

3. INDIGENOUS ENGAGEMENT BY THE NESP HUBS

3.1 Introduction and Approach

This Chapter examines how the six thematic Hubs under the NESP have performed in relation to improving the overall levels of Indigenous engagement in the NESP. This assessment was carried out in several stages.

- Firstly, SGSEP prepared an overview of each Hub’s Indigenous engagement activities based on what was available on the public record via the Hub’s websites, annual reports and annual research plans to the Department and other publicly available documents (i.e. technical reports, final reports, fact sheets, brochures, videos and journal articles). These Overviews record significant information about:
 - the Hubs’ purpose and scope;
 - research priorities/themes;
 - commitment to Indigenous Engagement;
 - Indigenous Engagement and Participation Strategies (IEPS);
 - a tabular analysis of a selection of the Hub’s projects detailing the nature of Indigenous engagement in each of those projects;
 - selected project summaries,
 - information about the extent of cross-Hub collaboration and with relevant Commonwealth agencies.
- Secondly, a dialogue with each of the Hubs about the information gleaned from public records and what was included in the Overviews of their Hub’s Indigenous engagement activities (see first point above), with ample opportunities for the Hubs to view drafts and provide additional information and/or corrections.
- Thirdly, analysis of the information gathered/provided, the development of a spreadsheet for comparative analysis of a selection of projects. (A summary of the spreadsheet is included with this report as **Appendix D**).
- Fourthly, the preparation of SGSEP’s Preliminary Findings followed by one-on-one interviews with each of the Hubs’ key Knowledge Brokers and/or Indigenous members of their Steering Committees and Indigenous Advisory or Reference groups (where they have been established and where they made themselves available).
- Finally, consultation on Preliminary Findings with the NESP Hubs and with other Indigenous research stakeholders, including the IAC (for the full list see **Appendix A**).

The NESP Hub Overviews are a comprehensive resource, documenting each of the Hubs’ commitment to, and extent of, Indigenous engagement in their governance and research activities and should be read alongside the analysis in this Chapter. [Due to their electronic size, the overviews have been provided to the Department as separate documents.]

In reading the analysis, it is important to bear the following points in mind:

- It was not a requirement of NESP that the Hubs specifically identify Indigenous environmental or climate science research priorities. Our observations about what the Indigenous environmental

and climate science research priorities may have been drawn out on the basis of our analysis of the research projects and other activities undertaken by the NESP Hubs.

- The Department's expectations with respect to ensuring effective integration of Indigenous aspirations and outcomes in the NESP were clearly set out in the *NESP Indigenous Engagement and Participation Strategy Guidelines* because the Department believes all research undertaken, irrespective of its nature, will have some sort of impact on Indigenous Australians (DoE 2015a). The Department identified Indigenous engagement and participation in the NESP as a cross-cutting theme for all the Hubs in the development of their research priorities. Our analysis therefore examined the full scope of NESP Hub activities, including their governance arrangements, their annual plans and annual reports, selected research projects and engagement practices across the board.
- Most of the NESP Hub research projects were not necessarily initiated by Indigenous peoples as a reflection of their priorities *per se*. In most cases Indigenous stakeholders were approached by researchers and the Indigenous stakeholders were reacting to the science needs of other end users or the research project arose from Hub priorities. Some of the specific projects that were initiated by Indigenous peoples *per se* or had a very high level of Indigenous engagement are discussed in more detail in **Parts 3.7** and **3.8** of this Chapter and in **Appendix E**. However, some of the Indigenous stakeholders SGSEP consulted made the point that it would be nice to see Indigenous peoples driving some of the research priorities. We return to this point later in this report.

3.2 NESP Hubs' commitment to Indigenous Engagement

SGSEP collected and collated information and resources from the NESP Hubs and other sources in relation to their commitment and actions in relation to Indigenous engagement across the full scope of their roles and activities.

As the Overviews of the NESP Hubs shows, all of the Hubs have taken the responsibility of lifting the level of Indigenous engagement in their activities very seriously.

Table 3.1 shows the nature of Indigenous involvement in the governance of the NESP Hubs and the nature of Indigenous engagement by the NESP Hubs at an aggregated scale.

The various initiatives aimed at lifting the level of Indigenous engagement in the overall governance and business of the Hubs can be summarised as follows:

- Each of the Hubs has an Indigenous engagement strategy (as required under the NESP Guidelines and the Department's IEP Strategy and discussed in the next part of this Chapter).
- Two of the Hubs have established an Indigenous Advisory or Reference Group (CAUL, TSR). The CAUL Hub's Indigenous Advisory Committee is co-chaired by a male and female chair to reflect and respect gender diversity.
- All of the Hubs have at least one Indigenous member on their Steering Committee or governing body.
- Four of the Hubs have an Indigenous Research Executive Member or Indigenous Research Leader (CAUL, ESCC, NAER, TWQ).
- Four of the Hubs employ Indigenous facilitators (ESCC, NAER, TSR, TWQ).
- All of the Hubs employ several Indigenous Researchers.
- All of the Hubs make use of Indigenous liaison, science advisers and coordinators.
- Five of the Hubs are applying the 3-Category Approach to Indigenous Engagement. The other Hub applies the Department's 5-Pillar approach to Indigenous Engagement (ESCC).

These achievements are indicative of a growing commitment to Indigenous engagement by the NESP Hubs.

Table 3.1: NESP Hubs and Indigenous Engagement (as at December 2019)

Indigenous Engagement	NESP Hub (Numbers reflect persons in those roles)					
	CAUL	ESCC	MB	NAER	TSR	TWQ
Indigenous Engagement & Participation Strategy	Yes	Yes	Yes	Yes	Yes	Yes
Indigenous Advisory/Reference Group	Yes	No	No	No	Yes	No
Indigenous membership of Hub Steering Committee	Yes (2)	Yes (1)	Yes (1)	Yes (2)	Yes (1)	Yes (1)
Research Executive member of Research Leader	Yes (1)	Yes (2)	No	Yes (1)	No	Yes (1)
Indigenous Facilitator	No	Yes	No	Yes	Yes	Yes
Indigenous Researchers	Yes	Yes	Yes	Yes	Yes	Yes
Indigenous liaisons, science advisers and coordinators	Yes (a)	Yes	Yes	Yes	Yes (a)	Yes
Applies 3-Category Approach	Yes	No	Yes	Yes	Yes	Yes
Applies DEE 5-Pillar Approach	No	Yes	No	No	No	No

(a) Some of the Indigenous Liaisons in the CAUL and TSR Hubs are also members of their respective Hub's Indigenous Advisory/Reference Group.

Sources: DEE/DAWE and NESP Hub websites.

However, care needs to be taken to not read too much into some of these statistics. For example, while only two of the Hubs have established an overarching Indigenous advisory or reference group, the Hubs were not required to do so, and other governance models, like regional Indigenous facilitation, have proved to be an effective engagement mechanism for the NAER Hub. While it was not a requirement to establish an Indigenous advisory or reference group, the CAUL and TSR Hubs were motivated to do so because they both felt their respective Steering Committees could benefit from advice provided by such a group with respect to Indigenous engagement and participation on a range of matters relating to the Hubs' research, communication and knowledge-brokering activities. For both of those Hubs, their Indigenous advisory groups play active roles in advising the Hubs about the appropriate level of Indigenous engagement in all of their respective research projects. For example, since establishing its Indigenous Advisory Committee in 2016, the CAUL Hub has required all of its project proposals to be submitted to the Committee for consideration and advice on Indigenous engagement. This has led to increased communication, collaboration and co-design with Aboriginal and Torres Strait Islander peoples and organisations in all of the CAUL Hub's projects with more projects having a much higher level of Indigenous engagement than would otherwise have been the case.

With significant prior experience under the predecessor programs, including CERF⁸, TRaCK⁹, NERP¹⁰, the NAER, TWQ and the TSR Hubs have built deep and trusting relationships with Indigenous peoples and organisations in the regions where they are carrying out research. The CAUL, ESCC and MB Hubs started from a lower base and have progressively built their relationships and developed partnerships with the Indigenous peoples and organisations relevant to their respective fields of research and involving Indigenous peoples in their research activities. These matters are discussed in more detail later in this Chapter.

When compared to the NERP, considerable gains have been made. All six of the NESP Hubs have successfully lifted the level of Indigenous engagement in the overall governance of the program, as well as in relation to research and communication activities, and the program learning is continuing.

It is also clear that through Indigenous engagement, access to Indigenous traditional knowledge and observance of Indigenous cultural practices have made significant contributions to, or enhanced existing scientific knowledge of, environmental issues (including but not limited to, threatened species, land and water management, fire management and climate change) and contributed to the development of practical environmental solutions. This is discussed in more detail in **Chapter 7**.

3.3 NESP Hubs' Indigenous Engagement and Participation Strategies

The Department's IEPS Guidelines issued in April 2015 included five considerations for the development of an IEPS by the NESP Hubs, including:

- Performance indicators for, but not limited to, engagement; views and knowledge; co-benefits; employment; and research outcomes.
- Respectful relationships to achieve successful outcomes and understanding and actioning Indigenous cultural protocols.
- Consultation with Indigenous people and communities in order to inform research at appropriate phases, enhance ownership of the research outcomes and support increased on-ground adoption of research results.
- Deeper engagement and participation activities which help embed cultural perspectives, build Indigenous capacity and establish partnerships between researchers and Indigenous communities.

⁸ <https://www.environment.gov.au/node/13277>

⁹ <https://www.nespnorthern.edu.au/track/> and <https://www.environment.gov.au/system/files/pages/56c08f6f-7bf7-4594-8175-b4c143110156/files/hub-track.pdf>

¹⁰ <https://www.environment.gov.au/science/nerp>

- Adoption of Indigenous knowledge, intellectual property rights and closing the loop in relation to communicating the outcomes and research results to participating Indigenous peoples and communities.
- Research outcomes benefiting Indigenous Australians.

The Department’s IEPS Guidelines also stipulated that in developing their IEPS, the Hubs must ensure that:

- The contribution of resources, knowledge and access to other information made by Indigenous peoples is acknowledged by way of rights in the research outputs and/or access to research results.
- Research outcomes are made available to the Indigenous persons or community in a form that is useful and understandable.
- Indigenous co-researchers are recognised in publications to which their knowledge and endeavours have contributed.
- Researchers are aware of and commit to the equitable sharing of the benefits derived from the utilisation of Indigenous knowledge.

As per the Department’s IEPS Guidelines, each of the Hubs has prepared and adopted an Indigenous Engagement and Participation Strategy (IEPS). The Indigenous engagement and participation strategies identified at the inception of the NESP were expected to be realised in Hub research plans and the broader reach of research activities across the life of the program. One way of achieving this requirement is to keep the Hub’s IEPS under regular review.

Table 3.2 shows the NESP Hub IEPS by date and version number that was inspected for this review. The ESCC Hub maintains that its IEPS complements the Hub’s annual Research Plan and is updated annually with each annual Research Plan approval. Similarly, the MB Hub’s IEPS states that the annual Research Plan progress reports provide an important trigger for periodic review of the IEPS. Apart from the ESCC and MB Hubs, it is not clear from the publicly available versions of the IEPSs as to whether they were in fact reviewed annually and whether any changes were made. If engagement and participation strategies are to be seen as living documents, then the annual research plans and reports need to show how the strategies are being applied and reviewed annually.

Table 3.2: NESP Hub IEPS by Date and Version

NESP Hub	Date	Version
CAUL Hub	May 2015	V1
ESCC Hub	February 2017	V3.1
MB Hub	November 2015	V1.1
NAER Hub	August 2016	
TSR Hub	November 2015	V1.1
TWQ Hub	July 2015	V0.4

The objectives of each of Hub’s IEPS are listed in Appendix C. These are summarised and compared in **Table 3.3**, which shows:

- Only one objective is common to all of the hubs: A commitment to conducting research to the highest ethical standards.
- Three objectives are common to most of the Hubs, including undertaking research that is relevant and beneficial to Indigenous Australians (except ESCC Hub); communicating research results and

sharing knowledge with Indigenous Australians (except ESCC Hub) and having meaningful Indigenous participation in Hub governance (except TSR Hub).

