



National Environmental Science Program

National Environmental Science Program

Marine and Coastal Hub annual progress report 1 May to 31 December 2021



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Acknowledgement of Country

The Marine and Coastal Hub acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Letter from the Hub Leaders

When the Marine and Coastal Hub (MaC) first started operations, there was a limited timeframe within which to develop projects for RP2021. The Hub developed a series of scoping studies to enable appropriate research-user engagement for project co-design and to help inform research directions in future research plans. However, it was also felt that in addition to scoping studies, we should also commission actual research projects where they had already been co-designed or met an research-user need. The Marine and Coastal Hub is supported by 29 research institutions, collectively representing the capability of thousands of researchers.

The philosophy of the Hub has been to embrace the research community of Australia as potential contributors. Although time was very short, we put out an open call for small-scale, short-term research projects. Given the short timeframe available, these proposals, by necessity already had to be advanced in their co-design or meeting immediate research needs. From this process, we received 131 proposals and selected 20 projects for funding. Many of these had already gone through a co-design process or were building on previous work and established partnerships. This process thus enabled us to establish on-ground research activity and further collaborative work with a range of research-users, all within our first year of operation.

Examples of the benefit of this process include our seagrass projects in northern Australia, which were co-created and co-designed with Traditional Owners by researchers familiar with the NESP process and just awaiting funding opportunity. We were also able to continue with ongoing long-term monitoring of southern right whales, whose populations are recovering after near extinction in the 1970's. Building upon existing information that has been collected over many years, we were able to commission small but effectual projects that synthesise and make available large amounts of existing data. Examples here include compiling and analysing data and developing a report card for data collected under the RedMAP program (www.redmap.org.au) which utilises citizen science from across the nation to record extensions in the distribution of marine species (largely in response to warming oceans). Another example is the collation and integration of data collected from >200 benchmark Surface Elevation Tables (which measure vertical accretion or subsidence in tidal and estuarine wetlands) onto a national platform.

We were also able to commission a number of projects that service the research needs of Parks Australia, a key research-user and partner in our Hub, and several projects that lay the foundations for more effective marine and coastal restoration and support our Protected Places initiative.

None of this would have been possible if the Hub hadn't pushed forward with an open call early in 2021 utilising our research community. As these projects deliver in 2022, we will see the benefit derived from this process.

Thus this, our first Annual Report, demonstrates that in our first year, the Marine and Coastal Hub has undertaken all of the necessary establishment activities required by the Hub and invested in partnership building on a wide range of topics. Overall, the Hub has progressed a significant number of projects in the first research plan that address key aspects of the program's defined outcomes, and the combination of small-scale and scoping projects will provide a solid basis for future research investment. These have been progressing under the backdrop of continued Covid-19 restrictions, and while this has contributed to minor delays to a number of projects, it will not impact their contribution to research planning during 2022.

Establishment

The National Environmental Science Program (NESP) is a long-term commitment by the Australian Government through the Department of Agriculture, Water and the Environment (DAWE). The program funds environmental and climate research. The second phase of NESP builds on the foundations of past work, and funds 4 research hubs from 2020–21 to 2026–2027.

The Hub completed a broad range of foundational activities in 2021. The establishment of the Hub's Executive Teams for both the southern and northern nodes, and the Steering Committee provided the cornerstones to advance progress on milestones in the NESP head agreement. Appointment of the Hub's Steering Committee members was confirmed and the terms of reference for the committee was agreed and accepted by the Department (milestones 2 & 3 of the Funding Agreement). The University of Tasmania (Utas) and the Reef and Rainforest Research Centre (RRRC) signed the funding agreement (milestone 1 of Funding Agreement). A range of appointments were made by UTAS and RRRC to secure high-performing team members for both nodes (i.e. Hub leaders, executive officers, knowledge brokers, communications officers, a data manager, an Indigenous facilitator and administrative support). Appointments were also made to support the development and implementation of the Hub's Protected Place Management initiative, with fractional positions established in both the northern and southern nodes. The Executive Team established a Hub Leadership Team to provide advice on development of research plans and annual progress reports.

