

4. COMMONWEALTH AGENCIES, NESP RESEARCH AND INDIGENOUS RESEARCH THEMES / QUESTIONS

4.1 Introduction and Approach

For comparative and overlap purposes, SGSEP also undertook a review of the environmental and climate science research priorities and activities of several Commonwealth agencies and departments, as well as their Indigenous engagement policies and activities and any connections the agencies or departments have with NESP Hub research projects. This Chapter presents the results of our review.

The agencies and departments SGSEP reviewed include the following:

- Australian Institute of Marine Science (AIMS)
- Bureau of Meteorology (BoM)
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Geoscience Australia (GA)
- Great Barrier Reef Marine Park Authority (GBRMPA)
- Murray Darling Basin Authority (MDBA)
- Torres Strait Regional Authority (TSRA)
- Department of Prime Minister and Cabinet (PM&C) and the National Indigenous Australians Agency (NIAA), and the
- Department of Agriculture, Water and the Environment (DAWE).

As agencies or departments of the Commonwealth, these institutions are actively involved in policy development and program implementation or research in their respective areas of interest or specialised fields. These agencies and departments are also significant initiators and/or end-users of NESP research activities and outputs.

This assessment was carried out by examining the publicly available information about environmental and climate science functions, programs and/or research activities of each of the Agencies and the two Departments, where the Agency or Department has any connection with NESP Hub research activities and, where possible, whether any Indigenous research themes and questions are identified. The assessment was current for most of the Agencies and the two Departments as at January and March 2020. The Machinery of Government changes that were announced in December 2019 and came into effect from 1 February 2020 were taken into account in this assessment.

SGSEP prepared separate overviews of each agency's activities, their Indigenous engagement policies and approaches and research activities. These overviews were shared with the respective agency for accuracy and have been provided to the Department as separate documents. Our analysis is included as **Appendix H** to this Report.

4.2 Commonwealth Agencies and Departments, Indigenous Engagement and Research Priorities

The following provides a brief snapshot of each Agency's or Department's research priorities and Indigenous engagement and how they may relate to Indigenous environmental and climate science research themes

and questions. The following should be read in conjunction with the more detailed analysis provided in **Appendix H**.

Australian Institute of Marine Science (AIMS)

AIMS' primary research focus is to support a resilient Great Barrier Reef, sustainable coastal ecosystems and industries across northern Australia, including environmentally sustainable offshore oil and gas development on Australia's North-West Shelf. AIMS' current research priorities include:

- *Cumulative impacts and ecosystem resilience*. Understanding the cumulative impacts of global and local pressures on tropical marine ecosystems.
- *Marine and coastal industries*. Supporting the sustainable development of Australia's marine and coastal industries through partnership and innovation.
- *Measuring change*. Supporting conservation and sustainable use in tropical marine environments.
- *Reef recovery, adaptation and restoration*. Enhancing the evolutionary potential and climate resilience of coral reefs for conservation and management.
- *Species at risk*. Identifying important habitats and threats to iconic marine species.
- Technology development and innovation. Information, monitoring and decision-making tools to help managers meet the challenges of sustainable ocean use.

AIMS' current research programs include:

- A healthy and resilient Great Barrier Reef program to conduct interdisciplinary research to provide managers and policymakers with a better understanding of the Reef's vulnerability to climate change and ocean acidification, and its interactions with local and regional environmental stressors.
- Sustainable coastal ecosystems and industries in tropical Australia to deliver science relating to the critical issue of cumulative stressors in a broad range of tropical marine habitats arising from coastal and catchment development, in the context of shelf-scale ecosystem drivers.
- Sustainable use of north-west marine ecosystems to focus on the sustainable development of marine resources in north-west Australia.
- Data and technology innovation to provide the interface between science and infrastructure management, and in some cases science and users.

AIMS' National Marine Science Research Plan 2015-2025 (2015) acknowledges that Indigenous Australians can play an increasing role in marine research and monitoring; recognises the Indigenous peoples' cultural connection with the oceans around Australia; and increasing opportunities for collaboration between Indigenous and Western knowledge systems. AIMS' Strategy 2025 also commits the agency to building its internal cultural competence and meaningful partnerships with Traditional Owners of sea country in northern Australia to deliver impactful research for both Indigenous and non-Indigenous Australians, and focussing on bringing together Indigenous knowledge with other areas of science to create new insights into Australia's marine systems, as conditions and circumstances allow, as well as sharing the results of its work to help improve the impact of its research.

Bureau of Meteorology (BoM)

BoM has meaningful engagement with Aboriginal and Torres Strait Islander people both as users of Bureau products and services, and as contributors to or sharing knowledge with the Bureau. BoM strives to understand, harness and celebrate the unique skills and perspectives of Aboriginal and Torres Strait Islander people. For example, through the Indigenous Weather Knowledge website BoM is working with communities that wish to record and share valuable seasonal and environmental information and traditional knowledge.

BoM has also developed a website devoted to Indigenous Language, Culture and Environmental Knowledge, to aid learning about the history of Indigenous weather, season and environment knowledge across Australia. The webpage includes links to 16 different cultural groups and their annual climate cycles.

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

CSIRO recently completed its second Reconciliation Action Plan (RAP), which aims to strengthen its approach to driving reconciliation through its business activities, services and programs, and develop mutually beneficial relationships with Aboriginal and Torres Strait Islander stakeholders and commits CSIRO to continue fostering a culture of inclusion and cultural awareness (CSIRO, 2018). CSIRO's RAP:

- Affirms CSIRO's commitment to reconciliation with Aboriginal and Torres Strait Islander peoples, the oldest living culture in the world;
- Recognises Aboriginal and Torres Strait Islander peoples as the first inhabitants of Australia and respects their enduring connection to lands, skies, waters, plants and animals;
- Commits to enabling Aboriginal and Torres Strait Islander peoples to contribute to and benefit from education, science, innovation and research;
- Demonstrates CSIRO's commitment to fostering a culture of inclusion and cultural awareness;
- Demonstrates that CSIRO is contributing towards the Commonwealth Government's target of three per cent of all purchases being made through Aboriginal and Torres Strait Islander owned businesses;
- Commits to the Commonwealth Government's target of three per cent Aboriginal and Torres Strait Islander employment and outlines a new Aboriginal and Torres Strait Islander Employment Strategy to help CSIRO achieve this;
- Commits to celebrating the successes of Aboriginal and Torres Strait Islander peoples and the sharing of their customs, cultures, knowledge and languages to improve CSIRO's work for the benefit of the Australian community.

A key science related action within the CSIRO RAP is:

- Action 5 – Opportunities: Increase Indigenous-led, driven and/or co-developed research activities in areas that address aspirations, opportunities and challenges prioritised by Aboriginal and Torres Strait Islander people, communities and organisations (CSIRO, 2018).

CSIRO engages Indigenous people in the co-design, implementation and translation of outcomes of research projects through diverse range of approaches, including participatory action research, weaving Indigenous, scientific and local knowledge, photovoice, collaborative film production, participatory mapping, matrices and guides that identify cultural law risks, and the "Walking-Together" Indigenist research approach: research as a respectful, reciprocal exchange between Indigenous peoples involving five steps.

CSIRO is also developing an Indigenous Cultural and Intellectual Property (ICIP) policy and protocols to guide organisational responses in operating at the cultural interface between IP and ICIP.

CSIRO is engaged in substantial research aimed at the development of new Indigenous enterprises and economies based on land, water and sea that have a sustainable social and environmental bottom line/benefit. Key application domains include:

- Fire management for carbon and protocols for Indigenous fire partnerships;
- Environmental and ecosystem services;
- Biosecurity and feral animals;
- Ecotourism;
- Blue economy;
- Bush food development;
- Pastoral improvement/transition;
- Evaluating investment in Indigenous cultural and natural resource management (ICNRM) to identify multiple co-benefits, enhance new income streams, help close the gap, and generate pathways to economic independence; and
- Understanding non-government investment in ICNRM enterprises, including philanthropic and impact investors.

While CSIRO hosts the Earth Sciences and Climate Change (ESCC) Hub funded under NESP, many of CSIRO's scientists are also engaged in several research projects initiated by the other NESP Hubs. The following are just a very small selection of NESP Hub projects where CSIRO scientists have played active and key roles.

- Bininj/Munggy indicators for healthy country Project. Through the NAER Hub, CSIRO was involved in the developing and trialling an adaptive approach to co-management using Bininj/Munggy indicators to monitor and evaluate the health of important values on Country. (NAER Hub Project No. 5.5 Phase 2)
- Protocols for Indigenous fire-management. Through the NAER Hub, CSIRO was involved in the development of a series of protocols to guide Indigenous fire management partners delivering environmental and cultural management programs.²³ (NAER Hub Project 5.2)
- Managing threatened species and their habitats. Through the TSR Hub CSIRO collaborated with Indigenous people to support on-Country opportunities for protecting and recovering Australia's threatened species and their habitats.²⁴ (TSR Hub Project No. 6.2)
- Research priorities for Indigenous Protected Areas (IPAs). Through the NAER Hub, CSIRO collaborated in an assessment of the research priorities for IPAs in northern Australia and identifying the environmental, social, economic and cultural benefits associated with IPAs.²⁵ (NAER Hub Project No. 5.1)
- Investing in Indigenous cultural & natural resource managers. Through the NAER Hub, using Indigenous led and co-developed participatory methods, focused on three key investor types – Indigenous corporations and communities, shareholder corporations, and philanthropic investors – to help investment in the ICNRM sector continue to expand and diversify into the future.²⁶ (NAER Hub project No. 5.6)

Geoscience Australia (GA)

GA's work aligns with the national science and research priorities and supports global and domestic government initiatives, and impacts six key areas of society:

- Maximising the value from our abundant mineral and energy resources;
- Strengthening our resilience to the impact of hazards;
- Optimising and sustaining our water use;
- Supporting the sustainable use of our marine environment;
- Using digital mapping for faster and smarter decision making; and
- Equipping government, industry and the community with geoscience data, and information to make informed decisions.