- Opportunities for Indigenous employment, training or skills transfer is common to four of the Hubs (CAUL, MB, NAER, TWQ Hubs).
- Shaping research so that Indigenous Cultural and Intellectual Property is respected is common to three of the Hubs (MB, NAER, TSR Hubs), while the TWQ hub includes research which respects Indigenous priorities and values.
- Increasing cultural awareness within the Hub is common to three of the Hubs (ESCC, MB, NAER Hubs).
- Building relationships with Indigenous peoples/groups is common to two of the Hubs (ESCC, MB Hubs).
- Five objectives relate to matters which only a single Hub has identified. Interestingly, these relate to matters such as:
 - Working collaboratively with other institutions/research partners (CAUL Hub);
 - Engaging with other NESP Hubs (ESCC Hub);
 - Developing and delivering case studies that address engagement/collaboration goals (ESCC Hub);
 - Nurturing effective involvement of Indigenous peoples to address on-ground needs (TSR Hub); and
 - Transitioning from engagement to collaboration (NAER Hub).

Four of the five objectives discussed in the last dot point above, could also have applied to the other Hubs.

Several Indigenous stakeholders commented that the Department's IEPS (DoE, 2015a) did not include a set of clear objectives for Indigenous engagement in the NESP. It would have helped the NESP Hubs if there had been one set of objectives the NESP Hubs could add to, but not divert from, in developing their own IEPS. Stakeholders also commented that Aboriginal and Torres Strait Islander people should be consulted on the development of the engagement objectives and their agreement sought before the objectives are adopted by the Department.

Table 3.3: NESP Hub Indigenous Engagement and Participation Strategy Objectives

NESP Hub IEPS Objectives	CAUL	ESCC	MB	NAER	TSR	TWQ
Research relevant and beneficial to Indigenous Australians	Y		Y	Y	Y	Y
Research respects Indigenous priorities and values						Y
Shape the research so that Indigenous Cultural and Intellectual Property (ICIP) are respected			Y	Y	Y	
Research conducted to the highest ethical standards	Y	Y	Y	Y	Y	Y
Effectively communicate research results and share knowledge with Indigenous Australians	Y		Y	Y	Y	Y
Meaningful Indigenous participation in Hub governance	Y	Y	Y	Y		Y
Opportunities for Indigenous employment, training, skills transfer	Y		Y	Y		Y
Building relationships with Indigenous peoples/groups		Y	Y			
Increase cultural awareness within the Hub		Y	Y	Y		
Work collaboratively with other institutions/research partners to promote Indigenous perspectives	Y					
Engage with other NESP Hubs		Y				
Develop and deliver case studies that address engagement/collaboration goals		Y				
Nurture effective involvement of Indigenous peoples to address on-ground needs					Y	
Transition from engagement to collaboration				Y		

Sources: NESP Hub Indigenous Engagement and Participation Strategies

The following extracts of policy statements by each of the NESP Hubs are drawn from various sources, including the Hub's websites, the Hub's Indigenous Engagement and Participation Strategy or the Hub's Annual Research Plans, and are indicative of the way they have viewed the commitment to Indigenous engagement.

3.3.1 CAUL Hub

The CAUL Hub is committed to meaningful Indigenous engagement and collaboration during all phases of the delivery of the NESP. Where relevant, due consideration will be given to actively involving key Indigenous stakeholders in research prioritisation, research delivery and, especially, the communication of research output. ...

CAUL Hub's IEPS aims for greater impact in our cities as project teams learn more about Indigenous ways of understanding urban environments and start focusing on Indigenous led or co-designed research. ...

A major opportunity for the CAUL Hub lies in its highly interdisciplinary nature. Integrating an Indigenous Australian perspective across these different disciplinary areas is a continuing focus of the IEP Strategy in 2020. The CAUL Hub will focus on maximising participation activities that best align with CAUL Hub's strategic research plan and are achievable with available resources, specifically:

- *identifying key Indigenous organisations and people in the cities where our research is focused, or whose expertise covers our research project areas;*
- *personal contact and workshops with Indigenous stakeholders allowing iterative refinement of research projects in a respectful and collaborative manner.*

3.3.2 ESCC Hub

The ESCC Hub engages in a mutually beneficial two-way dialogue with Indigenous stakeholders to explore ways traditional knowledge can inform Hub research and determine what climate change information Indigenous communities need. ...

The ESCC Hub is committed to meaningful Indigenous engagement and collaboration during all phases of the delivery of the NESP. Where relevant, due consideration is given to actively involving key Indigenous stakeholders in research prioritisation, research delivery and, especially, the communication of research output. ...

The ESCC Hub's research and engagement activities aim to ensure that as a result of our science:

- *established ongoing relationships between the Indigenous communities and the Australian climate change science community and NESP. [sic]*
- *Traditional and western science knowledge is combined to understand the climate risks relevant to Indigenous communities.*
- *Indigenous researchers and stakeholders are empowered to lead research and knowledge exchange activities and case studies relevant to their communities.*
- *Indigenous communities use tailored climate change information to train and inform their own communities about the changing climate and the potential impacts to their country and people.*
- *the Australian climate change science community values and incorporates traditional knowledge in climate change information and research.*

3.3.3 MB Hub

The MB Hub regards Indigenous engagement and participation in its research program to be important for outcomes in research effectiveness, respecting Indigenous culture and promoting Indigenous aspirations. The MB Hub recognises the role of Indigenous peoples in the conservation and ecologically sustainable use of Australia's biodiversity and promote the use of traditional knowledge. The MB Hub is

committed to improving Indigenous Australian peoples' engagement in coastal and marine research through partnerships based on respect, trust, reflection and knowledge sharing. ...

The MB Hub has led four national Indigenous workshops to identify needs and opportunities for increased collaboration and partnership with the MB Hub and marine researchers nationally. These activities have contributed to an increased level of awareness in the marine science research community to consider the involvement of Indigenous people in their research.

3.3.4 NAER Hub

The NAER Hub is committed to meaningful Indigenous engagement and collaboration during all phases of its delivery. Where relevant, the NAER Hub will actively involve key indigenous stakeholders in research prioritisation, research delivery and, especially, the communication of research outputs. ...

The NAER Hub partners have an outstanding record of appropriate Indigenous collaboration in large research programs in northern Australia as demonstrated through NERP and TRaCK. The NAER Hub will continue to work with Traditional Owner partners at a number of scales (pan-north Australia, regional and local) reflecting the diversity in roles and functions. Traditional Owner partners are involved in setting the research direction, undertaking research, and two-way knowledge sharing ensuring that research goals reflect the priorities of Indigenous land and sea managers. ...

Opportunities for Indigenous engagement are available at all levels of NAER Hub governance and include membership of the NAER Hub Steering Committee. Wherever possible existing Indigenous governance structures, such as local steering groups or committees are engaged to provide guidance to Northern Hub project activities.

3.3.5 TSR Hub

The Threatened Species Recovery Hub is committed to meaningful Indigenous engagement and collaboration during all phases of the delivery of the NESP. Where relevant, due consideration will be given to actively involving key indigenous stakeholders in research prioritisation, research delivery and, especially, the communication of research output. ...

The Hub has actively sought to engage and collaborate with Indigenous groups in the prioritisation and implementation of its research, and to produce findings that are both useful and accessible to Indigenous researchers and practitioners. The Hub seeks to put forward projects that are codesigned or Indigenous initiated.

3.3.6 TWQ Hub

The TWQ Hub aims to provide innovative research for practical solutions to maintain and improve tropical water quality from catchment to coast with a focus on the Great Barrier Reef, Torres Strait and other tropical waters. These geographical areas are strongly connected to the region's Aboriginal and Torres Strait Islander peoples. The geographical region of the TWQ Hub includes:

- *Approximately 70 Traditional Owner clan groups whose land and sea country include the Great Barrier Reef Marine Park and coastal ecosystems.*
- *20 Traditional Owner groups in the Torres Strait (19 Torres Strait Islander Corporations and one Aboriginal Native Title Corporation).*
- *Eight land and sea Indigenous Protected Areas (IPAs); and*
- *Seven Traditional Use of Marine Resource Areas (TUMRA).*

All activity in the Torres Strait is therefore planned with the Traditional Owners, the Chairpersons of the Registered Native Title Bodies Corporate and The Torres Strait Regional Authority.

Indigenous ecological knowledge is a fundamental pillar for the sustainable environmental management of the natural resources of north Queensland. The TWQ Hub recognises the importance

of Indigenous engagement in the understanding and management of north Queensland's land and sea country. ...

The TWQ Hub and the Hub Host strongly promote with project leaders and researchers that all projects must endeavour to engage with Indigenous groups in the geographical area of their research. The communication of research results to Traditional Owners is strongly encouraged.

These statements reflect the commitment by the Hubs to Indigenous engagement across the full scope of their work.

3.4 NESP Hubs' Approaches to Indigenous Engagement

3.4.1 The Department's Indigenous Engagement Guidelines

The Department's IEPS for the NESP (DoE, 2015a) refers to the Department's Indigenous Engagement Guidelines which provides advice on how to build strong, effective relationships with Aboriginal and Torres Strait Islander peoples and their communities (DoE, 2015c). The commitment to Indigenous engagement as being central to the design and delivery of all government programs and services can be sourced back to the Council of Australian Government's (COAG) and the National Indigenous Reform Agreement in 2008 (COAG, 2008; SCFFR, 2008: D-66).

The Department's Indigenous Engagement Guidelines (DoE 2015c) are underpinned by five pillars, or principles, that are critical to successful Indigenous engagement. The Department's five pillars are about building relationships with Indigenous peoples based on trust, respect and upholding their unique rights and interests through understanding and partnership.

The five pillars are summarised as follows:

- **Pillar 1: Building trust.** Trust is an essential element of building and maintaining strong relationships.
- **Pillar 2: Respectful interactions.** Respecting and valuing the experiences, perspectives and cultures of Aboriginal and Torres Strait Islander peoples is fundamental to building a diverse business and workplace culture. Respectful relationships between Indigenous and non-Indigenous Australians enable the Department, staff and stakeholders to achieve good business outcomes and to fulfil cultural aspirations by working together with a positive shared purpose.
- **Pillar 3: Upholding rights.** The United Nations *Declaration on the Rights of Indigenous Peoples* (UN 2007), which Australia has supported since April 2009, reinforces Indigenous peoples' right to self-determination. Articles 18 and 19 of the Declaration are cited as being particularly relevant to respecting and protecting Indigenous rights.
- **Pillar 4: Mutual Understanding.** Understanding Indigenous cultures and worldviews, languages, communication preferences, cultural protocols and the history of relationships with governments is a critical step in meaningful engagement.
- **Pillar 5: Enduring Partnerships.** Strong and resilient relationships enable the Department and Indigenous people, communities and organisations to work toward achieving common goals. Building trust, ensuring respectful interactions, upholding rights and fostering mutual understanding are the foundations to building enduring partnerships. Engagement should empower communities and build capacity. This means involving communities throughout each stage of the process to ensure there is a common understanding of the issue or issues at hand and that community views are heard and taken into account. By involving communities in this way, a true collaborative partnership may be achieved and communities will be able to give more to the engagement process.

The Department's IEPS for the NESP also states that Indigenous engagement is viewed as an integral component of the service design and delivery processes. Good engagement is an ongoing process based on cultural understanding, relationships of trust and continuing, honest dialogue, and that everyone involved in the NESP has a mutual responsibility to engage, consult, achieve and communicate shared outcomes (DoE, 2015a). Genuine engagement, participation and communication strategies that are relevant to the culture

and views of Indigenous Australians are essential to building strong, effective and mutually respectful relationships (DoE, 2015a).

3.4.2 The Three Category Approach to Indigenous Engagement

In developing their Indigenous engagement and participation strategy, the TWQ Hub drew on their experience with developing the Indigenous Engagement Strategy that was prepared for the Tropical Ecosystems Hub (RRRC, 2013) under the former NERP¹¹ and reflected on how Indigenous engagement could be better measured. The TWQ Hub undertook an analysis of the Department's requirements for Indigenous engagement under NESP and the KPIs and deliverables that the Hubs were expected to achieve.