The Executive Team developed four strategies (Communication Strategy, Knowledge Brokering Strategy, Data Management Strategy and Indigenous Partnerships Strategy) and these were endorsed by the Steering Committee and accepted by the Department (Milestones 4 & 5 of the Funding Agreement). The strategies are important documents that outline how the Hub will conduct its research activities, in particular co-creation, co-design and co-delivery of applied marine and coastal research.

The 2021 Research Plan was developed and accepted by the Department (milestones 6 & 7 in the Funding Agreement). Thirty-two projects were collaboratively developed with the Hub's research partners, research-users and Indigenous organisations. The research portfolio included 10 scoping projects designed to implement collaborative approaches to identify research priorities for investment in 2022 and beyond. The portfolio also included twenty-two smaller, short-term projects designed to advance and build on existing research investments in applied marine and coastal research. Many of these projects have progressed significant engagement with research-users, other research providers and relevant stakeholders. This built on earlier engagement by the Hub's knowledge brokers with the Department to outline the broader context of the Hub's vision, drivers and structure. All project leaders reported on project progress in mid-December 2021.

Research

NESP hubs deliver world-class, practical, evidence-based research to inform decisions. This investment helps build adaptation capacity and resilience in our natural environment and communities.

NESP research has real impact through partnerships and collaboration between researchers and research-users, including policy-makers, to deliver proven outcomes. Environmental decision-makers are key partners and are encouraged to articulate their needs to researchers; provide feedback on the quality and usefulness of the research outputs; and be engaged in the communication of how this information has informed policy.

NESP research listens to and prioritises the research needs of Indigenous land and sea managers, weaves together Indigenous and western environmental knowledge systems and celebrates Indigenous-led approaches to strengthening and sharing knowledge.

New and existing NESP research findings are available to use and accessible at Australian Government and hub websites.

The Marine and Coastal Hub's 2021 research portfolio was designed to address the following high-level research priorities: 1) Applied research to support management of Australia's marine and coastal environments including estuaries, coast, reefs, shelf and deep-water; 2) Targeted biodiversity and taxonomy products to support efficient system monitoring; and 3) Environmental monitoring systems and decision support tools.

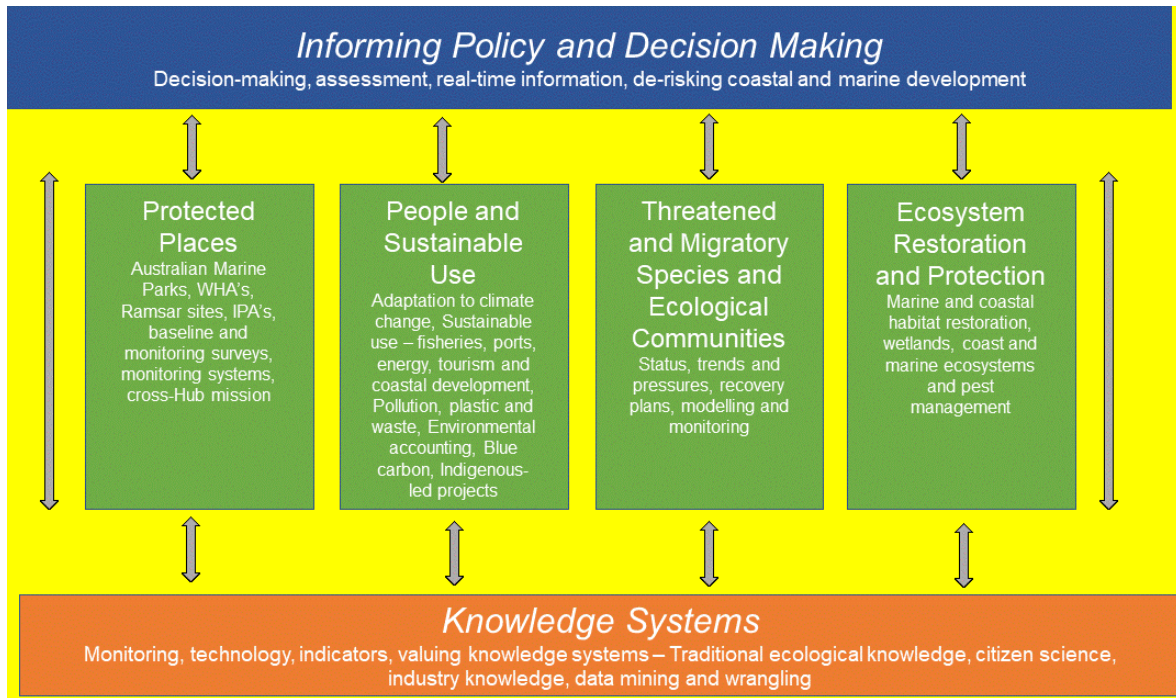
The portfolio includes 32 projects organised under six research themes (see figure below). The Hub research themes collectively and collaboratively deliver applied scientific knowledge, decision support and practical management options to support the Australian Government's priorities. The MaC Hub will provide innovative research for practical solutions to maintain and improve our understanding and management of marine waters under six research themes as outlined in the Hub's Vision Statement:

- Informing Policy and Decision-Making
- Protecting Places
- Threatened and Migratory Species and Ecological Communities
- People and Sustainable Use
- Ecosystem Restoration and Protection
- Knowledge Systems

The RP 2021 portfolio includes three types of research projects:

- 1) Scoping studies designed to promote co-creation and co-design of research between research partners and research-users, including the prioritisation of future research questions and areas. These are designed to inform future prioritisation and research planning for 2022 and beyond;
- 2) Bridging studies designed to deliver outputs and outcomes that support continuity for critical work initiated under the first phase of NESP; and
- 3) Small projects designed to progress research in priority areas aligned to the research themes (e.g. priority threatened and migratory species, and threatened ecosystems or ecosystem restoration and protection) and also contribute to scoping study findings. Several of these projects also involve cross-Hub activity and coordination, particularly in the areas of threatened species (project 1.20), Indigenous engagement (project 1.31), regional planning (project 1.32) and the Hub's Protected Place Management initiative.

The Protected Place Management initiative, led by Professor Iain Gordon and Dr Piers Dunstan, held over 20 small meetings with DAWE to discuss research needs and priorities for Protected Places as the draft strategy structure and logic was developed. The initiative leads have also participated in numerous cross Hub meetings and discussions with other initiative leads. The Protected Place Management initiative has four projects (1.1, 1.2, 1.3 and 1.4) in RP 2021 that are contributing to future directions and priorities in this research theme.



Progress towards research delivery

The Hub's Executive Team and research partners have worked closely with the Department to understand the NESP program's requirements and expectations of the Marine and Coastal Hub. These are reflected in the terms of reference for the Hub's Steering Committee and the 2021 Research Plan and its accompanying attachments (e.g. research project planning, activity budgeting and risk management and treatment planning). These requirements and expectations are also clearly reflected in the Hub's four strategies (Communication Strategy, Knowledge Brokering Strategy, Data Management Strategy and Indigenous Partnerships Strategy). These strategies include key performance indicators and a requirement for annual reviews. The Marine and Coastal Hub implemented a total of 32 projects in Research Plan 2021 covering all theme areas, and specifically included bridging projects that were identified by DAWE as project areas where continuity was required from the first phase of NESP. This related particularly to projects within both the Protected Places and Threatened and Migratory Species and Ecological Communities themes, reflecting specific time dependant decisions that required further research input.

The Hub has invested considerable effort to understand the specific needs and priorities of the Department's numerous sections with responsibility for marine and coastal environments (see section on Collaboration and Partnerships). Hub leaders, initiative leaders and knowledge brokers have actively engaged the Department to understand needs and priorities, including expectations of engagement and in many cases have facilitated discussions between Divisions and sections, with the aim of addressing the key research outcomes defined in the funding agreement.

In addition, Marine and Coastal Hub research partner project leaders have engaged with line areas within DAWE relevant to their project, including contributing to workshops, meetings and one-on-one engagement to discuss knowledge gaps and priority needs. These discussions have also involved contributions from Commonwealth research and development corporations (e.g. Fisheries Research and Development Corporation), authorities (e.g. Australian Fisheries Management Authority, National Offshore Petroleum Safety and Environmental Management Authority), and key marine agencies (e.g. Australian Hydrographic Office). Hub researchers have also consulted with numerous community and industry partners and research-users from both State and local government to better

understand needs and potential research impact. Several projects are heavily focused on working with Indigenous partners (projects 1.12, 1.14 and 1.31), industry (project 1.19) and community (projects 1.30, 1.29).