GA's Strategic Plan 2028, commits GA to delivering data and advice that helps government, industry and the community to address challenges and enhance opportunities facing Australia now and into the future. In doing so, GA also commits to respect and collaborate with the First Peoples—Australia's original mappers, miners and navigators (GA, 2019).

The current level of engagement between GA and stakeholders depends on the type of activity being undertaken, the degree to which the land would be disturbed and the type of stakeholder involved. GA uses four levels of engagement: notify, consult, involve and collaborate. For example, an aerial survey with no ground disturbance requires notification only to the affected stakeholders. However, stakeholders are encouraged to express concerns and ask questions. Additional consultation is undertaken on a case-by-case basis and tailored to specific needs. GA's Strategic Plan notes that it will maintain a focus on the needs of its

²³ <https://www.nespnorthern.edu.au/2016/10/11/developing-protocols-indigenous-fire-management-partnerships/>

²⁴ <http://www.nespthreatenedspecies.edu.au/projects/collaborations-with-indigenous-people-in-threatened-species-research-and-management>

²⁵ <https://www.nespnorthern.edu.au/projects/nesp/research-priorities-for-ipas-across-northern-australia/>

²⁶ <https://www.nespnorthern.edu.au/projects/nesp/guided-resource-investment/>

stakeholders, including respectfully engaging and collaborating with Aboriginal and Torres Strait Islander peoples.

In 2020, GA adopted a new Land and Marine Access (LAMA) Strategy which provides for an Indigenous Stakeholder Engagement Strategy (GA, 2020). The LAMA Indigenous Engagement Strategy 2020 sets out to develop trusted, mutually beneficial relationships and collaborations with Indigenous stakeholders through the application of best-practice engagement protocols. The UN *Declaration on the Rights of Indigenous Peoples* (UN, 2007) and the UN *2030 Agenda for Sustainable Development* (UN, 2015) are used to inform the LAMA Indigenous Engagement Strategy. The LAMA Indigenous Engagement Strategy aims to continue to build and strengthen relationships with Aboriginal and Torres Strait Islander groups and communities, develop trusted relationships with mutual benefit, and includes several objectives and short and long-term indicators for measuring its success. The LAMA Indigenous Engagement Strategy also includes a commitment to collaborating with other federal and state agencies by sharing knowledge and resources which are likely to lead to more integrated outcomes and mitigate the risk of ‘engagement fatigue’ that might result amongst GA’s key Indigenous stakeholders.

GA has identified two issues in relation to its efforts to meaningfully engage with Aboriginal and Torres Strait Islander communities and TOs, and they are: obtaining true consent to access land and assets; and data access disadvantage. Aboriginal and Torres Strait Islander peoples have expressed much frustration over these matters to GA, and GA has acknowledged their concerns (Mouthaan *et al*, 2020).

Given the concerns expressed by Aboriginal and Torres Strait Islander peoples, GA is in the process of placing much greater effort in moving to a more formal approach to managing marine and land access. GA has therefore committed to ensuring meaningful engagement with Aboriginal and Torres Strait Islander stakeholders through free, prior and informed consent.²⁷ In working towards these goals, GA is striving to engage early with traditional owners of land where surveys are being conducted, allowing sufficient time for relationships of trust to be developed.

Great Barrier Reef Marine Park Authority (GBRMPA)

Aboriginal and Torres Strait Islander people are the Traditional Owners (TOs) of the GBR region, with evidence of their sea Country connections dating back over 60,000 years. The sea Country of approximately 70 Traditional Owner clan groups includes the GBR Marine Park.

GBRMPA works with Aboriginal and Torres Strait Islander TOs and acknowledges their continuing social, cultural, economic and spiritual connections to the GBR region, and recognises that establishing effective and meaningful partnerships with TOs is essential to protecting cultural and heritage values, conserving biodiversity and enhancing the resilience of the GBR. GBRMPA collaborates with TO groups to develop a suite of sea Country management arrangements including Traditional Use of Marine Resources Agreements (TUMRAs) and Marine Park Indigenous Land Use Agreements (ILUAs)²⁸ covering approximately 46,808 square kilometres of the GBR Region.

In 2016, the Department commissioned the Gidarjil Development Corporation to consult with Traditional Owners and develop a *Reef 2050 Indigenous Implementation Plan* (Gidarjil Development Corporation, 2016). The Gidarjil Development Corporation found that the capacity of TOs is variable across the region; continued support for existing efforts is important; most of the Indigenous actions in the Reef 2050 Plan are closely linked; Further consultations need to be undertaken to inform monitoring and reporting; and

²⁷ Free, prior and informed consent is a specific right that pertains to Indigenous peoples and is recognised in several articles in the United Nations *Declaration on the Rights of Indigenous Peoples* (UN 2007). See discussion in **Chapter 8**.

²⁸ An ILUAs is a voluntary agreement made under the *Native Title Act 1993* (Cth) between people who hold, or claim to hold, native title rights and interests in an area and other people who have, or wish to gain, an interest in that area. ILUAs are negotiated agreements, and when registered they are binding on all persons who hold or may hold native title for the area covered by the agreement.

Implementation should focus on coordination, cultural heritage and business capacity. The Report also identified coordination; cultural heritage; and business capacity as key priority areas for implementation.

In 2017 the Australian Government commissioned a consortium of Indigenous and research organisations, led by the Reef and Rainforest Research Centre (RRRC), to engage with GBR TOs to better understand and reflect their aspirations for the GBR and deliver on existing commitments. The consortium's report (CoA, 2018), provides advice from GBR TOs about their aspirations for involvement in the management, governance and protection of the GBR. The Report notes that while significant progress has been made with respect to land and sea rights across much of the GBR (catchment and marine) and the emergence of some outstanding examples of TOs, government agencies and researchers working together in productive partnerships, there is no lasting, continuously improving GBR-wide approach to empowering TOs in the governance of the GBR. The Report also states that with the future health of the GBR under serious threat from climate change and other stresses, it is now critical to harness the capacity of TOs and their sea Country institutions for a new generation of reef protection and management into the future. The Report recommends the establishment of a GBR-wide Sea Country Traditional Owner Alliance; resourcing the GBR's leading research institutions to jointly collaborate with TOs to negotiate a long-term strategy for supporting TO knowledge and research needs (e.g. data sharing agreements, etc.); and TOs be embedded in all aspects of GBR monitoring and evaluation using culturally appropriate approaches (e.g. Strong Country – Strong People Framework).

The GBRMPA is responsible for the preparation of several primary documents, including the *Great Barrier Reef Blueprint for Resilience* (GBRMPA, 2017), the *Reef 2050 Long-Term Sustainability Plan* (AG, 2018), and the *GBR Outlook Report 2019* (GBRMPA, 2019), all of which contain considerable information and guidance about how the reef needs to be managed, including working with the TO groups of the region and identifying research priorities.

The *GBR Outlook Report 2019* examines the GBR's health, pressures, and likely future, and aims to provide a regular and reliable means of assessing reef health and management in an accountable and transparent way. The Report also identifies that the GBR Region still faces significant pressures ranging in scale from local to global, and that the greatest threat to the Reef is still climate change:

A comprehensive risk assessment of 45 threats to the Region's ecosystem and heritage values considered the residual risk, after taking into account the current management regime. The 10 threats identified in 2014 as presenting a very high risk to the Region's ecosystem and heritage values are again the highest ranked in 2019. Of the very high-risk threats, most relate to climate change or land-based run-off (water quality) affecting values on a Region-wide scale. Given the current state of the Region's values, actions to reduce the highest risks have never been more time-critical..... Without additional local, national and global action on the greatest threats, the overall outlook for the Great Barrier Reef's ecosystem will remain very poor, with continuing consequences for its heritage values also. The window of opportunity to improve the Reef's long-term future is now. Strong and effective management actions are urgent at global, regional and local scales (GBRMPA, 2019:vi).

In relation to research activities, the *GBR Outlook Report 2019* states:

Inclusion of Traditional Owners in research within their sea country is limited and research results are often not disseminated to Traditional Owners. However, examples of collaboration are increasing. These include: a protocol between the Wuthathi Aboriginal Corporation and Queensland Parks and Wildlife Service to manage permits for research in the Shelburne Bay area in Cape York; new guidelines for Woppaburra Traditional Owner Heritage Assessments in the Keppel islands region; and involvement of Traditional Owners in the development and implementation of research, monitoring and beach restoration at Raine Island (GBRMPA, 2019:205).

Multiple managing agencies continue to have representation on major committees relating to research on the Reef. Many of these are coordinated through the overarching Reef 2050 Plan. However, a number of researchers noted decreased engagement from the Marine Park Authority's staff on

research priorities, which they attributed to a loss of key staff members at the authority over the past few years. The reduced engagement may also be a consequence of diversified sources of funding for research in the Region, with significant research funds being managed through the Commonwealth Department of the Environment and Energy (GBRMPA, 2019:206).