The TWQ Hub decided to revise and update the Three Category approach that had been developed in conjunction with Torres Strait Islander researcher, scientist and consultant, Stan Lui, by the Tropical Ecosystems Hub under NERP. The revised Three-category approach was applied and tested within the TWQ Hub before it was presented to the IAC and refined and adopted by the TWQ Hub by inclusion in their Annual Research Plan No. 2 in 2016. Since that time, the TWQ Hub has been requiring each project schedule to apply the Three Category Approach and include Indigenous engagement deliverables within each project's milestone tables. The Three Category Approach was designed to build on the Department's Five Pillars approach discussed above, by adding another layer which is aimed at getting researchers to engage with Indigenous peoples about their research and to incorporate their involvement in the research (where practical and appropriate) from the outset and before a research proposal reaches the approval stage. This is consistent with best practice emerging in other areas of research involving Indigenous peoples in Australia and elsewhere around the World, as discussed later in this Report.

The definitions of the three Indigenous engagement categories as revised by the TWQ Hub are as follows (TWQ Hub, 2016):

Category One:

The definition of a Category One project, is a research project that is anticipated to be undertaken with direct collaboration with an Indigenous community, organisation, group or individual. As per the objectives of the IEPS, a Category One project will be expected to:

- Clearly identify how the research will be relevant, co-managed and of benefit to Indigenous communities and/or organisations.
- Provide opportunities for Indigenous engagement, employment or skills transfer, and the sharing of knowledge and the increase of cultural awareness amongst all parties.
- Ensure the research is conducted according to the highest ethical standards and respects Indigenous priorities and values.
- Develop a co-managed process for the generated knowledge, data and research results to be effectively shared, presented and communicated between Indigenous peoples, communities and organisations.

Category Two:

The definition of a Category Two project, is a research project that has a field component within the project, but does not have direct collaboration with an Indigenous community, organisation, group or individual. As per the objectives of the IEPS, a Category Two project will be expected to:

- Clearly identify how the research will be relevant and of benefit to Indigenous communities and/or organisations and if not why.
- Ensure the research is conducted according to the highest ethical standards and respects Indigenous priorities and values.

¹¹ The process of compiling the NERP Indigenous Engagement Strategy and identifying Indigenous engagement opportunities within the NERP Tropical Ecosystems Hub projects involved three workshops from November 2012 – January 2013. The Working Group consisted of Indigenous representatives, Hub Administration staff and identified project leaders.

- Explore opportunities for Indigenous engagement, employment, skills transfer, sharing of knowledge and the increase of cultural awareness amongst all parties.
- Develop a process for the generated knowledge, data and research results to be effectively shared and communicated between Indigenous peoples, communities and organisations.

Category Three:

The definition of a Category Three project, is a research project that is laboratory or desktop based and does not have direct collaboration with an Indigenous community, organisation, group or individual. As per the objectives of the IEPS, a Category Three project will be expected to:

- Develop a process for the generated knowledge, data and research results to be effectively shared and communicated between Indigenous peoples, communities and organisations.

SGSEP understands that the primary object behind developing the Three Category Approach was to make researchers think about the need for Indigenous engagement and how that engagement needs to occur before researchers embark on developing their research proposal and submitting it for approval. Based on past experiences, many scientific research projects have been conceived and executed without first considering Indigenous peoples' connections to and responsibilities for Country and what that means in terms of engaging with Indigenous peoples' about accessing their Country or utilising their ecological or traditional knowledges. In such circumstances Indigenous engagement has to be retrofitted to a project, often after its initial approval, which is not easy to do.

Following the TWQ Hub's adoption of the Three Category Approach in its Annual Research Plan 2 in 2016, four other NESP Hubs also adopted the Three Category Approach (CAUL, MB, NAER, TSR) and they have continued to apply the Three Category Approach as the basis for assessing the level of Indigenous engagement for all their research projects since that time (Research Plan 3 in 2017).

In developing the Three Category Approach Workbook (see **Case Study 1**), the CAUL Hub has re-worked the three categories to lift the level of engagement to a higher level. For example:

- **Category One** projects are co-designed with Indigenous people and work towards an application of Caring for Country in an urban context. To complete a Category One project, a researcher or practitioner will co-design the project, plus collaborate on the work, plus communicate the outcomes with the relevant Indigenous people involved in each part.
- **Category Two** projects take place on Country, with research that has a fieldwork component. To complete a Category Two project, a researcher or practitioner will collaborate on the work, plus communicate the outcomes with relevant Indigenous organisations.
- **Category Three** projects do not directly engage with or benefit from Indigenous knowledge. They can often be laboratory or desktop based. To complete a Category Three project, a researcher or practitioner will communicate the outcomes and share results with relevant Indigenous organisations.

Case Study 1: The CAUL Hub and the Three Category Approach Toolkit and Workbook

CAUL Hub Three Category Toolkit and Workbook

The CAUL Hub has taken the Three Category Approach into the urban research arena. As the CAUL Hub's website states, embedding Indigenous knowledge systems and applying cross-cultural work and two-way sharing of knowledge in an urban context has not been a normal part of research practice aimed at improving the quality of life in cities for people and for biodiversity. The CAUL Hub engaged Kalinya Communications to work with Stan Lui to develop the Three-Category Approach into a toolkit and workbook. The Workbook and associated workshop are aimed at guiding non-Indigenous researchers and practitioners in supporting Indigenous-led research and creating space for the co-design of urban projects. The Workbook discusses Indigenous engagement in research in three categories – Communicate, Collaborate and Codesign – and guides users through each category, with suggested actions and prompts to reflect on their work and approaches to research.¹²

Under the CAUL Hub IEPS, individual project leaders have responsibility for obtaining necessary training in cultural competency, especially where Category 1 or 2 activities are planned, ensuring researchers follow appropriate Indigenous Engagement protocols and maintaining relationships with Indigenous Communities through the life of the project. Project leaders are also responsible for ensuring knowledge of current best practice with regards to intellectual property, is maintained, communicated and honoured and that decisions relating to IP are made on a project-by-project basis with the Indigenous community or individuals involved.

The Three Category Workbook and associated workshop developed by the CAUL Hub is a valuable resource to enable researchers to undertake a self-assessment of the requirement to engage with and involve Indigenous peoples in their research and working out what that engagement might look like.

The first two workshops were held in Melbourne and Canberra in December 2019 and were very successful. The main attendees have been landscape architects, urban planners, state government agency staff, local government officers working in urban planning and design. The Canberra workshop included representatives from the Department of Agriculture, Water and the Environment. There is strong interest in the workshops from practitioners in state and local government. The CAUL Hub has been approached by the City of Melbourne and had pre-booked a workshop for its design team, however the restrictions arising from COVID-19 have resulted in it being postponed, and SGSEP understands the CAUL Hub is considering the development of an online format.

Source: <https://nespurban.edu.au/3-category-workbook/>

A number of significant resource documents have been produced by the Hubs, led by or developed in collaboration with Indigenous researchers, to document this evolution in practice. These include:

- the NAER Hub's *Our Knowledge Our Way* Guidelines (Woodward, 2020);¹³
- the TSR Hub's *Indigenous Engagement Protocols for Threatened Species Researchers* (TSR Hub 2020);
- the MB Hub's *Promoting partnerships for Sea Country Research and Monitoring in Western Australia: A snapshot of Indigenous, science and management agency partners* (Lincoln and Hedge 2019);¹⁴
- the ESCC Hub's *Co-design, Cross cultural Communication and Climate Change considerations for Engaging with First Nations People* (Morgan, 2019).¹⁵

There are also a number of noteworthy engagement initiatives including:

- the NAER Hub's employment of three Regional Research Coordinators across northern Australia (see **Case Study 5** later in this Chapter).

¹² <https://nespurban.edu.au/3-category-workbook/>

¹³ <https://www.nespnorthern.edu.au/projects/nesp/knowledge-brokering-indigenous-land-management/>

¹⁴ https://www.nespmarine.edu.au/system/files/Lincoln_Hedge%20Promoting%20partnerships%20for%20Sea%20Country_FINAL%2001Nov19.pdf

¹⁵ <http://nesclimate.com.au/wp-content/uploads/2020/03/A4-2p-AMOS-TO-workshop-summary.pdf>

- the TWQ Hub’s work with young Indigenous people to build their awareness and provide training to build capabilities to manage their sea Country.

3.4.3 Application of the Three Category Approach by the Hubs

To get a sense of how the Hubs are applying the Three Category Approach to their research projects, SGSEP examined 108 NESP Hub research projects that we were guided to by the Hubs or that we selected on the basis of having a high level of Indigenous engagement. A precis of the 108 projects is provided in **Appendix D**. A more detailed analysis was also prepared in an Excel spreadsheet (provided to the Department separate from this Report).

The definition of Category 1 is a research project that is anticipated to be co-designed and undertaken in collaboration with an Indigenous partner (a community, organisation, group or individuals). That is, the highest level of Indigenous engagement.

Of the 108 projects we examined, 34 of them were classified by the respective NESP Hubs as being Category 1 projects against the Three Category Approach. SGSEP then went a step further and examined 31 of those projects because they were identified as being co-designed or ‘Indigenous-led’. A list of the projects so identified and with a brief description of the nature and level of Indigenous engagement is provided in **Appendix E**.

On closer inspection of the documentation publicly available or provided by the NESP Hubs, there are some projects that are still based on non-Indigenous people designing the research and then seeking Indigenous input about pre-determined questions, frameworks or methods and pre-determined outcomes. On the basis of our further analysis, only about 20 to 23 of those projects can be identified as being genuinely Indigenous-led from start to finish. That is, Indigenous people driving the project’s conception, preparing the research proposal, designing the research method(s), executing the research, producing the outcomes and outputs, and communicating the results to their own audiences and to wider public audiences, and benefiting from the research. While this is a significant achievement in and of itself, this is a very small number of projects given the overall number of projects funded under the life of the NESP, especially given the growing number of IPAs across Australia and the ever-increasing size of the Indigenous estate (discussed in **Chapters 4 and 6**).

3.5 NESP Hubs’ Key Performance Indicators for Indigenous Engagement

As discussed in **Chapter 2**, since 2017 the NESP Hubs are required to report progress against the following KPIs in their Annual Reports in April each year:

1. Number of Indigenous people employed in a project.
2. FTE of Indigenous people employed in a project.
3. Number of Indigenous researchers/graduates/post-graduate/PhD/Post Doc Positions in project.
4. Number of Indigenous people trained in the use of environmental management tools and techniques.
5. The number of management tools for Indigenous waters and land that benefitted from NESP research and outcomes.
6. Number and type of communication products that have been used to communicate research with Indigenous people.
7. Number of research, knowledge sharing and communication events held with Indigenous communities.
8. Number of public events, conference presentations, jointly authored/published papers with Indigenous participants/contributors.
9. ADDITIONAL REPORTING: Number of Indigenous communities and organisations engaged to develop, refine or inform NESP research.

Appendix F includes summaries of the Indigenous participation KPIs from the 2017, 2018 and 2019 NESP Hubs' Annual Reports. These Summaries are prepared by the Science Partnerships Section of the Department of Agriculture, Water and the Environment.

Table 3.4 shows the how the Hubs have performed against each of the Indigenous Engagement KPIs over the three years 2017 to 2019 inclusive.

It is important to note that most of the data in **Table 3.4** and in **Appendix F** is heavily qualified with additional details in Endnotes about the nature of Indigenous engagement that contributes to that particular data set.¹⁶ The Endnotes in the Tables provided by the Department of Agriculture, Water and the Environment are also indicative of the challenges presented by KPI's that attempt to capture often complex information about people in the form of single numbers. Reading the qualifying Endnotes against each of the data sets in Appendix F (held by the Department) shows that there are many variables at play which affect the level and nature of that engagement. For example:

- The Hubs do not ask their researchers to identify as Indigenous. The information gathered is therefore based on information that is provided voluntarily.
- The numbers of Indigenous people employed in a project may include permanent, casual and one-off engagements.
- A particular project may not yet be at the stage of engagement with Indigenous stakeholders where management tools can be developed. This may be due to the nature of the research project and may not necessarily translate into tools.
- Capacity building projects will be various in nature, duration and scope, and therefore Indigenous engagement may not be for the full duration of a particular project.
- A particular project is working towards development of an Indigenous-led and designed framework for future research, which will build management tools for use in particular environmental contexts.
- A particular project only has progress reports available so far, and final management plans and reports will become available through the final stages of the project and reported in the final year.

The statistics relating to each of the KPIs between 2017 and 2019 are indicative of a significant increase in the quantity of Indigenous engagement, acknowledging that they are not to be interpreted as absolutes. Reducing human interactions and beneficial outcomes to numbers is not necessarily the full picture, but it is just one way of measuring progress.