The Protected Places Management initiative has been an important activity focus for the Hub during the reporting period, and for more information on the initiative see the Research section above and Cross-cutting initiatives below.

Research projects

Attachment A lists the projects funded under the Marine and Coastal Hub and provides information on the project status, information on outputs and links to products for all projects (where available). Exceptions to the *NESP data and information guidelines* are also noted there.

Cross-cutting initiatives

Two co-leads were appointed to advance the Protected Places initiative, one in each of the Hub's nodes. The initiative co-leads have engaged extensively with research-users (including numerous relevant sections in the Department), researcher partners and stakeholders to collaboratively advance a co-design approach to the initiative during the reporting period. A key activity advancing the initiative during the reporting period was development of the draft Initiative Strategy. The draft identifies three high-level outcomes:

- 1) Management of Australia's protected places is supported by building capacity of Indigenous communities and organisations to determine, lead and disseminate Indigenous knowledge and science to support protected place management;
- 2) Adaptive management of protected places is supported by building the evidence base including capacity for consistent, standards-based approaches to collecting, analysing, managing, and reporting social, economic, cultural, heritage and environmental data to identify the key drivers of resilient populations and ecosystems in protected places, particularly climate change and impacts from multiple drivers; and
- 3) Governance of Australia's protected places is improved by identifying effective interventions and approaches to management and highlighting opportunities to develop complementary approaches between programs and across the land/sea nexus.

The initiative co-leads have also worked collaboratively with the Hub's project leaders to advance the initiative by implementing Research Plan 2021. Projects include developing a deeper understanding about the initiative's focus areas, vision, activities and outcomes (project 1.1); coordinating efforts to survey protected places in the marine environment (project 1.2); supporting the monitoring, evaluation, reporting and improvement system for Australian Marine Parks (project 1.3); and characterising values and identifying indicators on the South-West Corner Australian Marine Park (project 1.4). Three co-designed research project proposals were identified to advance the initiative in Research Plan 2022.

The Hub has worked collaboratively with other Hubs during the reporting period to advance all four NESP cross-cutting initiatives. Participation in the Cross-hub Senior Governance Committee during the reporting period has generated shared insights about expectations, opportunities and challenges for advancing the initiatives. All five initiative leaders are meeting monthly to promote a collaborative, cross-hub approach to the initiatives. Initiative leaders also identified several research project areas that could form part of a cross-hub initiative set of activities. The Hub co-leads and knowledge brokers are also meeting with initiative leaders to promote a cross-hub approach to the initiatives. The Hub has met with initiative leads in other hubs to explore and advance approaches for waste management (e.g. Release and impact of chemicals, antimicrobials and microplastics into the marine environment), climate adaptation and protection of the assets in the coastal zone, and conservation

planning for threatened and migratory marine species and ecological communities (e.g. Southern Right Wales, sawfish, Maugean skate). These advances have instigated important discussions that will advance in 2022.

Emerging priorities

Within Research Plan 2021 the Hub has one approved emerging priorities project: *Application of environmental DNA to survey Bathurst Harbour Tasmania for the endangered Maugean skate*. The project leader has made good progress against project milestones and is on track to deliver the approved outcomes. The first of two Bathurst Harbour sampling trips was conducted from the 3rd to the 7th of November 2021. Quality assurance and quality control procedures have been completed to validate the successful collection and preserving of eDNA of fish species. The second (last) sampling trip is scheduled to occur in the first week of February 2020. All identified risks for the project are being effectively managed. The NESP investment in that project is \$73,528.

Performance against milestones

Performance against funding agreement milestones

All milestones for the reporting period and to date have been met as per the funding agreement (Milestones 1 to 7).

Performance against the research plan milestones

Information on project progress and performance is provided in Attachment A.

Measuring success

Hub outcomes and outputs

Research Plan 2021 identified five hub goals for the reporting period. The following text provides a broad description of the outcomes and outputs against these hub goals for the reporting period.