Murray Darling Basin Authority (MDBA)

The MDBA has developed partnership agreements with the Northern Basin Aboriginal Nations (NBAN) and the Murray Lower Darling Rivers Indigenous Nations (MLDRIN), and works with them and a wide range of other community organisations to help raise public awareness about Aboriginal interests and concerns relating to water and invests considerable effort into collecting and sharing Aboriginal information across the Basin.

The MDBA is committed to working with NBAN and MLDRIN to develop and incorporate Basin Nation's environmental watering objectives into environmental water planning and management, including through the First Nations Environmental Water Guidance (FNEWG) Project and the National Cultural Flows Research Project. The MDBA has also actively engaged with Indigenous peoples across the Basin on several other research projects, including water resource planning; reporting on Aboriginal participation in water for the environment; the Living Murray (TLM) Indigenous Partnerships Program; the Aboriginal Weather Watchers Project; the Aboriginal Water Entitlements Program; and Ranger groups and interest in expansion to water.

It is noted however, that no environmental or climate science research has been undertaken by the NESP Hubs in the Murray Darling Basin with the MDBA, MLDRIN or NBAN, other than the ESCC's Hubs work with the Yorta Yorta Nation Aboriginal Corporation to host the National Indigenous Dialogues on Climate Change.

Torres Strait Regional Authority (TSRA)

The TSRA provides regional coordination of policies and programs of benefit to Torres Strait Islander and Aboriginal people living in the region. The TSRA consists of an elected arm and an administrative arm, and is the only such regional Indigenous body in Australia, delivering services to all communities in the Torres Strait and to Bamaga and Seisia on Cape York.

The Torres Strait region stretches 150 km from Cape York Peninsula to 3.73 km off the south-west coast of Papua New Guinea, covering an area of approximately 48,000 km². The region straddles the Australia – Papua New Guinea international border and contains the Torres Strait Protected Zone, established under the Torres Strait Treaty between the two countries to acknowledge and protect the traditional way of life and livelihood of their Indigenous inhabitants.

The region is identified by the Australian Bureau of Statistics as the Torres Strait Indigenous Region. The majority of the region's population is Indigenous, comprising two distinct Indigenous races – Torres Strait Islander and Aboriginal peoples. The population is located on eighteen island communities in the Torres Strait and five Torres Strait Islander and Aboriginal communities on the Northern Peninsula Area of Cape York (Seisa, Bamaga, Umagico, Injinoo, New Mapoon).

The TSRA has been actively involved in several environmental and climate science research projects in the region, including the Traditional Ecological Knowledge (TEK) Project (TSRA, 2016) and the Torres Strait Climate Change Strategy 2014-2018 (TSRA, 2014).

The Traditional Ecological Knowledge (TEK) Project (TSRA, 2016) is a database system managed by the Torres Strait Regional Authority (TSRA) Land and Sea Management Unit (LSMU). The TEK Project Review included several key recommendations for improvements to the system, including improving community access to TEK systems through investigation of offline data upload; focusing on key TEK communities in order to acquire a baseline level of ecological data in these; increase staffing levels for TEK Project to adequately support TEK Systems; investigating the incorporation of TEK data sets into land and sea planning; and continuing to train rangers and LSMU staff on the importance of incorporating TEK into LSMU activities and recording methods.

The revised *Torres Strait Climate Change Strategy 2014-2018* (TSRA, 2014) highlights current climate trends and recent updates to climate change predictions for the region, and identifies the need for further research that targets species vulnerable to climate change (e.g. corals, fishes, crayfish, marine turtles, dugongs, seagrasses, pelagic foragers) to optimise the effectiveness of resilience-based management. Several knowledge gaps have also been identified, including lack of high-quality data; El Niño-Southern Oscillation (ENSO) and the Indian Ocean Dipole; tropical cyclones in the region; Climate Change Projections from Global Climate Models; and high-resolution regional climate models. (Suppiah *et al*, 2010:54).

TSRA is currently participating in two NESP research projects being undertaken by the TWQ Hub: Identifying the water quality and ecosystem health threats to the Torres Strait from the Fly River runoff, and Improving historical estimates of abundance and distribution of dugongs and large green turtles in western and central Torres Strait.

Department of Prime Minister and Cabinet (PM&C) and the National Indigenous Australians Agency (NIAA)

On 12 June 2019 the Prime Minister announced the transition of the Indigenous Affairs Group within PM&C to become the National Indigenous Australians Agency (NIAA). The new NIAA began operations on 1 July 2019. The two key programs of relevance to this report are the Indigenous Protected Area (IPA) Program and the Indigenous Rangers Program (formerly Working on Country).

The IPA program has been helping Indigenous communities voluntarily dedicate their land or sea Country as IPAs since 1997 and has achieved some remarkable successes, as demonstrated by the following statistics:

- The first IPA, Nantawarrina, celebrated its 20th anniversary on 27 August 2018.
- There are 76 IPAs that make up almost 44 per cent of Australia's National Reserve System, managed for the benefit of all Australians.
- Over 60 per cent of IPAs are managed by Australian Government funded Indigenous ranger groups.
- 839 Aboriginal and Torres Strait Islander people are employed in full-time, part-time and casual jobs under the IPA Program.

Indigenous ranger projects were first funded in 2007 through the former Working on Country (WoC) Program to create meaningful employment, training and career pathways for Aboriginal and Torres Strait Islander people working in land and sea management. Indigenous ranger projects support Indigenous people to combine traditional knowledge with conservation training to protect and manage their land, sea and culture. Indigenous ranger groups also develop partnerships with research, education, philanthropic and commercial organisations to share skills and knowledge, engage with schools, and generate additional income and jobs in the environmental, biosecurity, heritage and other sectors.

By achieving employment and environmental outcomes, alongside wider social, cultural and economic benefits, the work of Indigenous rangers is valued by Indigenous communities across Australia. Independent evaluations of the Indigenous Rangers and IPA programs in 2006 (Gilligan, 2006) and in 2016 (SVA Consulting, 2016) found that rangers had experienced increased confidence and skills through their training and work on Country. Rangers reported they felt more pride, self-worth, health and wellbeing, with closer connections to family, culture and Country. Ranger groups also reported a wide range of community benefits as a result of the programs, including safer communities, strengthened language and culture, an ability to find meaningful employment, increased respect for women, and more role models for younger people.

Indeed, the 2016 *Social Return on Investment* study of the IPA and Working on Country (WoC) programs (SVA Consulting, 2016) found that:

- Engaging Indigenous Australians in meaningful employment to achieve large scale conservation outcomes.

- Facilitating reconnection with Country, culture and language to achieve exceptional levels of engagement among Indigenous Australians which is driving positive social, economic, cultural and environmental outcomes.
- Helping to catalyse the development of an Indigenous land and sea-based economy, empowering Indigenous landowners to manage their Country in accordance with their priorities.
- This report synthesises findings from across the analyses, exploring the relevant drivers of value and alignment of program outcomes with PM&C's Strategic Priorities.

SVA Consulting (2016) concluded that over the period between the 2009 and 2015 financial years, an investment of \$35.2m from Government and a range of third-party investors has generated social, economic, cultural and environmental outcomes with an adjusted value of \$96.5m.

However, since the Machinery of Government changes in 2013 that created the Indigenous Advancement Strategy, the administration of the IPA Program has been awkwardly split between two different Departments. Under current Administrative Arrangements, the NIAA is responsible for the ongoing funding to IPAs through the Indigenous Ranger Program and the Department of Agriculture, Water and the Environment retains responsibility for the selection of new IPAs. Among the feedback from consultations with various Indigenous stakeholders, serious concerns were expressed about the artificial disconnect of the ongoing upkeep of IPAs and the Indigenous Ranger Program from Aboriginal and Torres Strait Islander peoples' holistic view of looking after Country generating numerous other benefits.

As is also discussed in **Chapter 6**, it is well established over more than a decade of empirical research that IPAs deliver more than environmental benefits because the Indigenous managers are 'caring for their Country' (Garnett and Sithole, 2007; Ganesharajah, 2009; Burgess *et al*, 2009; Zander and Garnett, 2011; Larson *et al*, 2020). Indigenous communities managing the IPAs are able to protect the values of their Country for future generations and achieve significant health, education, economic, social and cultural benefits, not only for their peoples, but also for Australia more generally. These benefits are well beyond any doubt (SVA Consulting, 2016). It was expressed to SGSEP in no uncertain terms that the disconnect between the IPA Program and the Indigenous Ranger Program from the overall management of Australia's conservation estate risks placing the deeper benefits of the programs in much greater jeopardy.

Department of Agriculture, Water and the Environment (DAWE)

The Department of Agriculture, Water and the Environment (DAWE) was established on 1 February 2020. The Department is responsible for the administration of over 125 statutes and regulations relating to agriculture, water and the environment (CofA, 2019). DAWE's functions also include responsibility for environmental information and research, environment protection and biodiversity conservation, natural built and cultural heritage, and coordination of climate change/systems science research activities, among many other matters relating to other parts of the portfolio. DAWE and its agencies are the biggest end-users of NESP research outputs.

The overview that follows focusses on the matters most pertinent to the scope of this review of Indigenous engagement in the NESP and in particular to Indigenous environmental and climate science research themes and questions, and is a snapshot of the details provided in **Appendix H**.