Table 3.4 is a compilation of the data collected on the NESP Hubs' KPIs from the 2017, 2018 and 2019 Annual Reports. It is clear from the data in **Table 3.4** and in **Appendix F** that the Hubs have invested considerable effort in lifting the level of Indigenous engagement and building cultural competencies across their research activities. It can be concluded from **Table 3.4** that from 2017 to the end of 2019:

- 319 Indigenous people have been employed in NESP research projects;
- 34.9 FTE of Indigenous people employed in a project;
- 44 Indigenous researchers/graduates/post-graduate/PhD/Post Doc Positions have been engaged in NESP research projects;
- 1,050 Indigenous people have been trained in the use of environmental management tools and techniques;
- 52 management tools for Indigenous waters and land have benefitted from NESP research and outcomes;
- 375 communication products have been used to communicate research with Indigenous people;
- 493 research, knowledge sharing and communication events have been held with Indigenous communities;

¹⁶The additional details in the summaries prepared by the Department of Agriculture, Water and the Environment used Endnote, which cannot be easily transposed into this report. See **Appendix F** and the original Tables prepared and held by the Department of Agriculture, Water and the Environment for more details.

- 316 public events, conference presentations, jointly authored/published papers have occurred with Indigenous participants/contributors.

Table 3.4: Summary of Indigenous engagement KPIs as reported in NESP Hubs' Annual Progress Reports 2017 - 2019

Indigenous Engagement KPI	CAUL Hub	ESCC Hub	MB Hub	NAER Hub	TSR Hub	TWQ Hub	Total
Number of Indigenous people employed in a project	6	3	10	231	32	37	319
FTE of Indigenous people employed in a project	1.85	0.7	0.6	21.92	1.65	8.15	34.87
Number of Indigenous researchers/graduates/post-graduate/PhD/Post Doc Positions in project	11	5	6	8	6	8	44
Number of Indigenous people trained in the use of environmental management tools and techniques	25	10	28	611	116	260	1,050
The number of management tools for Indigenous waters and land that benefitted from NESP research and outcomes**	2	2	4	17	6	21	52
Number and type of communication products that have been used to communicate research with Indigenous people	64	6	22	155	71	57	375
Number of research, knowledge sharing and communication events held with Indigenous communities	57	24	95	165	39	113	493
Number of public events, conference presentations, jointly authored/published papers with Indigenous participants/contributors	163	7	11	48	58	29	316
ADDITIONAL REPORTING: Number of Indigenous communities and organisations engaged to develop, refine or inform NESP research			19+				19+

Source: NESP Hub Annual Progress Reports 2017- 2019

While these statistics should not be read as absolutes, SGSEP has some concerns with the first two KPIs. Our concern relates to the correlation between the number of Indigenous people employed in a project and the number of FTE Indigenous people employed in a project. In response to these particular KPIs, some of the Hubs provided a break down between full time and casual staff and some did not, and then not consistently across the three annual reports. A simple correlation between the two figures suggests that of the 319

Indigenous people employed in a NESP project, this only equates to less than 35 full time positions across the six Hubs over the three years from 2019 to 2019. What this suggests is that most of those people are only employed as casuals and/or for very short periods of time. While that may be the case, this simple correlation raises some questions about the reasons for collecting this data without further clarification and follow-up. One Hub also pointed out that there is not a KPI for contracting or engaging Indigenous owned businesses, as that Hub has engaged with several Indigenous owned businesses as a matter of good policy. This could be overcome by the inclusion of requirements of the NESP Hubs to seek out Indigenous owned businesses before going to the open market.

Questions were also raised by several stakeholders as to whether these KPIs are sufficiently appropriate as measures of Indigenous engagement across the full suite of NESP governance and research activities. Discussions with Indigenous stakeholders about the KPIs raised some concerns about the need for stronger benchmarking of performance on a much wider range of indicators of the breadth of Indigenous engagement practices by the NESP Hubs. There was acknowledgement that the statistics in **Table 3.4** show some remarkable and worthy achievements by the NESP when compared the Program's predecessors, but there is no accountability for how the NESP Hubs perform against the KPIs to sustain their performance or to keep making improvements year-on-year. There are a range of other practical measures that could be designed into the program to improve performance and the level of accountability for achieving better outcomes in relation to Indigenous engagement. For example, it was suggested that targets be negotiated with the Hubs from the outset of NESP2 and that additional incentives be offered for reaching the agreed targets to ensure they can go further the following year.

3.6 NESP Hubs' Cross-Hub Activities

SGSEP found that all of the Hubs have collaborated in various cross-Hubs projects. The following are just a few examples:

- The development of an Indigenous Community of Practice in 2017 across the six NESP Hubs, led by the NAER Hub, to collaborate and share information and resources and draw from the experiences and history of Indigenous collaboration, partnership and engagement in the north. Practice materials were prepared by the NAER Hub leader and CAUL's Knowledge Broker to kick-start the process.
- The development of the Hubs' respective Indigenous communication and engagement strategies, informed by the positive trajectory of Indigenous engagement from predecessor programs, including CERF¹⁷, TRaCK¹⁸, NERP¹⁹, and best practice approaches across the Hubs since the commencement of NESP in 2015.
- As discussed earlier in this report, the TWQ Hub shared the Three Category Approach to Indigenous engagement with the other NESP Hubs for adaptation and implementation.
- The Indigenous gathering in Canberra, held in early 2018, to directly inform and improve Indigenous engagement and participation in the NESP (discussed in Part 2.7 above and see **Appendix B**). Importantly this event was led by Indigenous peoples involved in the NESP. Outputs included a cross-Hub document that consolidated the considered and direct input from Indigenous leaders involved in the NESP to inform the roll out of the Program and the scope of Indigenous engagement in research activities.
- The preparation of the Indigenous Engagement all-hubs brochure published by the DoEE in 2019 (AG, 2019).
- The NAER, TWQ and MB Hubs collaboration with Traditional Owners of the land and sea Country in the Gulf of Carpentaria in assessing the extent of mangrove dieback in the Gulf (TWQ Hub Project 4.13). The project was jointly funded by the three Hubs.

¹⁷ <https://www.environment.gov.au/node/13277>

¹⁸ <https://www.nespnorthern.edu.au/track/> and <https://www.environment.gov.au/system/files/pages/56c08f6f-7bf7-4594-8175-b4c143110156/files/hub-track.pdf>

¹⁹ <https://www.environment.gov.au/science/nerp>

- The MB Hub sending a Malgana delegation (Shark Bay) to the National Indigenous Dialogue on Climate Change convened by the ESCC Hub on Yorta Yorta County in 2018.
- The MB Hub co-investing and participating in an ESCC Hub led project on Climate Risk perceptions of Indigenous communities and linking this to the MB Hub's project on assisting restoration of ecosystems in the Shark Bay World Heritage Site.
- The CAUL Hub hosting the Indigenous Science Conversations at Questacon in Canberra as part of National Science Week in August 2018.
- The TWQ Hub participating in the National Science Week 2018, Indigenous Science Conversations in Canberra in August 2018 acknowledging the contribution of First Nation Peoples' knowledge and practice to the environmental research program.

For the NAER Hub, several projects capturing environmental research themes of interest to TOs and Indigenous land managers in the north are entering into their final phases, the focus of activity has shifted to research synthesis. In 2019, the NAER Hub commenced a research synthesis process with the specific aims of synthesising project findings across topics and focus regions, the transferability of project outputs to other regions, and developing web-based products and tools for management. The projects of relevance and interest to TOs and Indigenous land managers include Savana burning and Biodiversity; IPA's and Biodiversity; Kakadu Cultural Connections; Gamba Web Resource Project; Mitchell River Catchment Story; Kakadu Floodplain Synthesis; and a project on the suitability of Integrated Environmental Assessment to inform environmental decisions which is being led by the TSR Hub and to which all of the NESP Hubs are contributing.

These examples show that each of the NESP Hubs have developed a rapport around a commitment to cross-Hub Indigenous engagement.

3.7 NESP Hubs' Synthesis or Ground-Breaking Activities

The NESP Hubs have also been involved in what can be described as synthesis or ground-breaking research projects and activities. Several projects stand out for particular mention, including:

- The CAUL Hub's research project on Indigenous contributions to the framing of research and working out better models for enabling Indigenous people and communities to define and direct research that is of importance and value to them (CAUL Hub Project 4.7).
- The ESCC Hub's facilitation of the Climate Change Dialogues on Yorta Yorta Country in 2018 enabling TOs from around the Country to converse on climate change, sharing their observations, talking about their priorities and exploring opportunities to improve knowledge of climate change and its risks for people and Country. The National Dialogue has also highlighted the importance of an ongoing dialogue and made clear that First Peoples want to set their own agenda on climate knowledge and action (ESSC Hub Project 3.2).
- The MB Hub's partnership with the Australia Marine Sciences Association (AMSA) designed to promote Indigenous engagement and participation in Australia's marine research by convening a series of annual Indigenous engagement workshops, and the MB Hub's 2017 baseline survey from which to measure progress in future surveys and to understand changes in motivations, perceptions and practices with respect to Indigenous engagement by marine scientists. MB Hub's approach to developing a partnership with a peak professional association has considerable merit as a way of raising awareness, understanding and acceptance of the need to better engage with Indigenous peoples about research on their traditional land and sea Country (MB Hub AMSA Partnership and Baseline Survey).
- The NAER Hub's research on Indigenous land and sea management programs (ILSMPs) provides quantifiable and comparable information about multiple, local to national scale socio-economic and wellbeing benefits associated with ILSMPs and how it contributes to northern development, promotes Indigenous business development and economic independence, Indigenous wellbeing,

knowledge exchange, and helps Indigenous communities meet their wider aspirations (NAER Hub Project 5.3).

- The NAER Hub's research on Knowledge brokering for Indigenous land management led to the development of the '*Our Knowledge Our Way in Caring for Country*' guidelines for strengthening Indigenous knowledge in land and sea management, a document that will have significant and lasting value for some time to come (NAER Hub Project 5.4).
- The TSR Hub's research co-directed with the Martu Kanyirninpa Jukurrpa Rangers on developing a threatened species monitoring program tailored to the requirements of Indigenous land holders allowing them to assess trends and make decisions to implement management on their lands, is a case study of good practice in integrating Indigenous ecological values and knowledge with Western science approaches to quantitative analyses (TSR Hub Project 3.2.2.2).
- The TWQ Hub's research with the TOs of the Great Barrier Reef led to the development of a coordinated Indigenous framework for sea Country management of the Reef and shows how Indigenous participation in sea Country management can be effectively increased (TWQ Hub Project 3.9).

More details on these projects can be found in **Appendix G**.

SGSEP believes the projects and activities cited above demonstrate that the NESP Hubs saw past the need for Indigenous engagement at the individual project level and also focussed on synthesising the research outcomes of several projects so they would have greater long-term value for a larger number of end-users. The projects cited above also demonstrate a commitment by the Hubs to breaking new ground in relation to Indigenous engagement in environmental and climate science research.

The projects cited in **Parts 3.6** and **3.7** above are truly remarkable outputs and outcomes that will have enduring value well beyond the life of NESP and provide a very solid basis for NESP2 to continue building upon.

3.8 NESP Hubs' Research and Indigenous Engagement Activities

In order to ascertain an understanding of the nature of Indigenous engagement in NESP Hub research activities, SGSEP undertook a closer examination of a selection of research projects from each of the Hubs. The timeframe and budget for this review did not allow for an analysis of all of the research projects across the life of the NESP, so the following analysis is therefore based on 108 projects that we were guided to by the NESP Hubs or that we selected on the basis of having a high level of Indigenous engagement. A precis of the 108 projects is provided in **Appendix D** and a more detailed analysis was also prepared in an Excel spreadsheet (provided to the Department separate from this Report).

The analysis focuses on the different types of research activities where Indigenous people were engaged, including: planning, engagement, fieldwork, management, training or communications. These terms were already being used by the TSR Hub to describe how their Indigenous partners were engaged in the TSR Hub's research activities. For consistency, SGSEP requested the other Hubs to provide similar details of the level of Indigenous engagement in their identified projects. SGSEP generally adopted the dictionary meaning of these terms with some variation, as shown in **Table 3.5**.