Build awareness of the Marine and Coastal Hub, its goals, outputs and outcomes: The Hub has built shared understanding with its researcher partners and research-users about the Hub, its goals, outputs and outcomes. Extensive targeted knowledge brokering, communication and Indigenous facilitation was conducted over the course of the reporting period, particularly with regard to research priorities and research planning processes. The first research plan and four hub strategies were foundational outputs developed in the reporting period that were key to building shared understanding.

Work with the Department to increase the awareness of NESP research and impact at a local, regional and national scale: The Hub prioritised engagement with the Department in the reporting period to establish a clear understanding of the Australian Government research needs, priorities and links with other research-users at local, regional and national scales. The Hub has increased awareness of the NESP research across nine Divisions of the Department, including how best to engage with the Hub to co-create and co-design research proposals. In the next phase of the Hub we will promote the Hub via the website, media releases, social media and national presentations to research users.

Re-establish and build partnerships and relationships with previous and new networks to co-design and co-deliver research projects: Hub leaders, initiative leaders, knowledge brokers and the Indigenous facilitator have built a broad range of partnerships critical to the co-creation, co-design and co-delivery of research during the reporting period. The focus in 2021 has been establishing

partnerships among the Hub's 29 research partners, research-users outside of the Department including Indigenous organisations (e.g. NAILSMA, Malgana Aboriginal Corporation and Kimberley Land Council), State and territory governments and Non-Governmental Organisations (e.g. The Nature Conservancy and Ozfish).

Deliver priority research areas and questions to be addressed in future Research Plans. Shared understanding among research partners and research-users has been generated by co-design and co-delivery of 32 projects, particularly the 10 research scoping projects. Initial insights to priority research areas and questions were used to identify 7 priority research topics to be advanced in Research Plan 2022. Final outputs from these projects will inform identification of priority research areas to be advanced in Research Plan 2023.

Make all outputs and products publicly available and accessible: The Hub developed and commenced implementation of its Data Management Strategy to generate shared understanding among research partners and research-users about expectations and requirements for availability and access to the outputs and products. The data wranglers met with all project leaders to agree on data requirements and responsibilities at the project level. The foundational outputs for the Hub (i.e. Research Plan 2021, project plans, research summaries and Hub strategies) are available to the public on the Hub's interim website. Outputs associated with the findings for Research Plan 2021 projects will start to emerge at the end of the first quarter 2022 and will be made available to the public on the Hub's website.

Short- to medium-term outcomes – quantitative measures

Table A: Quantitative performance measures (short- to medium-term outcomes)

Notes: Reporting period means the calendar year preceding the Annual Progress Report. For the first year of NESP 2 hubs, the reporting period is May to December 2021. Unless specified otherwise, the term 'research-user' refers to departmental and/or external users.

No.	Performance measure	Result for reporting period (numerical only)	Explanation, if any
1	Proportion of projects (active or completed in the reporting period) for which there is a research-user actively engaged in the project: a) co-design b) research delivery c) use and research uptake	a) 32/32 b) 32/32 c) 32/32	
2	Research outputs in the reporting period provided to research-users on time and as identified in the approved research plans: d) total number e) proportion	d) 13 fact sheets e) 100%	The majority of research outputs for Research Plan 2021 are timed for delivery in 2022 and will be reported in the next annual research plan. Facts sheets drafted and provided to DAWE in 2022
3	Proportion of completed research projects that are confirmed to meet the needs of departmental research-users as identified at project co-design stage	0	Research projects in Research Plan 2021 are timed for completion in 2022.
4	Number of projects that: a) are Indigenous-led b) meet research and management priorities of Indigenous stakeholders c) are Indigenous-led projects that also meet research and management priorities of Indigenous stakeholders.	a) 8 b) 10 c) 7	
5	Number of peer-reviewed, NESP-funded publications during the reporting period	0	Research outputs for Research Plan 2021 are timed for delivery in 2022 and will be reported in the next annual research plan