The Environment Protection and Biodiversity Act 1999 (Cth) (EPBC Act)

The EPBC Act is Australia's central piece of environmental legislation which provides a framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places - defined under the EPBC Act as Matters of National Environmental Significance (MNES).

The EPBC Act provides for the recovery plans for threatened species, setting out what must be done to protect and restore important populations of threatened species and habitat, as well as how to manage and reduce threatening processes. Recovery plans achieve this aim by providing a planned and logical framework for key interest groups and responsible government agencies to coordinate their work to improve the plight

of threatened species and/or ecological communities. In many cases, the recovery plans rest heavily on research undertaken under the auspices of the NESP, and in turn on partnerships with Indigenous people in order to access and utilise their IK, as the following case study demonstrates.

Case Study 8 is an example of the kind of partnerships with Indigenous peoples and other partners that can be developed around threatened species and their recovery.

Case Study 8: *Psephotus chrysopterygius* — Golden-shouldered Parrot, Alwal

National recovery plan for the Golden-shouldered Parrot (*Psephotus chrysopterygius*) 2003-2007

The golden-shouldered parrot is one of 20 birds that the Australian Government has prioritised resource allocation to support the species recovery effort. This species is a priority for investment primarily because of the support afforded to actions to recover it through community partnerships. Priority actions needed to recover this species include protecting termite mounds and associated foraging habitat, controlling feral pigs and feral cats and implementing suitable burning regimes.

The golden-shouldered parrot, or alwal, is a significant cultural species for the Olkola people of Cape York. This brilliantly coloured little parrot lives in tropical savanna woodland, spending much of its time on the ground feeding on grass seeds. Alwal have the unusual habit of nesting in old termite mounds which makes them vulnerable to feral pigs and cats.

The Olkola Aboriginal Corporation, Bush Heritage and landholders are working together with Queensland Parks and Wildlife Service to implement actions from the recovery plan.

The preface of the new draft Recovery Plan states:

'Traditional Owner groups participating in the golden-shouldered parrot Recovery Team welcome the opportunity to work with partners who can help to meet the objectives of the Recovery Plan. All requests to work in partnership with the Recovery Team and participating Traditional Owner groups should be directed to the Recovery Team secretariat at recoveryteam@olkola.com.au. Potential partners will be requested to complete an Expression of Interest form to identify the purpose of their proposed work and whether there is a good alignment of purpose with the Recovery Plan objectives. This process is necessary to protect Indigenous interests in golden-shouldered parrot recovery as outlined in Specific Objective 1.1 of the recovery program.'

Sources:

<https://www.environment.gov.au/biodiversity/threatened/recovery-plans/recovery-plan-golden-shouldered-parrot-psephotus-chrysopterygius-2003-2007>

<https://www.environment.gov.au/system/files/resources/f2ba8fe9-2091-4e37-84ac-dc1ee04c5179/files/p-chrysopterygius.pdf>

http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=720

<https://www.bushheritage.org.au/newsletters/2016/summer/bring-alwal-home>

An independent review of the EPBC Act is currently underway and is due to report later in 2020. In a Discussion Paper (Samuel, 2019), the Review panel notes that respect for and appreciation of Aboriginal and Torres Strait Islander peoples and their cultures has deepened since the introduction of the Act, and that Aboriginal and Torres Strait Islander peoples' roles could be strengthened by placing an emphasis on early and genuine engagement with them, and updating the objects of the Act to provide more emphasis and clarity on the involvement and interests of Indigenous Australians. SGSEP agrees, including in relation to the connections between Indigenous-driven environmental and climate science research outcomes and recovery plans prepared under the EPBC Act.

The EPBC Act also establishes the Indigenous Advisory Committee (the Committee) as a statutory committee to advise the Minister on the operation of the EPBC Act and on other relevant matters as requested by the Minister, taking into account the significance of Indigenous peoples' knowledge of the management of land

and the conservation and sustainable use of biodiversity. The IAC meets about once or twice per year and Bulletins from each meeting are placed on the web. An examination of the Bulletins shows that over the last five years the IAC has provided regular input into the NESP, providing valuable insights and feedback on current program delivery, ensuring greater transparency in how local research priorities are considered, the need to identify best practice approaches and seek more consistency in Indigenous engagement across the Hubs.

The State of the Environment (SoE) Report

Every five years, the Australian Government commissions an independent review of the state of the environment (SoE) to provide all Australians with authoritative information on the state of the environment that sustains our economy and wellbeing, an assessment of how effectively the Australian environment is being managed and what the key national environmental issues are. While the most recent SoE Report (2016) does not necessarily single out Indigenous issues as a theme, it does highlight Indigenous peoples' concerns and inputs across a number of themes, including heritage, land and water, pressures affecting the environment, the marine environment and other matters. For example, there is discussion of the use of land and vegetation for carbon sequestration by Indigenous land owners (**Figure 4.1** left) and the development and take up of innovative scientific tools by Indigenous Rangers for harvesting biodiversity observations and monitoring long term change in our environment (**Figure 4.1**, right) (Jackson *et al*, 2017:32, 34,76-77).

For the 2021 Report, the SoE Taskforce is designing a culturally appropriate process to ensure authoritative Indigenous voices and cultural perspectives about environmental condition and change underpin the 2021 National Report. Drawing on the advice of the IAC, the 2021 report will bring together a mix of traditional, scientific and regional knowledge to inform decision making for better environmental outcomes, including Indigenous knowledge about caring for Country. The use of storytelling using culturally appropriate communication mediums like videos, will ensure the report can be communicated back to Indigenous audiences.



Figure 4.1: Savanna Burning for reduced carbon emissions (left). Applied research supporting Indigenous heritage management (right)

Source: Jackson et al 2017:34, 77)

Australia's Marine Bioregions, National Representative System of Marine Protected Areas (NRSMPA) and Australia's Marine Parks

The Integrated Marine and Coastal Regionalisation of Australia (IMCRA v4.0) (Figure 4.2) is a spatial framework for classifying Australia's marine environment into bioregions that make sense ecologically and are at a scale useful for regional planning. These bioregions are the basis for the development of a National Representative System of Marine Protected Areas (NRSMPA). The NRSMPA aims to establish and manage a comprehensive, adequate and representative system of marine protected areas to contribute to the long-term ecological viability of marine and estuarine systems, to maintain ecological processes and systems, and to protect Australia's biological diversity at all levels.

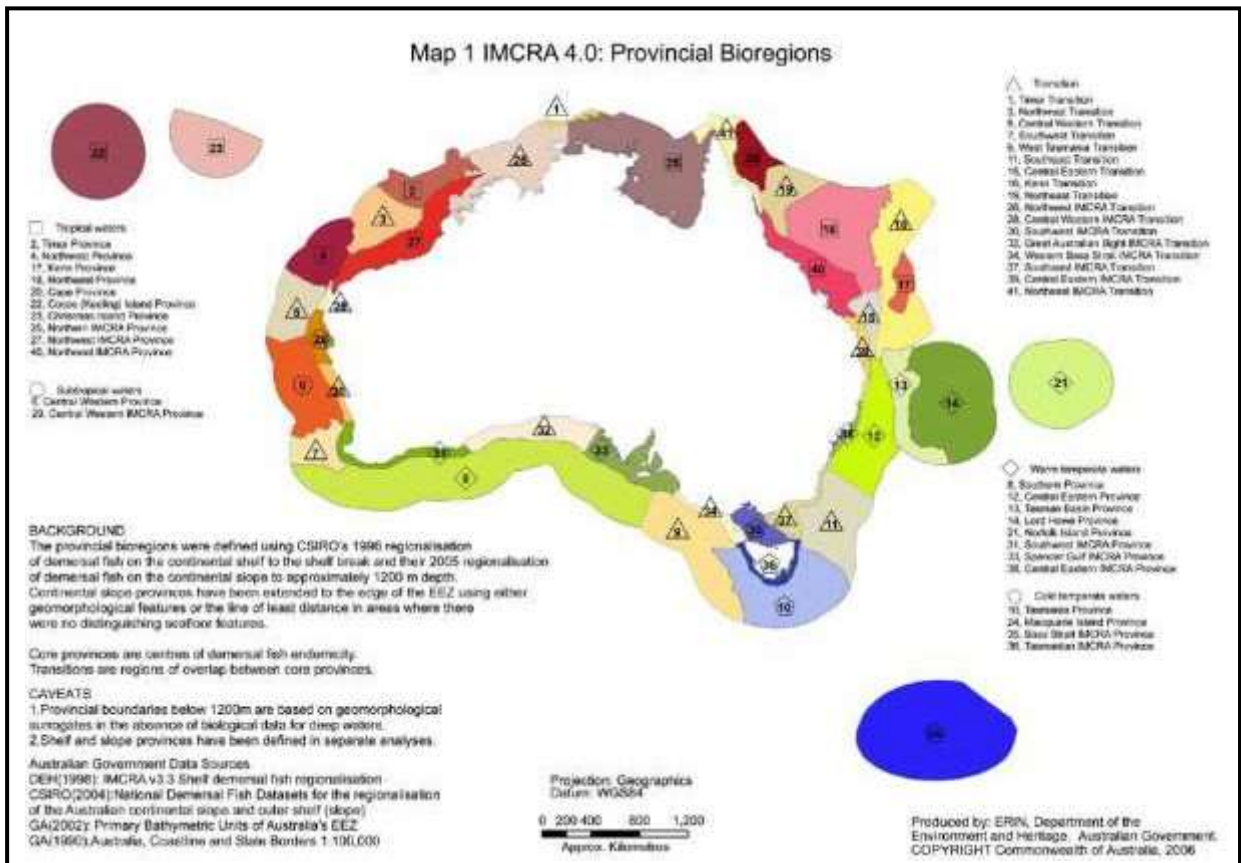


Figure 4.2: Integrated Marine and Coastal Regionalisation of Australia (IMCRA v4.0)

Source: DAWE

Australian Marine Parks (Commonwealth reserves) are proclaimed under the EPBC Act and are located in Commonwealth waters that start at the outer edge of state and territory waters, generally three nautical miles (approximately 5.5 km) from the shore, and extend to the outer boundary of Australia’s exclusive economic zone, 200 nautical miles (approximately 370 km) from the shore. Marine parks have also been established by state and territory governments in their respective waters under the NRSMPA.

