group meetings facilitated by Parks for the exchange of knowledge, understanding and participation in the management of marine reserves (such as for the commercial fishing industry and commercial tourism charter fishing industry).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Partially completed + ongoing</td>
<td>A commercial fishing industry workshop was held in Hobart in April 2014. No further sectoral group meetings were held in the foundation phase of active management.</td>
</tr>
</tbody>
</table>

5.4 Community initiatives presented to the SE Forum and/or its representatives, or generated by SE Forum members, that seek to enhance awareness, understanding and protection of CMR values will be encouraged and supported as appropriate and where possible (relative to other priorities). Support may include influencing outcomes, in-kind, funding or facilitating access to networks/expertise.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ongoing</td>
<td>Conversations were held at SE forum meetings to investigate opportunities to enhance the awareness, understanding and protection of values in the network. As a result of these conversations, Parks Australia formed an agreement with TARFish to produce a revised version of the Recreational Fishing Code of Practice. The updated code can be found here: <a href="http://www.tarfish.org/documents/CodeofPractice.pdf">http://www.tarfish.org/documents/CodeofPractice.pdf</a>.</td>
</tr>
</tbody>
</table>

5.5 Collaborate with key CMR users to guide and participate in the management of the network and advise on the implementation of the management plan in the interim before formal consultative structures are put in place.

<table>
<thead>
<tr>
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<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completed + ongoing</td>
<td>The South-east stakeholder forum has been held seven times throughout the first 4 years of management plan implementation.</td>
</tr>
</tbody>
</table>

5.6 Future consultative structure and membership established and operating effectively to deliver advice on the implementation of the management plan.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not completed / partially completed?</td>
<td>The Independent Review of CMRs in 2015 recommended that consultative structures should be formalised across all networks. Parks Australia will develop a Terms of Reference with the forum in 2018.</td>
</tr>
</tbody>
</table>

**Considerations for year 5-8 implementation (consolidation phase):**

- Activity 5.1 – Updates as appropriate to the communication and education strategy.
- Activity 5.1 - See description – Parks updating the commercial fishers guide and considering electronic delivery. Confirm if this has occurred, no mention of it in annual updates.
- Activity 5.2 - Continue to investigate opportunities to fund signage projects.
- Activity 5.3 - Conduct sectoral group-specific workshops where the need is identified. Perhaps no longer relevant through strategic partnership building and coordination (4-year outcome 4). E.g. no need to conduct a commercial fishing workshop because commercial fishing industry is adequately represented and informed by SE forum membership.
- Activity 5.5 - Continue stakeholder meetings in some capacity (forum, committee, annually instead of twice-yearly?)
- Activity 5.6 - Formalise the SE forum into an SE network stakeholder committee?
➢ 10 year outcome 1 - Use the communication and education strategy to guide projects aimed at increasing awareness/understanding of values and management arrangements (overlap with compliance and science strategies).

➢ 10 year outcome 2 - Define what effective participation means? Establishing terms of reference is a good step and it could include a review of forum effectiveness at the next 4 year period.
Case Study 5.1

In 2015 Parks Australia in partnership with the South East Trawl Fishing Industry Association and the Australian Fisheries Management Authority established a pilot online training course for commercial fishers operating in the South-east Commonwealth Marine Reserves Network. The course provides information to commercial fishers to improve understanding of marine reserves in the region, and the fishing activities that are allowed and prohibited in these reserves.

The course is intended to deliver on a number of elements of the South-east Network management plan including to better engage with this key stakeholder group and support sustainable use of marine reserves.

The training encourages voluntary compliance and stewardship in the South-east Network, helps fishers to avoid straying inadvertently into areas where fishing is not allowed and promotes awareness of the values of the reserves. Training for the accredited course is delivered through three online modules fishers can conveniently complete at their own time and pace.

The course is a general introduction to marine reserves, an overview of the South-east Network with specific information about the rules for commercial fishing. It includes quizzes to encourage retention and interactive exercises to help fishers find where to access maps of the reserves and other information.

116 commercial fishers have completed the course since it was launched at the beginning of 2016.
South-East Commonwealth Marine Reserve Network

Strategy 6:

Support involvement of Indigenous people in management of Commonwealth marine reserves.