It is not possible to interpret the information gathered numerically, as only a selection of projects carried out by the NESP Hubs were examined. An entry against any one of these activities does not necessarily constitute a discreet or single activity, because it invariably encompasses a number of similar types of activities against a particular project. Care must be taken in reducing human interactions and beneficial outcomes to numbers, as this does not necessarily portray the full picture. The intention behind collating information about the different types of activities was to get a sense of the nature of Indigenous engagement across a wide selection of projects from all of the Hubs.

Table 3.5: NESP Hub Research activities involving Indigenous partners – Definitions

Activity	Definition
Planning	To form a scheme of action, procedure, arrangement or project for a definite purpose.
Engagement	To obtain the attention or efforts of a person/organisation; to become involved.
Fieldwork	To devote a period of time to outdoor activities to accomplish set objectives or outcomes.
Management	To bring about; to take charge or care of; to handle or control; handling, direction or control.
Training	To give or attend lessons or instructions in some skills, knowledge, discipline or profession or for a particular kind of work.
Communication	To give, impart, pass, share (information) with others, and listening to others.

Source: The Macquarie Dictionary

Several other factors also make comparative analysis difficult. The nature of each research project is different depending on the purpose, scope and desired outcomes of the research. For example, research being undertaken on a particular species in a particular location, is very different from research on the Indigenous perspectives about the impacts of a particular phenomenon such as changes in climate systems on their traditional land or sea Country and its environmental values. The level of engagement with and/or the nature of involvement of the relevant indigenous peoples in a particular research project is also driven by a number of factors, including their level of interest and availability, relevance to their priorities, as well as the likely benefits to the Indigenous peoples concerned.

Notwithstanding these factors, the following general observations can be made about the different ways Indigenous peoples were engaged in NESP Hub research projects. A case study is included with each category of activity.

3.8.1 Planning

The term ‘plan’ means to form a scheme or set of ideas for acting, or to design or develop a pattern of arrangements to achieve particular outcomes or outputs. ‘Planning’ therefore constitutes the ‘doing’ of these things in order to achieve a set of desired outcomes or outputs. Projects with identified planning activities have generally included meetings or workshops to plan for certain outcomes or to plan for specific activities, as listed below. **Case Study 2** is an example of Indigenous engagement in planning a NESP Hub research project.

- Meetings with Indigenous peoples, Traditional Owners (TOs), Prescribed Bodies Corporate (PBCs) and/or other Indigenous organisations as potential partners to:
 - discuss project proposals, including the development of shared objectives, clarifying cultural objectives, planning for access to sites and identifying training opportunities;
 - seek Indigenous perspectives about the scope and usefulness of a research idea/proposal;
 - seek guidance from TOs for a particular research proposal in a particular locality;
 - ascertain Indigenous research priorities and how the research may benefit them;
 - conceive and co-design a research proposal and Indigenous involvement;
 - discuss participation in planning the research approach, how they wish to be involved and how they wish to contribute toward outputs;
 - co-design of monitoring activities;
 - design and participate in a community survey about a particular matter;

- understand cultural importance of particular species of sea snakes and other protected marine species and interest in participating in the research;
- undertake project planning and discuss interest in undertaking a survey of Indigenous interests and priorities for research on threatened and migratory marine species in northern Australia;
- ascertain interest in participating in field work and training to deploy scientific equipment;
- develop agreements about engagement and employment of Indigenous advisers and rangers;
- develop a conference program and call for abstracts from possible presenters;
- establish a project steering committee to prioritise Indigenous research priorities and/or to oversight a project as it progresses;
- plan projects, set management objectives, set targets, and decide what Rangers can do to protect certain species;
- decide on site locations for fieldwork;
- complete a questionnaire to assist Rangers with thinking through management priorities for their land or sea Country;
- explain research activities (on-site), seek permission to access sites and who will need to accompany the researchers;
- make arrangements for employment of Indigenous project officer;
- make arrangements for on-going consultation, communication, outputs and training opportunities;
- obtain relevant approvals, settle research agreements prior to commencing fieldwork and data collection; or
- obtain required permits to conduct surveys and mapping and sample testing on site.
- Workshops with Indigenous peoples, Traditional Owners and/or Prescribed Bodies Corporate (PBCs) and other Indigenous organisations to:
 - design cross-cultural decision-support mechanisms;
 - ascertain Indigenous input into research design and involvement in executing the research;
 - develop research agreements, decide representation on project steering committee and how logistical support will be provided for fieldwork components;
 - develop appropriate research protocols, obtain ethics clearances and settle collaborative research agreements;
 - identify priority actions to care for a particular plant species and surrounding habitat;
 - undertake tailored cultural competency training.
- Working with TOs and/or Rangers in planning specific activities, such as:
 - Collation of information on IK and cultural values of particular marine species;
 - setting out field trials;
 - species control activities;
 - helping the researchers to locate the mangrove dieback;
 - species restoration activities;
 - methods of repairing wetland systems on their Country;
 - seagrass monitoring workshop;
 - on-ground monitoring activity;
 - locations for stinger monitoring and collection on Country;
 - identifying areas requiring management to improve water quality entering the GBR;
 - project management from identification of erosion mangroves, fieldwork to be undertaken, vessel usage and maintenance, workshops with stakeholders and community members;
 - finalising report recommendations.

This analysis shows that in the planning phase, the focus is on seeking Indigenous input in relation to research priorities and project co-design, developing appropriate protocols for communication and participation, workshoping to clarify particular matters and/or details, settling research agreements and scoping specific research activities.

Case Study 2: ESCC Hub’s National Indigenous Dialogues on Climate Change

ESCC Hub Project 3.2: Meeting Indigenous priorities for climate change information, capacity building and engagement

The first Indigenous Dialogue on Climate Change at the Dharnya Cultural Centre Barmah, Victoria, in November 2018 was planned with assistance from an Indigenous-led Steering Committee including the co-hosts the Yorta Yorta Nation Aboriginal Corporation (YYNAC), Kimberley Land Council, and SEED (Indigenous Youth Climate Network).

The ESCC Hub supported more than 50 Traditional Owners from across Australia met to converse on climate change sharing their observations, talking about their priorities and exploring opportunities to improve knowledge of climate change and its risks for people and Country.

Importantly, the two-way dialogue between researchers and Traditional Owners working on climate change helped improve the understanding of mutual goals and potential benefits from working together to support the community’s climate information needs. This dialogue has been recorded in a co-authored report from the workshop.

An Indigenous Steering Committee is planning the second Indigenous Dialogue on Climate Change, originally planned for 2020 but now more likely to be held in early 2021.

Source: <http://nespclimate.com.au/supporting-a-national-dialogue-on-the-climate-change-science-needs-of-indigenous-communities/> (See also **Appendix G**)

What is also clear from the information provided by the NESP Hubs and from discussions with the Hubs and Indigenous and other stakeholders, is that for planning projects covering large geographical areas, considerable up-front work is required to undertake deliberations with Traditional Owners and their PBCs/RNTBCs about securing their engagement and maximising participation and input. This takes time and resources for it to be successful.

3.8.2 Engagement

The term ‘engagement’ means to obtain the attention or efforts of a person/organisation to become involved in a particular activity. Engagement in the context of this analysis therefore encompasses the extent to which the attention and efforts of Indigenous people has been secured to become involved in a particular project. Projects with identified engagement activities can be grouped under various sub-headings including meetings, workshops, building relationships, knowledge sharing, the conduct of fieldwork and other engagement tasks. **Case Study 3** is an example of Indigenous engagement in a NESP Hub research project .

- Meetings or workshops with Indigenous research partners (which may include Traditional Owners and/or Prescribed Bodies Corporate (PBCs) and other Indigenous organisations) to:
 - identify Indigenous aspirations and collaborative opportunities and advice about working in partnership;
 - co-develop terms of reference for steering committee;
 - complete consent forms;
 - develop workshop program and content;
 - discuss cultural protocols, research agreement, case studies, involvement in production of information products for an Indigenous audience and other end-users;

- determine cultural heritage values and science required to commence an adaptation planning process with the host community;
- attend and participate regular project management meetings, research-user and stakeholder meetings;
- review desktop findings and finalise research priorities.
- Workshops involving:
 - Cross-cultural workshop at Australian Meteorological and Oceanographic Society (AMOS) conference to discuss research protocols and understanding of working with Indigenous peoples.
 - Cultural workshops led by Indigenous researchers;
 - Multi-stakeholder workshops with participatory scenario planning sessions followed familiar workshop methods, such as the delivery of material to the whole group, smaller focus group discussions and the comparison of points emerging from each group. This included the engagement of interpreters to discuss underlying concepts and to culturally translate the materials of two workshops, and for separate workshops with TOs and multi-stakeholders.
- Building relationships:
 - one-on-one phone conversations with TO groups, plus information sharing via email. TO groups also providing input on project design. Further engagement via email updates and workshops.
 - building relationships and using different constructs to co-create new ways of understanding cultural differences about climate and the environment.
 - Indigenous partners signing an engagement plan with the view to one of the three restoration field sites being selected to occur in traditional fishing grounds.
- Knowledge sharing:
 - via one-on-one meetings and workshops for presentation of project material and seeking guidance;
 - exploring different ways of collecting and sharing cultural knowledge and expertise and more flexible ways of expressing the cultural components.
- Conduct of Fieldwork:
 - planning the conduct of field research to capture, tag and release protected species.
 - for each of the prioritised Australian Marine Parks (AMPs), the survey leaders engaged with relevant TO groups and Indigenous land councils to discuss the proposed survey and understand Indigenous interests in the survey area, or adjacent areas.
 - on-Country fieldwork arranged and conducted in partnership with Rangers from relevant TO groups.
 - consultation with National Park staff and TOs to identify monitoring sites across major ecosystems in the Park that build on previous long-term monitoring.
- Engagement tasks, including:
 - interviews or yarning circles with local Indigenous people about their local knowledge;
 - collaboration with Land and Sea Management Rangers and peak bodies such as NAILSMA, MRTCAG;
 - working with TOs, rangers and pastoralists to monitor particular threatened species, refine survey methods, undertake threat management and help build local capacity in these areas;
 - interviews and workshops held with key Indigenous fire managers and partners (TOs, NGOs, scientists and government agencies) across northern Australia who are actively participating in, or are interested in participating in, fire management projects;
 - action-learning process of adaptive co-management; Employment as co-researchers;

- co-developed participatory methods, workshops, project updates, co-communication of the findings to DAWE, communication of final reports;
- rangers and Traditional Owners co-presenting with researchers at relevant conferences.

Case Study 3: MB Hub and the Malgana community restoring sea grasses in Shark Bay

MB Hub Project E6: Assisting restoration of seagrasses in the Shark Bay World Heritage Area

The Malgana Aboriginal Corporation and Malgana Rangers have been involved in planning the research, including development of shared understanding about science objectives, cultural objectives, access to sites and training opportunities, for the natural recovery of sea grasses in the World Heritage listed Shark Bay in WA.

The Shark Bay World Heritage Site (WHS) is unique globally for its natural values, including stromatolites, seagrass meadows and marine megafauna including dugongs, sharks, turtles, and dolphins. The immediate goal is to scale up the existing restoration research to assist recovery of the dominant seagrasses, *Amphibolis antarctica* and *Posidonia australis* following the 2011 marine heat wave.

This project is a collaboration between scientists and the Shark Bay Malgana Indigenous community into jointly developed seeding and shoot planting methods to assist natural recovery of seagrasses in preparation for future devastating impacts of climate change. The Indigenous participants identified restoration sites and provided directions on access to sites (where to go and not to go); ensured that training was part of the research agreement (benefits of project for Indigenous communities) and with a focus on understanding mutual benefits from the research.

Source: <https://www.nespmarine.edu.au/project/project-e6-%E2%80%93-assisting-restoration-seagrasses-shark-bay>

3.8.3 Fieldwork

The term ‘fieldwork’ means to devote a period of time to outdoor activities to accomplish a set objectives or outcomes and in a particular contextual setting away from one’s usual place of work. Not all projects examined included a fieldwork component, but projects with identified fieldwork activities included the following activities, many of which included details that are more relevant to the particular project, but not included here.

- Co-designing field work and undertaking the monitoring;
- Data collection, including field surveys by air, river and by sea for various purposes, including for example to understand whether protected areas adjacent to heavily fished grounds provide refuge for culturally important and conservation priority marine species;
- Capturing, tagging and releasing and monitoring of protected species;
- Relocation of threatened species;
- Scientists and rangers working together to collect seagrass seeds, seedlings and samples and engage in training activities for restoring seagrass habitat;
- Fish biodiversity sampling, water quality sampling, bund wall removal;
- Mapping for quantification of diversity and extent of mangrove dieback damage throughout a particular the region.