Combined, these cover about 3.3 million square kilometres or 36 per cent of our oceans, as shown in **Figure 4.3**, effectively fulfilling the Australian Government’s commitment to establishing the NRSMPA.

The Commonwealth, through the Director of National Parks, manages the 58 Australian Marine Parks located within Commonwealth waters – those over 5.5 kilometres from the coast²⁹ - with management plans for each of the six regions setting out how Australia’s Marine Parks are managed.

The Director of National Parks has developed partnerships with various stakeholders, including with Aboriginal Corporations representing the TOs to support collaborations and engagement in accordance with a set of Indigenous engagement principles (see **Figure H.13** in **Appendix H**). These principles inform the approach to implementing the Management Plans, as well as the development and implementation of actions in each marine park.

²⁹ The Great Barrier Reef marine park is managed by the Great Barrier Reef Marine Park Authority and the Heard Island and McDonald Islands marine park is managed by the Australian Antarctic Division.

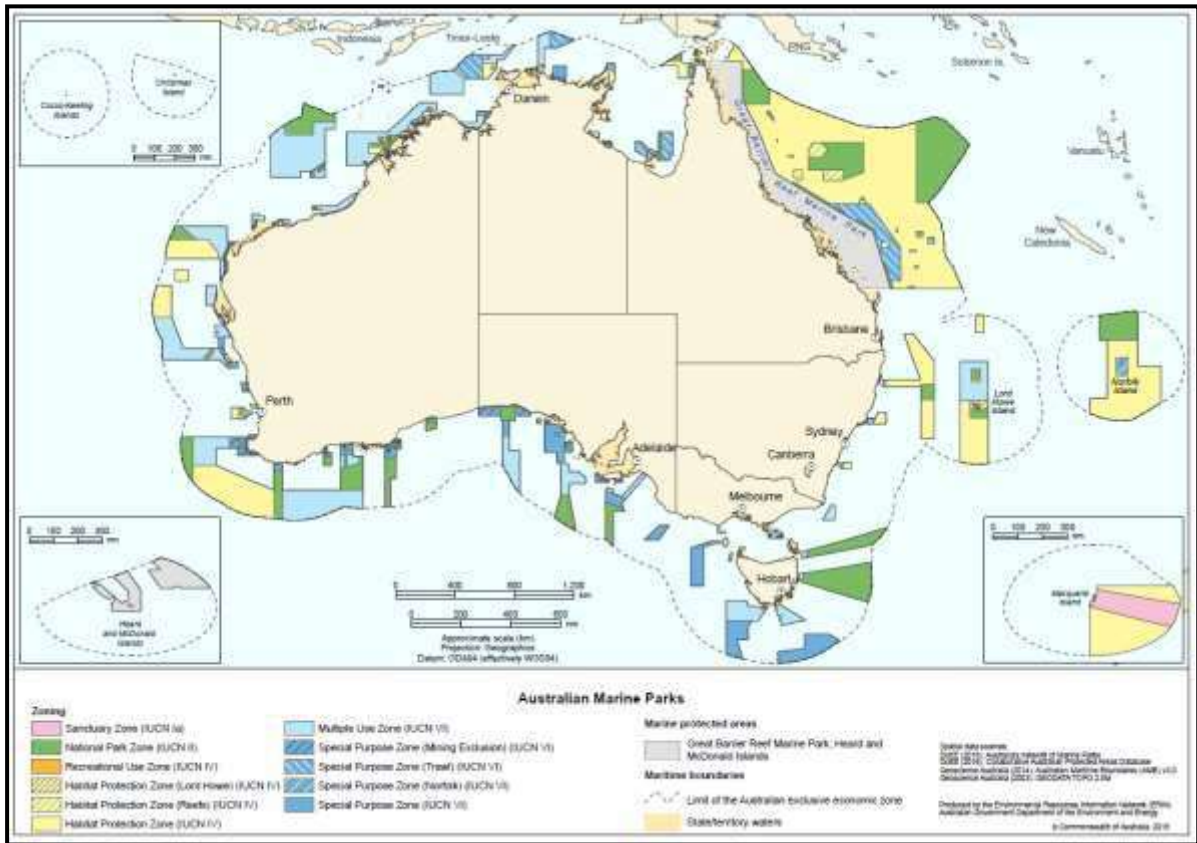


Figure 4.3: Australian Marine Parks

Source: DAWE

An Indigenous engagement program enables the Director of National Parks to work with Indigenous organisations, land councils and Indigenous ranger groups to establish collaborative projects for marine parks and to protect cultural values. The program outcomes include social, cultural and economic benefits for traditional owners, and partnerships with traditional owners and Indigenous groups to manage sea Country in marine parks.

Australia's Terrestrial Bioregions, Ecoregions, National Reserve System (NRS) and Indigenous Protected Areas (IPAs)

The Interim Biogeographic Regionalisation for Australia (IBRA) is a spatial framework for the systematic development of a comprehensive, adequate and representative (CAR) National Reserve System (NRS) in Australia. The current version of IBRA classifies Australia's landscapes into 89 large geographically distinct bioregions based on common climate, geology, landform, native vegetation and species information. For example, the Australian Alps, the Nullabor Plain and the Wet Tropics are distinct bioregions (Figure 4.4). The NRS is Australia's network of protected areas, conserving examples of our natural landscapes and native plants and animals for future generations.

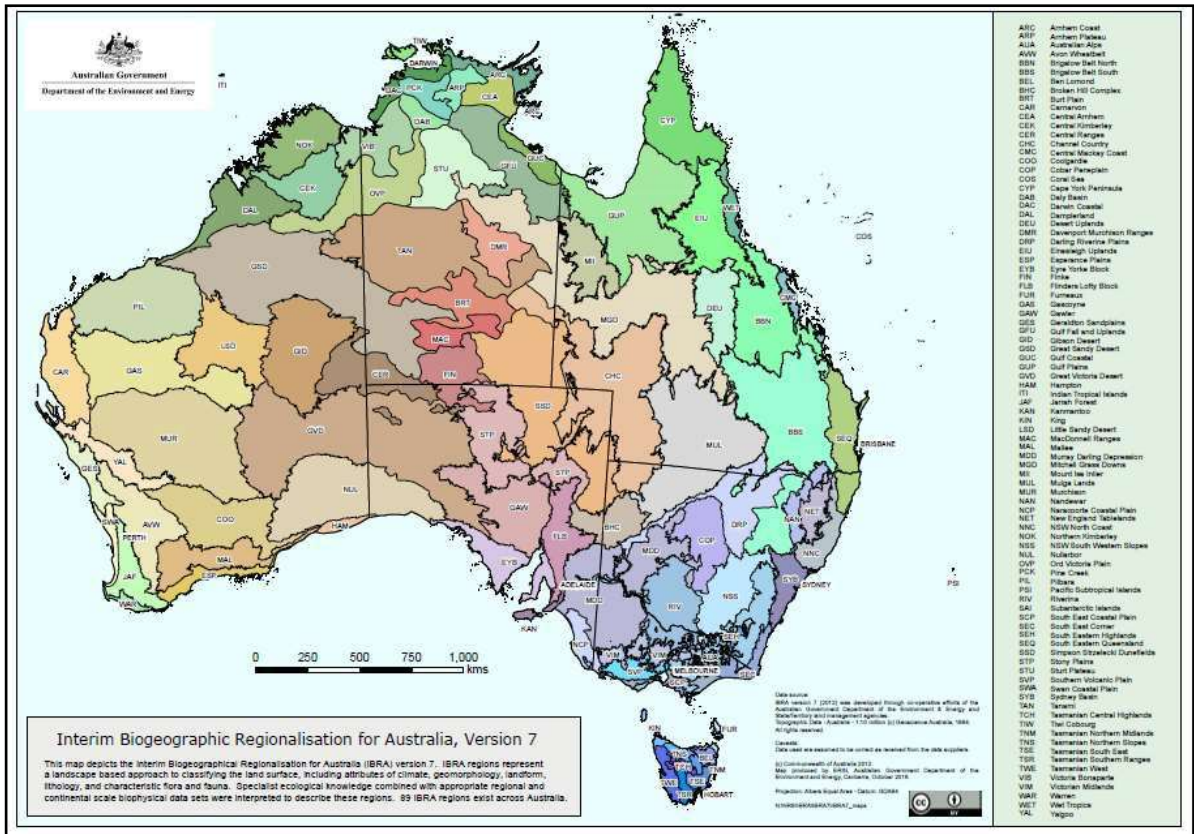


Figure 4.4: Interim Biogeographic Regionalisation of Australia, Version 7

Source: DAWE

Under the UN *Convention on Biological Diversity* (Secretariat of the Convention on Biological Diversity, 1992), Australia has worked towards a target of 17 per cent of the Australian continent to be protected as part of the National Reserve System. In building the National Reserve System, priority is given to under-represented bioregions that have less than 10 per cent of their remaining area protected in reserves. Other priorities include: key habitats for nationally listed threatened species or migratory species and/or Ramsar sites or wetlands of national importance; and areas that contribute to whole-of-landscape conservation outcomes, such as places that offer refuge and/or contribute to connectivity and the adaptation of biodiversity to changing climate.