End of management plan outcomes (10 years):

18. Indigenous people and organisations are partners in the management of sea country within Commonwealth marine reserves.

➢ During the foundation phase of management in the South-east network there has been a focus on identifying and engaging with indigenous people and organisations relevant to the network area. It is planned that these initial meetings will be able to provide an insight as to the appetite for these individuals and groups to contribute to the network management process, therefore providing the foundation for future involvement and contributions, particularly at the South East

19. Management activities within Commonwealth marine reserves acknowledge and respect existing Indigenous governance arrangement, activities and cultural needs.

➢ Parks Australian will continue to monitor its compliance with the requirements specified in the Native Title Act 1993 to ensure that the holders of native title rights are not impeded in the their access to, and use of resources of the SE Network. Indigenous customs, practices and knowledge will continue to be used as an effective way of informing relevant management planning activities.

Gaining a greater understanding of indigenous structures and cultural needs and how they can be best integrated into the management of the SE Network remains a long-term goal of Parks Australia. Staff have been attending training provided by the Tasmania Aboriginal Council (TAC) focussed on providing a greater perspective of the challenges faces by indigenous communities and the historical adversity they have been required to manage. These types of activities provide a solid foundation for delivering on the strategies long term outcomes.

Foundation phase outcomes (4 years):

20. Indigenous customs, practices and knowledge relevant to CMR management in the South-east are identified, understood and respected by marine users.

➢ In managing the SE Network, Parks Australia has fulfilled its requirements under the Native Title Act 1993. Specifically with regard to Section 211 of the Native Title Act 1993 legal advice to Park Australia detailed that the management of the South-east network does not impede access for some activities for the holders of native title rights or does it require them to seek authorisation/approval to engage in those activities. Parks Australia acknowledges the importance of managing the South-east network in a manner consistent with native title legislation and as such considers this an ongoing matter for review and reconsideration on a regular basis.

➢ Parks Australia have committed to improving the knowledge base regarding cultural heritage values in the South-east network and also at estate wide level. Building on previous research work on indigenous cultural values within the South-east 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 an estate wide approach. While the outcomes from this review were informative there were few example of direct overlap or linkage with the actual South-east network, a more thorough review of smaller, more relevant data sets may have been more effective.
The desktop review included considerable consultation and engagement with relevant indigenous people and organisations done in a manner consistent with estate indigenous engagement principles.

Working in collaboration with the TAC, The University of Tasmania and the Tasmanian Parks and Wildlife Service, Parks Australia has established a working group on the management of Tasmania Shearwater with a predominately indigenous focus. Parks Australia is currently exploring the possibility of additional resourcing to address a number of management challenges which the group has identified.

21. Agreed consultation arrangements for Indigenous engagement are implemented.

Representatives from Parks Australian have been working with indigenous representatives groups from the South-east network including the Tasmanian Aboriginal Council (TAC) and also the Tasmanian Regional Aboriginal Communities Alliance (TRACA) to discuss the operation and management of the South-east network. These informal meetings have been beneficial in building stronger relationships and providing a greater level of understanding and acknowledgement of each organisations objectives and how they can be achieved in a complementary manner.

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.

Progress against Outputs:

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

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</thead>
<tbody>
<tr>
<td>6.1 Indigenous representation is facilitated to support future consultative structures.</td>
<td>Commenced</td>
<td>Indigenous representatives were invited to attend and participate in SE Forums.</td>
</tr>
<tr>
<td>6.2 Indigenous cultural values within the South-east region are updated and, where appropriate, are communicated to the wider public.</td>
<td>Partially completed</td>
<td>Parks Australia undertook a desktop study of Indigenous cultural values in the SE Network. The gaps identified from published materials will feed into broader engagement work being conducted across the estate.</td>
</tr>
<tr>
<td>6.3 Management plan administered in compliance with the requirements of the Native Title Act 1993.</td>
<td>Completed/Ongoing</td>
<td>Parks Australia has not received any Native Title claims in the SE Network during the foundation phase of active management.</td>
</tr>
</tbody>
</table>

Considerations for year 5-8 implementation (consolidation phase):

- Activity 6.2 – there might be some work here?
➢ 6.1 and 6.3 are BAU.