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No.	Performance measure	Result for reporting period (numerical only)	Explanation, if any
6	Number of NESP research citations in other researchers' publications during the reporting period	0	Research outputs for Research Plan 2021 are timed for delivery in 2022 and will be reported in the next annual research plan
7	Percentage of completed NESP products, research publications, datasets and metadata that are discoverable and accessible in accordance with <i>NESP data and information guidelines</i> and the funding agreement	0	Project-level metadata records have been developed for publishing in 2022
8	The number of datasets and management tools that benefitted from Hub research and outcomes (including but not limited to web-based decision support systems; environmental management tools for Indigenous communities, waters and land management; plans of management for Indigenous Protected Areas (IPAs), co/jointly managed parks, marine park plans of management, conservation agreements)	TBA	Hub to meet with DAWE to discuss decision rules for administering this KPI
9	Number (full-time equivalents) during the reporting period of: a) PhD students b) post-doc and early-career researchers c) mid-career researchers d) Indigenous researchers e) volunteers (total) f) Indigenous volunteers g) Indigenous sub-contractors	a) TBA b) TBA c) TBA d) TBA e) TBA f) TBA g) TBA	Hub to meet with DAWE to discuss decision rules for administering this KPI (this level of information not incorporated in the current project plan template provided by DAWE)
10	Number of knowledge-sharing and communication events and activities held or shared: a) with on-ground managers (general) b) jointly with Indigenous researchers and Traditional Custodians c) that are Indigenous-led	a) 164 b) 29 c) 25	'On-ground managers' is defined generally and includes events with those involved in management and decision making of on ground assets
11	Proportion of Hub staff and researchers who have completed: a) Indigenous cultural capability training b) Indigenous cultural and intellectual property training c) both Indigenous cultural capability training and Indigenous cultural and intellectual property training	a) 15 b) 5 c) ?	
12	Proportion of Hub projects overall that fall within the categories of the Three-category approach: • Category 1		

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No.	Performance measure	Result for reporting period (numerical only)	Explanation, if any
	<ul style="list-style-type: none"> • Category 2 • Category 3 	Cat 1: 6/32 Cat 2: 5/32 Cat 3: 21/32	
13	Proportion of Hub projects that have been developed in consultation with the Hub's Indigenous Facilitator or the Indigenous Facilitation Network	5/32	
14	Number of guidelines about best-practice that the Hub has produced or co-produced in the reporting period for: <ol style="list-style-type: none"> a) knowledge brokering (e.g. https://www.nespthreatenedspecies.edu.au/publications-and-tools/connecting-research-with-policy-guide-to-writing-for-policy-makers) b) Indigenous partnerships and products (including design of flagship engagement activities e.g. <i>Our Knowledge Our Way</i>; <i>Three Category Approach</i>) c) environment and climate management within the scope of the Hub's research (e.g. <i>Guidelines for the translocation of threatened plants in Australia, Third Edition</i>; https://www.nespmarine.edu.au/project/project-d2-standard-operating-procedures-survey-design-condition-assessment-and-trend) 	a) 0 b) 0 c) 0	Project 1.7 (Towards a consolidated and open-science framework for restoration monitoring) is developing guidelines for restoration monitoring, these will be published in 2022

Longer-term outcomes – qualitative measures

The expected outcomes of the NESP are to produce research that:

- 1) enhances our understanding of Australia's environment, climate and weather;
- 2) is communicated clearly to relevant stakeholders and the public;
- 3) is discoverable and accessible; and
- 4) informs decision-making and addresses environmental priorities.

The Hub is in the very early stages of establishing and progressing its strategies and research plans, and these collectively will provide the foundations from which qualitative measures of longer-term outcomes will emerge. In this context, the Hub has instigated 10 collaborative scoping projects designed to develop shared understanding about priority needs of research-users and how these needs will improve understanding, conservation and management of the marine and coastal environments in Australia. The projects in Research Plan 2021 cover a broad range of relevant areas including wetlands, threatened and migratory species, water quality, restoration, survey planning and coordination, Indigenous partnerships, socio-economic values, and northern Australia regional planning. Such scope and early engagement will maximise the chance that future research investments will be targeted at priority issues, complement other related funding initiatives, and result in longer-term outcomes and impact.