The NRS includes more than 10,500 protected areas covering 19.63 per cent of the Country – over 150 million hectares. It comprises Commonwealth, state and territory reserves, Indigenous lands and protected areas run by non-profit conservation organisations, through to ecosystems protected by farmers on their private working properties. While governance and institutional arrangements vary between jurisdictions, four types of protected areas are recognised in the NRS includes public reserves (or government-owned), IPAs, private protected areas, and shared management reserves.

The next 20 years will be a critical period for biodiversity conservation in Australia, and the *National Reserve System Strategy 2009-2030* (NRMMC, 2010) is an important step towards long-term protection of Australia's biodiversity. The Strategy states that the foundation of the NRS must be based on strong partnerships between the Australian Government and the various state, territory and local governments, with a commitment to ongoing collaboration and sharing of information and resources. The NRS cannot be built solely on public lands and there is a significant role for Indigenous groups, local communities, private landholders and non-government organisations to play in establishing and managing protected areas to ensure the success of the NRS. The Strategy includes the following three targets:

- To expand the area that is protected within the National Reserve System to at least 125 million hectares (a 25 per cent increase), with priority to be given to increasing the area that is protected in under-represented bioregions.
- To expand the contribution of Indigenous Protected Areas (IPAs) to the National Reserve System by between eight and 16 million hectares (an increase of at least 40 per cent).
- To complete management plans for 100 per cent of Australian Government-funded protected areas under the National Reserve System within two years of the formation of agreements relating to these areas.

Currently, IPAs account for more than 45 per cent of the total area of the NRS. There are currently 76 dedicated IPAs comprising approximately 67 million hectares (**Figure 4.5**), plus 12 more sites currently under consultation (See **Appendix I** for details), which when dedicated will add almost 30 million hectares and increase the size of the NRS by almost 30 per cent.

As well as protecting biodiversity, IPAs deliver cost-effective environmental, cultural, social, health and wellbeing and economic benefits to Indigenous communities. IPAs also protect cultural heritage into the future, and provide employment, education and training opportunities for Indigenous people in remote areas. The formation of IPAs, the benefits of IPAs, IPA Management Plans and their role in environmental and climate science research are discussed in more detail in **Chapter 6**.

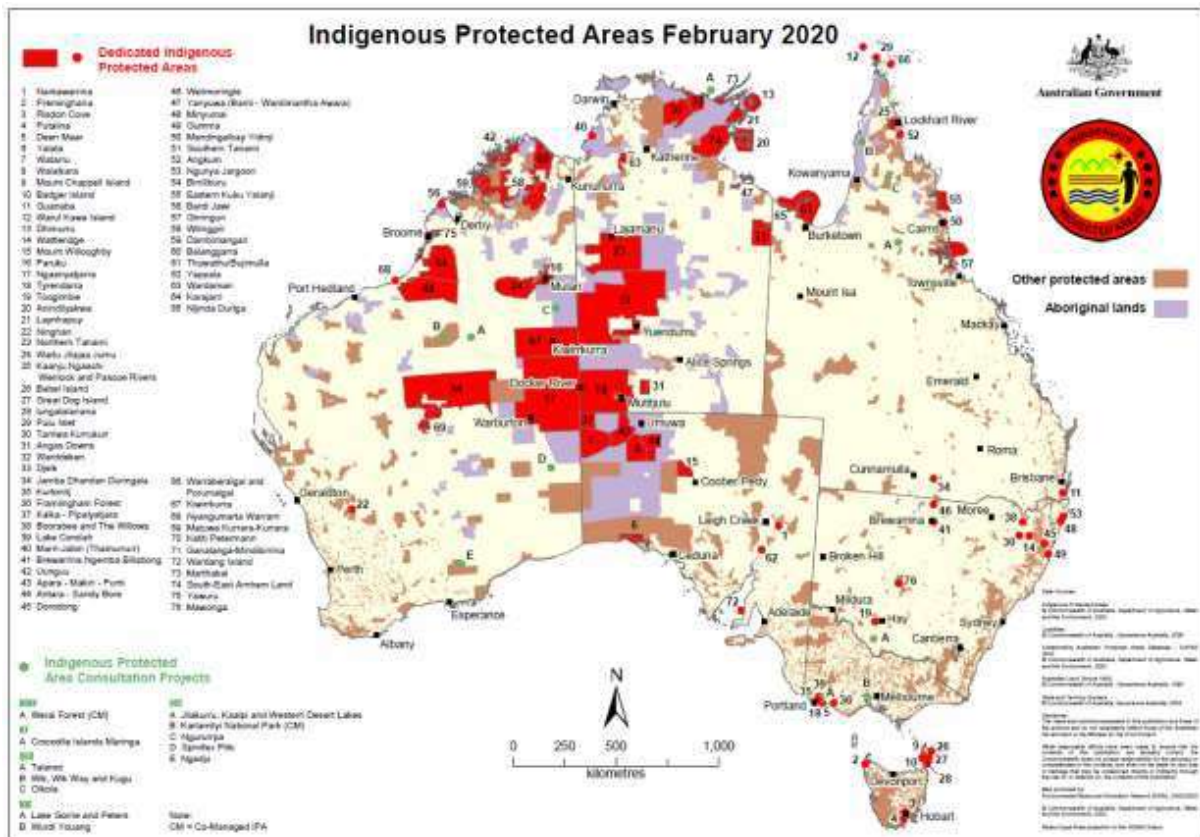


Figure 4.5: Indigenous Protected Areas and Consultation Projects – February 2020

Source: DAWE, 2020

The Australian Government manages three terrestrial National Parks jointly managed with Aboriginal people, the Booderee National Park in NSW and the Kakadu National Park and Uluru-Kata Tjuta National Park in the Northern Territory.

Indigenous heritage

While Australia's state and territory governments have broad responsibilities for recognising and protecting Australia's Indigenous heritage, the Commonwealth plays a role through the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) and the EPBC Act.

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) enables the Australian Government to respond to requests to protect important Indigenous areas and objects that are under threat, if it appears that state or territory laws have not provided effective protection.

The EPBC Act protects Australia's World heritage properties listed for outstanding cultural and natural values (Kakadu National Park in the NT) and establishes the National Heritage List, which includes natural, Indigenous and historic places that are of outstanding heritage value to the nation. A place may be added to the National Heritage List if the place has outstanding heritage value to the nation because of the place's importance as part of Indigenous tradition. The Act also establishes the Commonwealth Heritage List, which comprises natural, Indigenous and historic places on Commonwealth lands and waters or under Australian Government control, and identified by the Minister for the Environment (the Minister) as having Commonwealth Heritage values (i.e. the Uluru-Kata Tjuta National Park in the NT). 'Indigenous tradition' means the body of traditions, observances, customs and beliefs of indigenous persons generally or of a particular group of indigenous persons (s.201(4) of the EPBC Act).

Regulations under the EPBC Act include the requirement for management plans for World, National and Commonwealth heritage places and the application of a set of management principles. Including that the management of these places should make timely and appropriate provision for community involvement, especially by people who have a particular interest in, or associations with, the place, and may be affected by the management of the place.

Under the EPBC Act, the Minister must table a report in the Parliament at least once in every five years on the National Heritage List and the Commonwealth Heritage List (S.324ZC and s.341ZH respectively). The most recent report on the heritage lists covers the five years from 1 July 2013 until 30 June 2018 (DEE, 2019). In relation to Indigenous heritage, the Report makes the following points:

- The Australian Heritage Council's preferred approach to National Heritage nominations of Indigenous heritage is that they be led by the relevant Indigenous communities with the support of the relevant State or Territory government. This approach of strong partnerships with Indigenous communities ensures obligations around free, prior and informed consent are met. This enables Indigenous people to take leadership in identifying Indigenous heritage places for potential recognition in the National and World Heritage lists.
- In May 2018, Chairs and senior officials from Aboriginal and Torres Strait Islander heritage organisations and agencies joined the annual meeting of the Heritage Chairs and Officials of Australia and New Zealand (HCOANZ) for the first time and were invited to become permanent members of HCOANZ. The HCOANZ forum, led by the Chair of the Australian Heritage Council and the forum host, the chair of the Northern Territory Heritage Council, issued the Darwin Statement.³⁰ The statement affirms the need to include, engage and collaborate with Aboriginal and Torres Strait Islander people and share their cultural heritage stories.

National Landcare Program

The National Landcare Program (NLP) invests in projects that build on partnerships with Indigenous people and communities which also enable them to have the opportunity to fully participate in land and sea management and draw on their significant and unique knowledge, skills and responsibilities.