➢ Work on a standalone indigenous advisory group for the South-east network

➢ Further work on the identification of the most appropriate Aboriginal representation at the South-east forum.

➢ Shearwater (or related) projects.
South-east Commonwealth Marine Reserve Network

Strategy 7:

*Evaluate and report on the effectiveness of this management plan through monitoring and review.*

End of management plan outcomes (10 years):

22. *Management is improved on the basis of new information and knowledge.*
   - Outcomes across the 7 strategies (as activities are completed) provide new information that helps shape and improve our management focus (consistent with adaptive management theory).

23. *Improved understanding of the conservation values, and the pressures on such values, of the marine reserves network.*
   - The outcomes of specific strategy activities continue to improve our level of understanding of park values and the pressures upon them.

24. *The establishment of a program which provides the foundation for the long-term monitoring, evaluation and reporting on the marine reserves network.*
   - Parks Australia is currently working on developing a Program Logic that will support long term monitoring and reporting programs. This framework will help inform future Management Plan review processes, for the SE Network and across the estate.
   - An effective Program Logic framework will also assist in the development of performance indicators for the SE Network, requiring associated implementation of monitoring. The finalisation of a research and monitoring strategy (developed in conjunction with the SE Forum) is the first step in establishing monitoring priorities that will form part of the performance assessment process.
   - Alignment of Parks Australia performance and management effectiveness measures with the SE Network Implementation Schedule will improve the linkage between objectives, strategies, and actions.

25. *Effective reporting on reserve management to inform stakeholders and meet statutory requirements.*
   - To date the annual implementation schedule yearly progress reports have been made available to the Department of Environment and Energy for inclusion in their annual reporting process (publically available).
   - Annual implementation schedule yearly progress reports provide an important source of information for SE Forum members and the groups they represent, it is anticipated that the importance of these documents for stakeholders will increase.

Foundation phase outcomes (4 years):

26. *Performance framework and reporting provides management guidance to support adaptive management.*
   - Parks Australia provides annual implementation schedule yearly progress reports which are a high level overview of progress against activities and are an efficient communication tool to SE Forum members. The yearly progress reports provide a snap shot for Parks Australia to review how short term (4 years) outcome delivery are tracking against longer term (10 year) outcomes.
➢ These reports also provide recommendations for initiating, continuing or terminating activities as part of the effective adaptive management framework progressed in consultation with the SE Forum (also used as reference information by SE Forum members for discussion with their sectors).

➢ As detailed in the years 1-4 implementation schedule Parks Australia has drafted a 4 year status report for consideration by the SE Forum. It is envisaged that not only will this Status Report deliver an overall picture of what has been achieved during this period in the SE Network, but also provide an effective starting point for development of the 5-8 year Implementation Schedule.

Progress against Outputs:

Progress against the outputs listed below is considered over the entire four years of the foundation phase (2013-2016). Please refer to the annual progress updates (e.g. enclosures 1, 2, 3, 4) for more detailed updates on the progress made throughout each specific year.

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</tr>
</thead>
<tbody>
<tr>
<td>7.1 Progress on actions monitored and reported and management effectiveness measures (including indicators) developed.</td>
<td>Not completed</td>
<td>Management effectiveness indicators have not yet been developed. A program logic was developed, another is in the process of being developed to reflect the new estate environment.</td>
</tr>
<tr>
<td>7.2 Yearly progress reports prepared to inform our consultative representatives and management.</td>
<td>Completed</td>
<td>Progress reports have been presented to, and finalised with, the SE forum each year.</td>
</tr>
<tr>
<td>7.3 South-east information to the Department of the Environment and Parks Australia annual reports submitted.</td>
<td>Completed + ongoing</td>
<td>Information from the SE Network has been provided for DNP annual reports.</td>
</tr>
</tbody>
</table>

Considerations for year 5-8 implementation (consolidation phase):

➢ Activity 7.1 Monitoring indicators for the SE network need to be developed (or at least priority indicators identified) ASAP

➢ Activity 7.2 Change the structure of these to make reporting easier. Need to do a mapping process to link new projects to management plan actions to outcomes.