Early signs of qualitative measures of longer-term outcomes are evident in the Hub's impact stories (see next section on NESP impact stories).

NESP impact stories

NESP impact stories are provided at Attachment B. These stories showcase the contribution of NESP -funded research beyond contributions to academia, including to the environment, the economy, society, culture, public policy and quality of life.

In the establishment phase of the Hub, three impact stories have been collated around the themes of:

- Protected places
- Improved understanding of seagrass habitat for Sea Country management
- Improved knowledge of Threatened and migratory species and ecological communities

The Protected Place research has provided significant support for developing Parks Australia's Monitoring, Evaluation, Reporting and Improvement System for Australian Marine Parks, further developing and implementing a tool for improved nationally coordinated planning for areas of interest for seabed mapping and characterisation, and analysing ecological data in selected marine parks. All of the activities have involved significant early engagement and capacity building in Parks Australia.

Collaboration and partnerships

NESP encourages a collaborative, multi-disciplinary approach to environmental and climate research. Key to the success of the Hub will be the capacity to foster partnerships across hubs and with a wide range of decision-makers across the Australian community, including Indigenous communities, to achieve positive environmental, social and economic outcomes. The following four sections outline the Hub's approach to collaboration and partnerships during the reporting period.

Knowledge brokering

The Hub's approach to knowledge brokering during the reporting period has focused on advancing the first five objectives of the Knowledge Brokering Strategy. The primary focus has been on establishing

networks of research partners and research-users. Three Regional Reference Groups have been formed to establish networks in temperate Australia. A network of relevant staff in the Department has also been established to facilitate knowledge exchange between the Hub and the Department. The Hub has generated shared understanding about research-user needs and priorities, and actively engaged research-users in co-design and co-delivery of scoping projects designed to define questions to be answered by applied science. Significant effort has been invested to understand the needs of the Australian Government and how these relate to the needs and interests of State and territory governments and industry. Knowledge brokers provided all project leaders with tailored advice about meeting the engagement expectations of the Department; a particularly challenging task given the extensive list of departmental research-users included in project plans. The Knowledge Brokering Strategy is scheduled to be reviewed in mid-2022.

Communication

The Hub's approach to Communications during the reporting period has focused on advancing the first two actions of the Hub's Communication Strategy. The primary focus has been on working with researchers and knowledge brokers to identify and prioritise communication needs and ensuring projects leaders have clarity about the role of the Communications Officers. An interim website has been established to provide the public access to the Hub's foundational documents (e.g. Steering Committee membership, Executive Team members, research plans, project summaries and the Hub's 4 strategies). Social media profiles (i.e. Facebook, LinkedIn, Twitter and Instagram) have also been established to promote the Hub's research impacts and achievements. The Hub also contributed an article the first NESP2 edition of the NESP news – the Departments newsletter for NESP. The Communication Strategy is scheduled to be reviewed in mid-2022.

Indigenous partnerships

The Hub's approach to Indigenous partnerships has included a range of activities. The appointment of an Indigenous Facilitator was a pivotal development for implementing the Hub's Indigenous Partnerships Strategy and contributing to the NESP Indigenous Facilitators Network during the reporting period. The Indigenous Facilitator has worked with the Hub's Steering Committee and Leadership team to develop a shared understanding about their role (e.g. how it fits with Hub leaders, knowledge brokers and project leaders). The Indigenous Facilitator worked with project leaders to promote Indigenous science partnerships in research projects. Project 1.31, a national-scale project, commenced with the primary focus of promoting Indigenous participation in the Hub's research and identifying Indigenous research needs to inform Research Plan 2023. A number of small-scale projects with Indigenous collaboration and engagement were advanced during the reporting period. The Indigenous Partnerships Strategy is scheduled to be reviewed in mid-2022.

Data management

The Hub's approach to data management during the reporting period has focused on ensuring research project plans are consistent with the Hub's strategy, including clear articulation of project outputs and consistency with the FAIR data principles. The Data Wranglers met with project leaders to agree on a data management plan for their projects. A data delivery schedule has also been established enabling Data Managers to proactively engage with project teams on data discovery and accessibility. The Data Management Strategy is scheduled to be reviewed in mid-2022.