³⁰ <http://www.environment.gov.au/system/files/resources/94665a8c-2e41-4aa3-915f-77a1a6af0199/files/darwin-statement-hcoanz.pdf>

The National Landcare Program includes a Regional Land Partnerships component which provides many of the 56 regional NRM organisations around Australia with resources to work with local Indigenous people and communities. **Figure 4.6** shows the 49 management units across Australia that were funded under the Regional Land Partnerships component of the National Landcare Program to support the delivery of 195 projects that aim to contribute to vital on-ground environment and agricultural projects across the country. many of these management units are part of the network of regional NRM organisations across Australia.

Indigenous peoples are involved in NLP projects in several different ways, including:

- on-ground natural resource management (NRM) activities (e.g. fire, rehabilitation, weed or pest management);
- the recording and continued use, support and reinvigoration of IK to underpin biodiversity conservation and the sustainable use of natural resources, such as savannah and traditional cool burns;
- employment and capacity building, including access to appropriate training, education, land and sea management planning, management activities and enterprise development;
- clear articulation of Indigenous land and sea aspirations in regional NRM plans and the development and implementation of regional NRM Indigenous participation strategies;
- development of land and sea management plans; and
- Indigenous Participation Strategies that provide a framework and practical guide for regional NRM organisations to partner with and include Indigenous people in the planning, consultation and implementation of NRM investment.

These activities contribute to wider social and economic benefits, such as Indigenous employment, training and enterprise development.

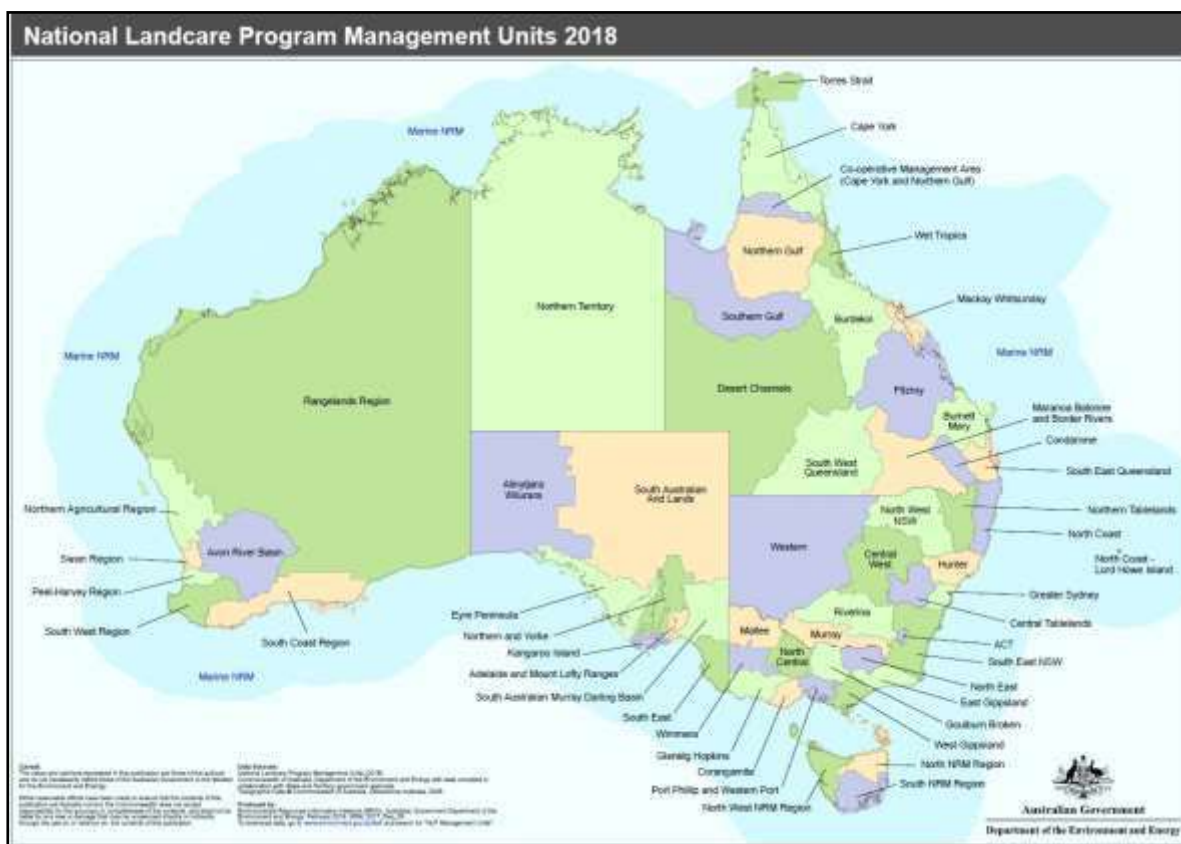


Figure 4.6: National Landcare Program 2018 Regional Land Partnership Management Units

Source: DAWE <http://www.nrm.gov.au/system/files/resources/83b10aba-cd7a-4068-bccb-c41b0cc7d5c1/files/national-landcare-program-management-units-2018-map.pdf>

National Waste Strategy

DAWE is responsible for implementation of the National Waste Policy (AG, 2018b), in collaboration with state, territory and local Governments, business and industry. Importantly for Indigenous communities, the Policy encourages governments, businesses and industries to implement tailored solutions in response to local and regional circumstances and acknowledges better waste management also helps reduce health and environmental problems and prevents pollution of our land and oceans. The Policy contains strategies that target the waste minimisation and recovery needs of Indigenous communities. Strategy 6 is about 'Improving access' by identifying and improving regional, remote and Indigenous communities' ability to access, influence and participate in a circular economy. Strategy 10 is about 'Plastics and packaging' to reduce the impacts of plastic and packaging on the environment and oceans, reduce plastic pollution, and maximise benefit to the economy and society.

Commonwealth Environmental Water Office (CEWO)

The role of the Commonwealth Environmental Water Holder was established under the *Water Act 2007* (Cth) to manage water acquired by the Australian Government as part of a suite of national water reforms, including the Murray-Darling Basin Plan. The Commonwealth Environmental Water Holder's plans take into account annual priorities and longer-term targets set within the Murray-Darling Basin Plan by the MDBA, and the CEWO is co-funding the First Nations Environmental Water Guidance (FNEWG) Project with the MDBA to develop a defined and transparent methodology for First Nations' environmental watering objectives to be incorporated in environmental water planning.

Australian Bureau of Agricultural and Resource Economics and Sciences and the inventory of Indigenous owned, managed or co-managed lands

ABARES is now part of the DAWE portfolio. Among its many functions, ABARES produces a periodic State of the Forests Report (SoFR) to meet certain reporting requirements of the *Commonwealth Regional Forest Agreements Act 2002* (Cth). Indicator 6.4a in the SoFR is about the area of forest to which Indigenous people have use and rights that protect their special values which are recognised through formal and informal management regimes. This indicator monitors the degree to which land is placed under appropriate tenure classifications or management regimes to protect Indigenous peoples' values in forests. An acceptable level of accountability for the protection of Indigenous peoples' cultural, religious, social and spiritual needs and values is an essential part of forest management.

The relevance of the SoFR to this review of Indigenous engagement in the NESP is because in order to report against Indicator 6.4a, the SoFR includes a national data set of four Indigenous land ownership and management categories. For reporting purposes, the information collected on Indigenous land is grouped into four categories (Dillon *et al.* 2015):

- **Indigenous owned and managed:** freehold lands that are both owned and managed by Indigenous communities.
- **Indigenous managed:** lands that are managed but not owned by Indigenous communities (e.g. Crown reserves and leases); and lands that are owned by Indigenous people, but have formal shared management agreements with Australian and state and territory government agencies (e.g. leased-back nature conservation reserves).
- **Indigenous co-managed:** lands that are owned and managed by other parties, but have formal, legally binding agreements in place to include input from Indigenous people in the process of developing and implementing a management plan (e.g. nature conservation reserve memoranda of understanding).
- **Other special rights:** lands subject to native title determinations, registered Indigenous Land Use Agreements and legislated special cultural use provisions. These are independent of tenure and, in most cases, do not grant ownership or management rights of land to Indigenous communities. They can provide for the right to access areas of cultural significance or the use of areas for cultural

purposes (e.g. within protected water supply catchment areas), or can provide a legal requirement for consultation with the local Indigenous community before any major development activities take place.

A land parcel may be subject to more than one type of management. For this indicator in the SoFR, land is classified into the highest-ranked Indigenous land ownership and management category that is applicable (Dillon *et al*, 2015). For example, a land parcel that is subject to a native title determination, but that is also Indigenous owned and managed as a declared Indigenous Protected Area, is reported here as Indigenous owned and managed.

In 2016, the national Indigenous estate contained 438 million hectares of land, of which 69.5 million hectares was forested. This is 52% of Australia’s total forest area. Of the 69.5 million hectares of forested land in the Indigenous estate, 47.8 million hectares (69%) is in Queensland and the Northern Territory. The proportion of forested land that is in an Indigenous land category varies from 15% in New South Wales, to 79% in the Northern Territory.

The 69.5 million hectares of Indigenous forested land comprises 18.0 million hectares of forested land that is Indigenous owned and managed, 4.9 million hectares of forested land that is Indigenous managed, 5.7 million hectares of forested land that has Indigenous co-management arrangements in place with government agencies, and 40.9 million hectares of forested land over which Other special rights apply (including native title determinations and Indigenous Land Use Agreements). **Figure 4.7** shows the geographic distribution of the Indigenous forest estate across Australia by land ownership and management category.