Most of the Hubs said that they have developed long-term relationships with TO groups and discrete Indigenous communities and stressed that Indigenous people are always involved in all project fieldwork activities, including in paid positions as co-researchers or on a fee-for-service basis. **Case Study 4** is an example of fieldwork in a NESP Hub research project.

Case Study 4: TSR Hub and Martu people monitoring the Mankarr (Bilby)

TSR Hub Project 3.2.2.2: Monitoring threatened species in the IPAs: Bilbies in the Martu Determination

The TSR Hub recognises that outcomes for threatened species will be improved by increasing Indigenous involvement in their management. Martu people are traditional owners of over 14 million hectares of the Western Desert - one of the last strongholds of the Greater bilby. Martu have extensive knowledge of the occurrence and ecology of Mankarr (bilby) on their Country and their Ranger teams have been surveying for bilbies for the past 10 years and have detected bilbies at multiple locations.

Martu rangers monitor bilbies by searching for signs of their presence in the form of tracks, scats, diggings and burrows and are keen to work with the TSR ecologists to ensure their future. A co-developed bilby field monitoring program is helping Martu rangers to determine bilby population trends and assess whether current management practices (feral herbivore and predator removal, fire management) are helpful to conserve bilbies on Martu lands.

This program helps Rangers decide on which parts of their vast desert Country to focus their monitoring efforts, the best data to collect in the field, and how to interpret the data to understand how bilby populations may be changing. This 'best-practice' monitoring program capitalises on the unique skills of the Martu people and allow for the challenges of working in remote and often difficult conditions, allowing their management to be adapted to suit the species over time.

Source: <https://www.nespthreatenedspecies.edu.au/publications-tools/factsheet-monitoring-threatened-species-on-indigenous-lands-bilbies-in-the-martu-determination> (See also **Appendix G**)

3.8.4 Management

The term 'management' means to bring about; to take charge or care of; to handle, direct or control. Of the 108 projects that we examined across all of the Hubs, this is where there were the least number of entries, as well as some confusion over what the activity applied to. For example, against several projects it was stated that TOs or IPA Management bodies are responsible for on-ground land and sea management activities, which is as you would expect it to be. However, this category of activity was not intended to capture what land or sea management activities Indigenous people are responsible for. Rather, the type of activity that was meant to be captured by this category is where Indigenous people have played an active role in bringing about a project or taking charge of or directing the project. **Case Study 5** is an example of Indigenous engagement in management of a NESP Hub's research activities. Of the small number of projects that provided the appropriate information, the management activities included:

- An Indigenous-led Steering Committee was established to run the 2018 national Indigenous dialogue on climate change.
- A refreshed Indigenous-led steering committee has been established to co-develop and co-design the next national Indigenous dialogue on climate change.

The NESP Hubs have indicated to SGSEP that there are many projects where researchers have been directed by Indigenous partners, particularly in relation to a range of specific matters, including but not limited to:

- Cultural matters;
- Advice on which sites to include/not include;
- Access to cultural knowledges;
- Access to significant sites;
- Protocols to be followed when liaising with TOs on the ground and on-site meetings;
- Practices in relation to working with threatened or significant species for the purposes of catching, tagging and releasing for monitoring purposes; and
- The scope of projects;

- Artwork and the design of signs to draw attention to protection measures for threatened and migratory species;
- Managing engagement with the local primary school.

And there are also several projects that were led and staffed by Indigenous researchers, which are not captured in this analysis.

The NESP Hubs have also advised that there are several projects where Indigenous engagement, traditional knowledge and cultural practices have significantly contributed to or enhanced existing scientific knowledge of environmental issues (including but not limited to, threatened species, land and water management, fire management, climate change) and contributed to the development of environmental solutions, but these were not captured in this category of engagement. This knowledge co-production is an evolving and exciting sphere of research practice in the NESP. The integration of Indigenous knowledge and Western science through co-design and co-production of research projects is explored in more detail in **Chapter 7**.

Case Study 5: NAER Hub's employment of Regional Research Coordinators

NAER Hub's Regional Research Coordinators

Since 2017 the NAER Hub has employed three Regional Research Coordinators to support project activity in three regions across the north of Australia: one in the Kimberley in WA, one in Jabiru in the NT to support projects in Kakadu National Park, and one in far north Queensland through JCU to support projects in Cape York and the Gulf of Carpentaria.

The Regional Research Coordinators are involved in research coordination, communication with stakeholders, and promotion of Hub outputs to partners and research users, and ensuring relevant Traditional Owners are included and involved in NESP research activities relevant to them. The positions facilitate discussions between Indigenous partners and Land Management groups (such as rangers), local land managers and researchers to understand local capabilities and potential benefits of local involvement in research activities, and identify opportunities for researchers to incorporate capacity building activities into research plans.

The role of the Regional Research Coordinators is to ensure that all regional voices are heard in the process of selecting and designing environmental and climate science research projects. The model also recognises that Indigenous peoples have their own priorities and the Regional Research Coordinators can liaise with them to better understand their priorities and capacities in relation to research opportunities as they arise.

Source: Information supplied by NAER Hub and DAWE.

3.8.5 Training

The term 'training' means to give or attend lessons or instructions in some skills, knowledge, discipline or profession or for a particular kind of work. SGSEP found that many projects include the development of training materials and the delivery of training activities as an integral part of a project. **Case Study 6** is an example of Indigenous engagement in NESP Hub training activities. Where specific training activities have been identified, they include the following:

- Two-way knowledge exchange as an integral part of working with Indigenous partners and in shaping the design of projects, fieldwork and outputs, including through workshops and digital networking activities. Two-way knowledge exchange often involves TOs or Indigenous rangers contributing their knowledge, and research scientists providing Indigenous people with training in specific techniques and Western science knowledge and interpretations. Two-way knowledge exchange also includes TOs helping to target data collection and rangers learning to collect scientific data about culturally important species.
- Training for TOs, Rangers and Indigenous partners in a wide range of specific skills, including:

- the practice of kelp cultivation for either commercial purposes or to advance with kelp restoration;
- shorebird counting techniques, water sampling and other research activities;
- sampling sharks at the Garig Gunak Barlu Cobourg Marine Park;
- fish surgery techniques and acoustic telemetry;
- field guide to assessing mangrove health;
- an eDNA sample collection manual and eDNA collection kits;
- use of drones, time lapse cameras and participatory videos at case study sites;
- in-field methods of data recording;
- COTS control, diving and vessel operations;
- stinger drags and jellyfish identification on Country.
- use of environmental management tools and techniques for reef leadership, coral restoration and identification of coral diseases;
- aerial survey techniques;
- capability development to enhance understanding and application/use of climate systems and change data, and information in World Heritage management
- use of software required to explore digital maps and the ability to update the maps at a later date;
- salinity data entry and monitoring;
- dugong and turtle capture and transmitter and tag deployment;
- shoreline monitoring data acquisition using the Shoreline Video Assessment Method (S-VAM) and mangrove identification using cameras, GPS equipment and boat handling and formal achievement certificates and skills recognition on completion.
- Conference attendance and participation. All of the NESP Hubs have provided support for TOs, Rangers and Indigenous partners involved in NESP research activities to attend and participate in various scientific research or native title conferences. These activities are generally counted as outputs against particular projects.
- Academic achievements. The NESP Hubs have also supported Indigenous researchers to complete tertiary studies in their chosen fields of endeavour at various universities around Australia. The data is included in the analysis of KPIs in Part 3.5 of this report.
- The NESP Hubs have also been able to employ Indigenous researchers to undertake research on Hub projects and training was offered where Aboriginal staff were employed to assist with field work. The NAER Hub reports that for Project 5.3 Multiple Benefits of Indigenous Land and Sea Management Program, two young local Indigenous people were employed for two periods of the survey process for the project. In interviews at the completion of the first stage of the project, these two spoke in detail about the benefits that they derived from the project. In particular the opportunity to speak to their family and ‘countrymen’ in a way that was impactful to both. The insights that they got from the process about local priorities were also notable. Their delivery of the project findings to government representatives in Canberra was hugely successful with strong feedback received on the impact that they made on the bureaucrats.

Our review of the selected projects shows that the delivery of training activities often involves the researcher/s making visits to the TO groups, ensuring the groups are small, and the information delivery is tailored at an appropriate level for each group. Some projects, depending on the circumstances, location and experience of Indigenous partners will also include follow up with the Indigenous Ranger groups to ascertain how they are going with newly acquired skills, how they fit with local priorities and management options in looking after their land and sea Country and whether any follow up training may be required. Several projects also flagged that training activities are to be conducted in the final year of NESP1.

Case Study 6: TWQ Hub's training in Crown of Thorns Starfish (CoTS) control

TWQ Hub Project 5.1: Matching the Crown-of-Thorns Starfish Integrated Pest Management to the scale of new Control Program

The highly invasive Crown-of-Thorns (CoTS) Starfish are a major threat to the health of the northern Great Barrier Reef, reproducing in great numbers and feeding on live coral. An outbreak of the starfish can strip a reef bare in weeks or even days. Researchers in the TWQ Hub have brought together scientists, Commonwealth and state government reef managers and tourism stakeholders to develop a ground-breaking Integrated Pest Management strategy focused on tactical control.

Part of CoTS control program has included training young people in a six-month dive training and CoTS Control program. Trainees received a Certificate III's in Tourism and Occupational Diving while at the same time culling the coral eating Starfish. Over 50% of the trainees have been Indigenous, and more than 85% of the 230 young trainees (to date) are now in full time employment, most in marine and tourism industries. This is building training capacity in the region to manage the outbreaks and the TWQ Hub is assessing the training, employment and social development outcomes of these traineeships, and the role of the training program in the expanded CoTS Control Program and other reef programs.

Source: <https://nesptropical.edu.au/index.php/round-5-projects/project-5-1/>

The more significant finding in this category is that there is a strong commitment to two-way knowledge exchange and learning in several projects. It is indeed a sign of significant progress in building relationships between Indigenous Australians and the environmental and climate science fraternity, when there is a clear commitment to two-way learning and knowledge exchange on matters relating to the management of land and sea Country and generally on equal terms. This knowledge exchange and Country partnerships in NESP is enabling the production of practical management and training tools for Indigenous land and sea Country managers and their communities.

3.8.6 Communication

The term 'communication' means to give, impart, pass or share (information) with others, and listening to others. SGSEP found that most of the projects includes communication activities with their Indigenous partners throughout the life of their research projects, encompassing the early establishment phase of a research project, at critical points during a project, at the completion of a project, in the production of final communication products (i.e. reports, factsheets, journal articles, etc.) and after completion through conference presentations and sometimes media coverage of final project reports. Where specific communication activities have been identified, they include the following:

- Communication with Indigenous partners at the start-up stages of a project. This includes the preparation of fact sheets or star-up sheets, meetings to establish relationships, establishing the ground work for developing formal research agreements, using community contacts to advise of survey dates and times, and provision of schedules about fieldwork visits to arrange suitable times/sites.
- Communication with Indigenous partners during research projects. This covers a range of activities, such as:
 - regular in-person meetings with the relevant TO group or management committees during fieldwork visits;
 - regular communications via phone calls and/or email exchanges;
 - regular updates via intranet websites or newsletters;
 - in the Torres Strait through Torres News and local ABC Radio
 - workshops on specific topics, such as setting management objectives, setting targets

- participation in surveys/questionnaires.
- Communication of research results to Indigenous partners, including for example:
 - cross-cultural communication products (videos, signage and handling protocols) with Indigenous collaboration in the design, production and distribution of these products;
 - on-site meetings in person to share and discuss research results, including implications of the results and follow-up meetings for opportunities to provide further feedback;
 - articles and/or paid advertorials in relevant newspapers such as The Koorie Mail;
 - presentations at key gatherings of TOs on Country or as part of other forums (i.e. Northern Australian Savanna Fire Forum, CDU, Darwin Feb 2020);
 - providing summaries of research results with outline of key messages, a focus on key lessons learned and protocols for effective and appropriate ways to incorporate IK into management goals and practices;
 - use of oral, written and visual communications (particularly on-Country site inspections and discussions/workshops/roadshows) to communicate and share research results with Indigenous peoples.
- Communication of research results directed toward non-Indigenous researchers and practitioners to build capacity within settler institutions and alleviate the burden on Indigenous communities through various means. Including for example:
 - visits by TOs to DAWE and other key agencies and institutions in Canberra (and State capitals) prior to completion of the project to share findings and understandings;
 - producing summaries of research findings for government agencies outlining key messages, key lessons learned from the research and how the results may be applied elsewhere in similar contexts; and
 - through stakeholder workshops and community events following the completion of projects.
- Communication products, including for example, final reports, technical reports, booklets, other media resources such as videos, podcasts, films, PPT presentations, posters, information sheets for policy makers, investor friendly products, guidelines for adapting existing metrics and reporting, co-authored articles in academic journals, scientific publications and academic texts, brochures and fact sheets. Noting that these products are:
 - often co-produced with TOs and Indigenous partner organisations and with their prior approval/consent, including the use of photos and videos and Indigenous people story telling;
 - disseminated through individual contacts, local and regional community networks, representative bodies, peak bodies;
 - hosting on various websites and social media forums.
- Presentations of research results at conferences etc by Indigenous partners. Several projects made explicit provisions for the presentation of research results at various national and sometimes international conferences of relevance to the research theme, including for example, the National Native Title Conference in Broome, Queensland Indigenous Ranger Conference in Cairns; Torres Strait Treaty Environmental Management Committee; and meetings with DAWE in Canberra.²⁰

Other observations to emerge from this analysis of communication activities, include the fact that the NESP Hubs invest a considerable amount of time and energy in:

- Developing their communication techniques and tailoring products for use with their Indigenous research partners;
- Communicating the results of their research back to their Indigenous host research partners;
- Ensuring there is a genuinely shared understanding of the research results and benefits;
- Obtaining approval of final reports and other products before they are publicly released;

²⁰ <https://www.nespnorthern.edu.au/achievements/bringing-northern-australia-science-to-canberra/> and <https://www.nespnorthern.edu.au/2019/02/26/follow-up-resources-from-canberra-research-forum/>

3.9.1 CAUL Hub

The CAUL Hub is one of two Hubs that has established an Indigenous Advisory Group. The Advisory Group's role is to oversee the development and implementation of Indigenous engagement, collaboration and participation by the CAUL Hub, endorse the evaluation requirements with respect to the IEPS in overall CAUL Hub Reporting; and encourage alignment and coordination of the Hub's IEPS with other initiatives including those led by other NESP Hubs, government, community, industry and the broader scientific community.

As Jason Barrow, one of the Co-Chairs of the CAUL Hub's Indigenous Advisory Committee states:

*'The purpose of the Indigenous Advisory Group is to work with our various research teams across the Hub and to seek to embed aboriginal perspectives right across their research works. It could range from translating research into usable materials by community, by people, to help people succeed and to build cases within their communities, right through to employment, through to research careers for aboriginal people and indeed Aboriginal people leading and developing their own research pathways into the future.'*²¹

Under the guidance of its Indigenous Advisory Group and a wide network of Indigenous contributors, the CAUL Hub has worked hard to develop a cross-cultural and cross discipline approach to Caring for Country in cities. In developing its research plans, CAUL Hub is asking the question:

- Given thousands of years of Caring for Country in places we now call cities, how can city decisions better include Traditional Custodians, Indigenous knowledge and cultures in future city planning?

The Caring for Country concept embodies a stewardship approach to land and sea management which is deeply embedded in Aboriginal and Torres Strait Islander culture. The CAUL Hub has applied this concept in an urban context as a new and innovative way of interacting with nature and managing its resources for economic, social and cultural prosperity. The CAUL Hub's research has resulted in a synthesis of Indigenous perspectives about urban planning and urban greening. In particular, introducing greater levels of Indigenous input and active engagement in managing urban public green and blue spaces in urban environments, reversing the trend of species loss, restoring ecological function and ecosystem services and reconnecting people with traditional Aboriginal knowledge in urban environments.

The CAUL Hub's research has also focussed on how Indigenous values, perspectives and methodologies are able to drive environmental and climate science research in both urban and non-urban settings. The research found that urban practitioners and researchers need to better understand and engage in meaningful dialogue on the expectations, rights and aspirations of Indigenous communities in urban areas. Moving beyond a model of 'inclusion' of Indigenous people in research and teaching, especially within an urban context, toward genuine involvement in decision making about urban environments. The research has also identified that further work is required on developing better models for enabling Indigenous communities to define and direct research that is of importance and value to them.

The CAUL Hub's Indigenous Advisory Group has played an active role in leading some of the CAUL Hub's activities (such as the Indigenous Science Conversations in National Science Week 2018), as well as overseeing all of the CAUL Hub's project proposals which has led to increased communication, collaboration and co-design with Aboriginal and Torres Strait Islander people and organisations in all of the CAUL Hub's projects than would otherwise have been the case.

Figure 3.1 summarises the key activities completed and planned under the CAUL Hub IEPS from 2015 to 2020, and shows the progression of Indigenous engagement across the Hub's activities.

²¹ <https://nespurban.edu.au/people/indigenous-advisory-group/>

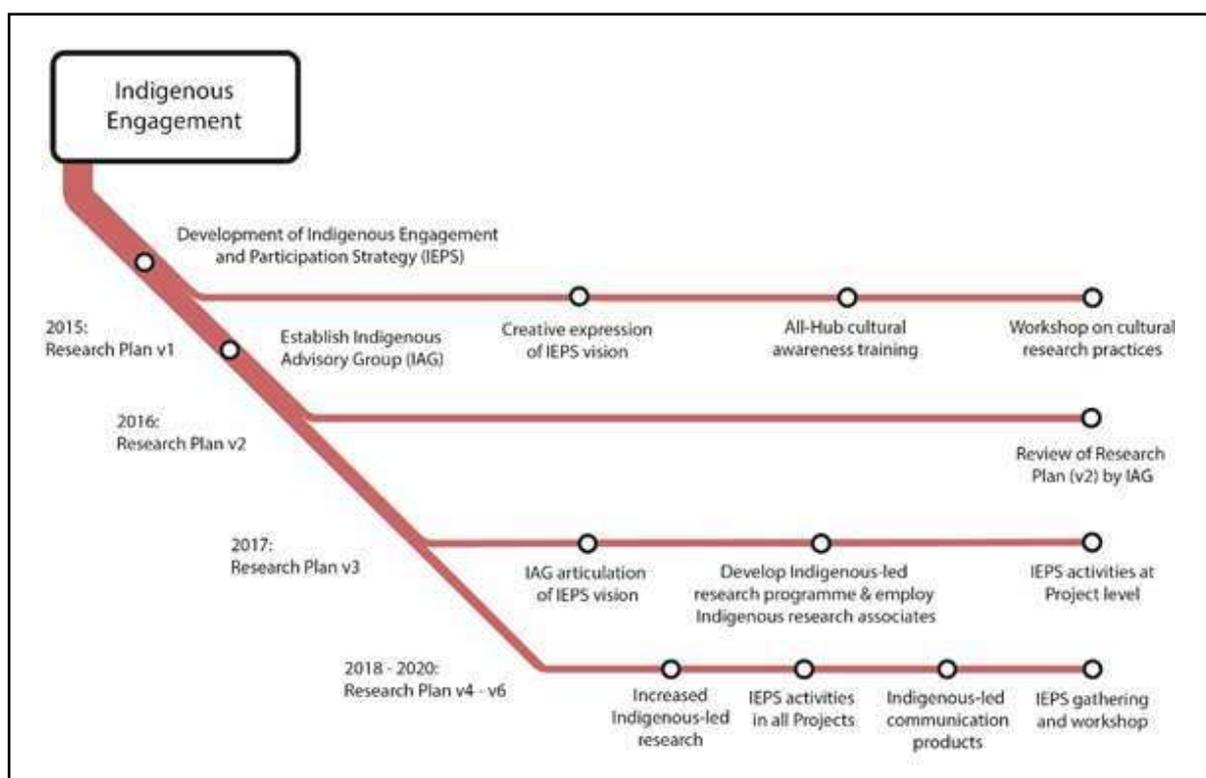


Figure 3.1: CAUL Hub IEPS Key Activities

Source: CAUL Hub Research Plan V6, page 21.

3.9.2 ESCC Hub

The ESCC Hub came from a position of minimal direct engagement with Indigenous peoples when it was first established. The ESCC hub has sought to develop a strong commitment to meaningful Indigenous engagement and collaboration. Where relevant, due consideration has been given by the ESCC Hub to actively involving key Indigenous stakeholders in research prioritisation, research delivery and communication of research output. The ESCC Hub has also sought to engage in mutually beneficial two-way dialogues with Indigenous stakeholders to explore ways traditional knowledge can inform Hub research and determine what climate change information Indigenous communities need.

The ESCC Hub was aware of the forum on climate change that had been hosted by Monash University under the National Climate Change Adaptation Research Facility (NCCARF) in 2012-13 (Griggs, *et al* 2013) that was run by Monash University and the Yorta Yorta Nation Aboriginal Corporation (YYNAC). Through a series of connections, the ESCC developed a relationship with the Yorta Yorta people who were keen to build on that initial gathering back in 2013. In the interests of building on the NCCARF gathering in 2013, the ESCC worked with the Yorta Yorta people to develop the National Indigenous Dialogue on Climate Change that was again hosted by Yorta Yorta on their ancestral Country in November 2018. While it took two years to organise the 2018 National Dialogue, it was led by an Indigenous steering committee from the outset. While invitations were issued to all of the Hubs, only the MB Hub accepted the invitation and sent representatives to attend and participate. The key outcome of the 2018 Dialogue was a statement from Traditional Owners (**Figure 3.2**) calling on the Australian Government to understand how Indigenous peoples have always understood the changing climate in Australia and the significance of Indigenous culture and its enduring nature.

The 2018 National Dialogue was one of the most significant national gatherings of Indigenous peoples on climate science research priorities. The National Dialogue identified several research priorities, including bio cultural renewal; monitoring of seasonal indicators; impact on water cycles/flows; water rights and access; impacts of resource extraction; governance and institutional responses; cumulative impacts and many others. The ESCC Hub reports that the 2018 National Dialogue generated a strong response among

Aboriginal people and communities from across Australia and a growing interest in being involved in the next national dialogue and translating the outcomes into policies and actions. The ESCC Hub had commenced planning for the next national dialogue to be held in 2020, but at the time of writing it was seeking the agreement of the Department to postpone it to 2021 given the impact of the COVID-19 pandemic.

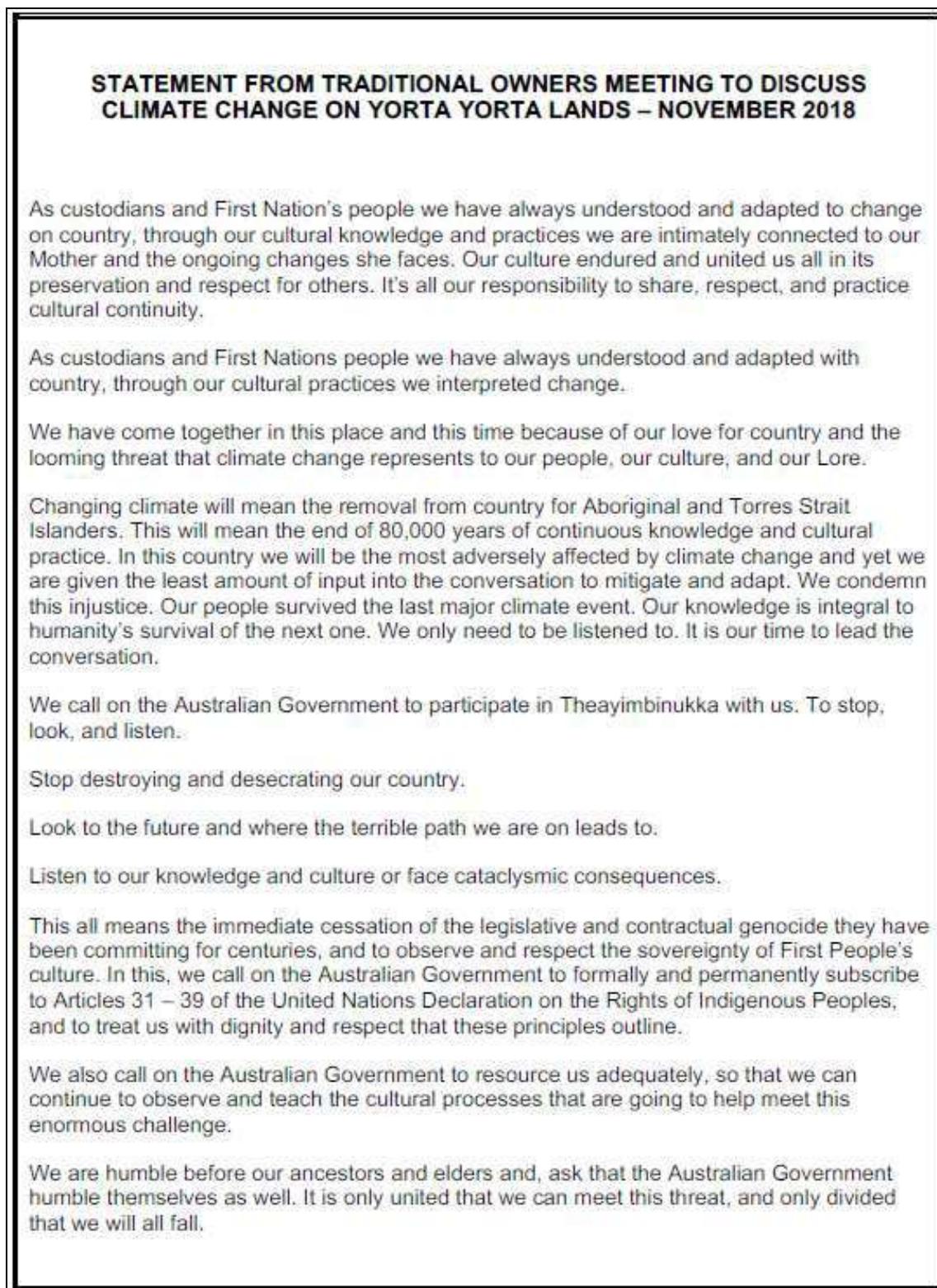


Figure 3.2: National Indigenous Dialogue on Climate Change 2018 - Statement on Indigenous people and climate change

Source: Morgan *et al*, 2018:7.

In 2019, the ESCC Hub continued to strengthened relationships started through the National Indigenous Dialogue on Climate Change by developing new networks in central Australia and working with these communities to provide climate information to inform housing developments. The ESCC has also commenced three significant projects in 2019 that are specifically aimed at raising the profile of Indigenous climate science research needs (Supporting Indigenous participation at the Australian Meteorological and Oceanographic Society 2020 Conference); improving the participation and inclusion of Indigenous peoples in understanding and using climate information for the management and protection of their traditional lands and seas under changing climatic conditions (Indigenous perspectives of climate risk); and supporting World Heritage Managers to identify climate change variables and benchmark the use of climate change information in the management of World Heritage Properties (Adapting to climate change and building resilience in Australian World Heritage properties: Using climate change science information to inform risk & vulnerability assessments and adaptation planning).

3.9.3 MB Hub

The MB Hub has also come from a position of minimal direct engagement with Indigenous peoples when it was first established. From the outset, the MB Hub sought to promote Indigenous engagement and participation in marine science research by convening a series of Indigenous engagement workshops at the Australian Marine Sciences Association's (AMSA) annual conferences over the last four years, as discussed in Part 3.6 above. As stated earlier, an important part of this approach was to promote engagement and participation in both northern and southern Australia, given historical research efforts appear to have strongly favoured engagement with the former. These series of workshops have resulted in an increased and increasing level of awareness about engagement with Indigenous people in marine science research and resulting in genuine engagement.

The MB Hub has also focussed its efforts on EPBC Act Matters of National Environmental Significance (i.e. listed species, communities and world heritage areas) and protected places (Australian Marine Parks), and is finding that many of the listed species and communities accorded this formal significance are also of great importance to Indigenous people. Although the motivations and criteria for assigning significance may be different, there is a strongly shared commitment to ensuring that the Indigenous peoples will continue defining Australian seascapes and their spiritual and instrumental value as also being of value to Australian society. The marine research interests identified by Indigenous people reflect the powerful obligations they accept as custodians of sea Country and the lifeforms and ancestors depending on their management of sea Country. Research is continuing with a number of specific species and communities of interest to Indigenous peoples and in more recent years the Hub has extended its partnership approaches from northern to western and southern Australia. The MB Hub provided the details in **Figure 3.3** to show the nature of their Indigenous engagement with Indigenous peoples and the species that are the subject of their research projects.

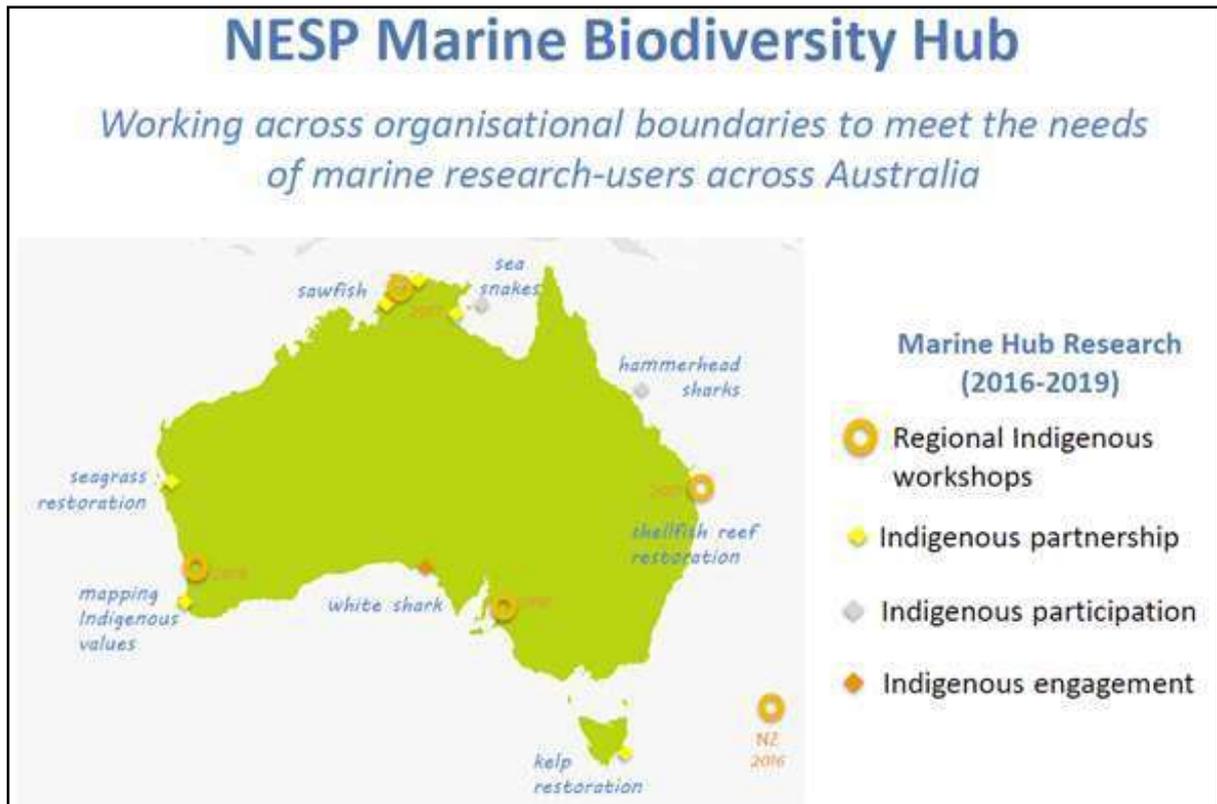


Figure 3.3: MB Hub selected Research projects 2016-2019

Source: Marine Biodiversity Hub

3.9.4 NAER Hub

The NAER Hub partners have a long track record of engaging with Indigenous peoples in large research programs in northern Australia as demonstrated through their involvement in the NERP and the TRaCK research program (Jackson and Douglas, 2015). The NAER has sought to build on these long-term relationships and has done so very effectively. Where relevant, the NAER Hub has actively sought to involve key indigenous stakeholders in research prioritisation, research delivery and the communication of research outputs.

Given the geospatial scope of the NAER Hub, it has been able to collaborate with Indigenous peoples on a very diverse range of matters, including environmental and Indigenous cultural water needs; environmental and economic accounting for river waters, the links between Gulf rivers, coastal environments and food for migratory birds; managing savanna riparian zones; assessing mangrove die-back in the Gulf; fish movement and sensitivity to contaminated mine water; waste and marine debris management; lessons from Top-End fire management; defining metrics for feral animal management; obnoxious and invasive weed management; prioritising threatened species management; monitoring, mapping and safeguarding threatened species; developing eDNA methods for detecting Top-End animals; and the development of Healthy Country indicators.

The NAER Hub has also been able to focus its efforts in collaborating with Indigenous peoples across northern Australia on enabling several cross-thematic projects of particular importance to Indigenous peoples and land managers, including:

- The Indigenous led *Our Knowledge. Our Way in Caring for Country* best practice guidelines;
- The *Country: multiple values, multiple benefits into the future research priorities for IPAs across northern Australia, and the Economic values of Indigenous Protected Areas across Northern Australia*; and

- *The Report on the National Indigenous Fire Knowledge and Fire Management Forum – Building Protocols from Practical Experiences.*

These and several other projects initiated by the NAER Hub have generated valuable lessons and resources for future research and the next iteration of the NESP.

3.9.5 TSR Hub

In mid-2017, the TSR Hub decided that it needed an Indigenous Reference Group (IRG) to assist the TSR Hub to improve Indigenous engagement and participation in the Hub’s activities and research projects. Members are appointed on the basis of their capacity to understand research, community, government and threatened species, along with the aim of having a gender balance and geographical balance. The IRG’s role is to assist the Hub with better aligning its research with Indigenous Australians’ strategic needs, identify activities within the Hub which could advance Indigenous Australians’ involvement in threatened species recovery and management, advice on how to value-add to projects by addressing Indigenous research needs, and advice on culturally appropriate formats for research outputs for Indigenous end-users and stakeholders. The IRG has a standing item on its agenda to scrutinise at least 2-4 projects at each meeting to track the level of Indigenous engagement and their progress. The IRG is also currently leading a project that aims to articulate Indigenous interests and management aspirations for culturally important species and overseeing the development of Cultural Engagement Guidelines for Threatened Species Researchers.

The TSR Hub has been able to collaborate with Indigenous peoples on a wide range of matters. Including mitigating feral animal impacts on native animals; saving endangered species; contrasting outcomes of contemporary and traditional fire management approaches in different environments; improving conservation measures for threatened species; long-term monitoring of threatened species to try and unravel causes of decline and extinctions of threatened species; developing coordinated monitoring programs; optimising the design of a network of havens for vulnerable species; key factors for effective partner integration and governance for threatened species and developing national monitoring priorities for threatened species.

The TSR Hub has also played a key role in assisting DAWE with identifying the threatened ecological communities following the 2019-20 bushfire season, including the appointment of leading researchers involved in the TSR Hub to the Minister’s Wildlife and threatened species bushfire recovery Expert Panel.²²

3.9.6 TWQ Hub

The TWQ Hub has also been building on its long-standing collaborations with Indigenous peoples, particularly in Qld along the Great Barrier Reef and other parts of Northern Australia. The development and application of the 3-Category Approach by the TWQ Hub has played a significant role and the majority of scientists involved through the TWQ Hub are quite comfortable with its application.

The TWQ’s research on TOs and Sea Country in the Southern Great Barrier Reef was used to further define Indigenous aspirations in the Reef 2050 Plan, and the research on Ecosystem Services in the Eastern cape York Peninsula is proving invaluable in terms of holistic approaches to environmental management in tropical waters.

Thematically, the research priorities that the TWQ Hub has been able to collaborate with Indigenous peoples on, includes further research on the crown of thorns invasive species; best practice approaches to restoration of the Reef; improving coral conditions in the Reef through better resilience-based management practices; better management of estuarine environments flowing into the Reef; assessment of key Turtle and Dugong seagrass resources in the northern Torres Strait; water quality and ecosystem health threats in the Torres Strait; and capacity building and increased participation in sea Country management.

²² <http://www.environment.gov.au/biodiversity/bushfire-recovery/expert-panel>