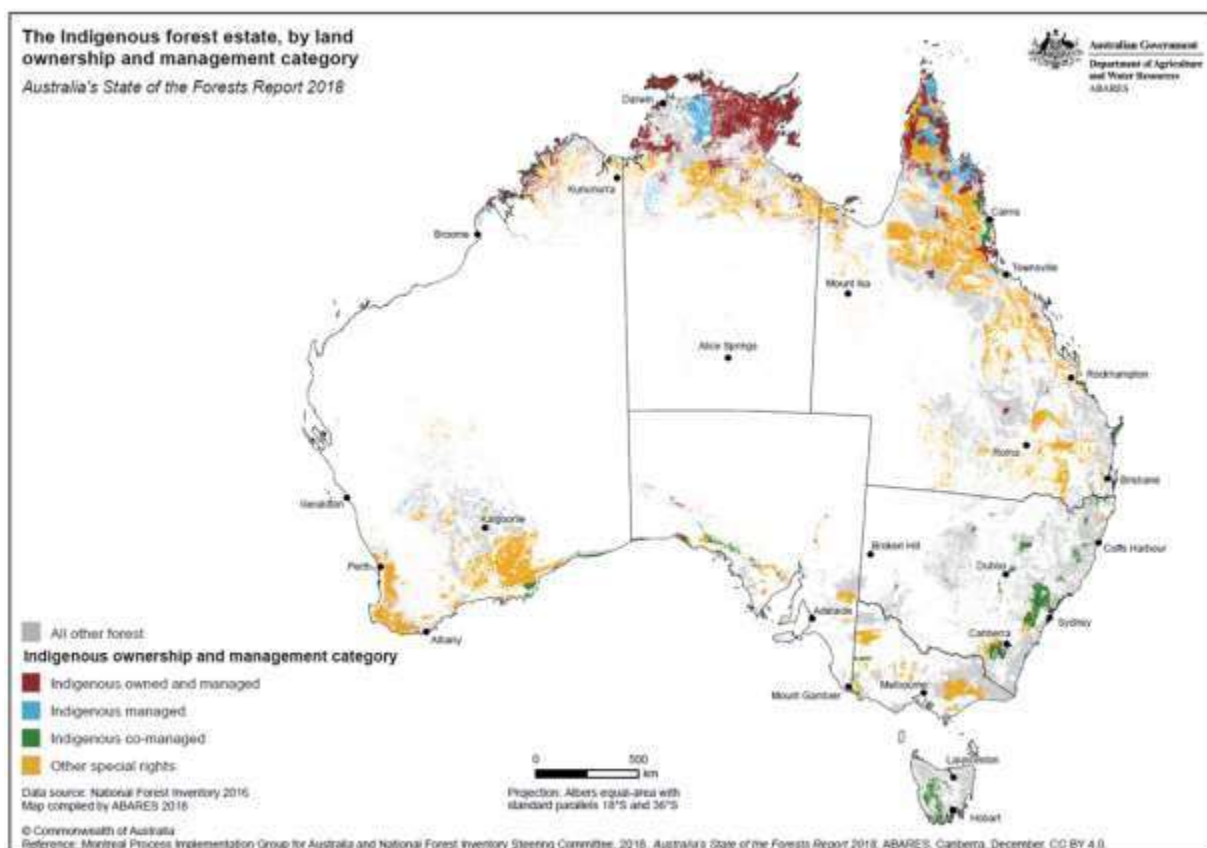


Figure 4.7: The Indigenous Forest Estate by land ownership and management category

Source: ABARES 2018:403

The State of the Forests Report notes that while the level of Indigenous participation in forest management through various mechanisms may be difficult to measure, Indigenous people provide critical knowledge that contributes to the protection and maintenance of forest values independently of any legal right to the land.

The Report also notes that the joint management arrangements applied in Kakadu and Uluru-Kata-Tjuta National Parks are a blueprint for joint management arrangements more broadly, not just in Australia, but also internationally (ABARES, 2018:423).

We return to the ABARES' Indigenous land data set in **Chapter 5**.

4.3 NESP Hub Collaboration with Commonwealth Agencies and Departments

SGSEP also requested the NESP Hubs to identify their collaborations with the selected Commonwealth Agencies and Departments or any others, in order to understand the connections between the Hubs' research activities and uptake by end users. The following information is indicative of the scope of interactions between the NESP Hubs and various Commonwealth agencies and Departments. What follows is by no means an exhaustive account of those interactions and the way NESP Hub research outcomes are used or applied by those agencies or departments.

4.3.1 CAUL Hub

The CAUL Hub links with DAWE in a number of ways, including the following:

- DAWE (and its stakeholders) are collaborators and are working directly with the CAUL Hub on co-creating practitioner- and industry-appropriate training and engagement such as the Three-Category Approach toolkit.
- DAWE's policymakers have undertaken training on the Three-Category Approach to inform their own practice and perspectives (this has the potential for broader reach to other departments).
- DAWE's policymakers have been informed by the CAUL Hub's work highlighting Indigenous knowledge and perspectives on air quality, urban greening, biodiversity, people, nature and liveability through cities as Indigenous places.
- DAWE's policymakers have developed new conceptual frameworks for perceiving engagement through the CAUL Hub's highly regarded *Flipping the Table* report and its promotion of cities as Indigenous places.
- DAWE has drawn upon CAUL-Hub research expertise, including in the development of National Performance Framework data and State of the Environment reporting through multiple themes.
- DAWE participates in the CAUL Hub's bi-annual Steering Committee Meetings with the Indigenous Advisory Group co-Chairs.

4.3.2 ESCC Hub

The ESCC Hub links with many Commonwealth agencies in several ways, including the following:

- The ESCC Hub has collaborated with the Commonwealth and State Governments agencies through World Heritage Properties, Science teams and International Heritage Teams. CSIRO and BOM are partners in the Hub, but the ESCC Hub also uses capability from other areas of these organisations, including the Diversity and Inclusion team in BoM and Land & Water in CSIRO. ESCC Hub has held workshops that have had included collaboration with the TSRA and, to a lesser extent, the Great Barrier Reef Fund.
- ESCC Hub has collaborated with DAWE on a number of projects, including:
 - Meeting Indigenous priorities for climate change information, capacity building and engagement (Project 3.2).
 - Climate change impacts on inshore aquatic ecosystems and coastal communities in the Torres Strait (Project 3.3).
 - 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.

4.3.3 MB Hub

The MB Hub links with many Commonwealth agencies in several ways, including the following:

- DAWE is the primary research-user of the MB Hub's research. Many of the MB Hub's research outputs are designed to inform decision making for the protection of threatened and migratory species, management of Australian Marine Parks, assessment of proposed activities and State of the Environment reporting. Three DAWE senior executives sit on the MB Hub's Steering Committee.
- AFMA, the Australia's Fisheries Management Authority is an important research user of the MB Hub's research, they also collaborate with the MB Hub by sharing data on commercial fisheries. In more recent times AFMA has sought advice from the MB Hub about approaches to Indigenous engagement and participation. One AFMA officer sat on the MB Hub's Research-user Committee, which has since been replaced by direct meetings with research-users and a primary contact officer in AFMA.
- GBRMPA – An important research-user of the MB Hub's research and has benefitted from advice and tools developed to establish integrated monitoring and cumulative impact assessment.
- TSRA – Stan Lui from TSRA sits on the MB Hub's Steering Committee. Stan Lui is the Program Manager – Environment Management, Land and Sea Management Unit, Torres Strait Regional Authority.
- The MB Hub has collaborated with DAWE on a number of projects, including:
 - Northern Australian hotspots for the recovery of threatened euryhaline species (Project A1).
 - Australia's Northern Seascape: assessing status of threatened and migratory marine species Project A12).
 - Underpinning the repair and conservation of Australia's threatened coastal- marine habitats (Project B4).
 - National data collation, synthesis and visualisation to support sustainable use, management and monitoring of marine assets (Project D1).
 - Implementing monitoring of Australia's Marine Parks and the status of marine biodiversity assets on the continental shelf (Project D3).
 - Assisting restoration of ecosystem engineers through seed-based and shoot-based programs in the Shark Bay World Heritage Site (Project E6).
 - Assessing the feasibility of restoring giant kelp beds in eastern Tasmania (Project E7).

4.3.4 NAER Hub

The NAER Hub links with many Commonwealth agencies in several ways, including the following:

- DAWE are the primary research user for the Hub's research outputs and projects have been co-designed with DAWE to deliver targeted research products to address their needs. Two Senior DAWE staff sit on the Hub Steering Committee.
- CSIRO are a founding partner in the Hub and a CSIRO senior staff member sits on the Hub's research Executive Committee. CSIRO have led major projects in the Hub and have collaborated on others. These projects have employed Indigenous people, provided support for Indigenous people in areas of water planning and catchment management and have involved a number of Indigenous-led projects including the production of the *Our Knowledge, Our Way* guidelines.
- The Hub has undertaken a number of projects specifically focussed on supporting policy development for IPAs including a review of research needs on IPAs and an assessment of the benefits of Indigenous land management on IPAs.
- The Hub has worked closely with the National Indigenous Australians Agency in the Department of Prime Minister and Cabinet. A senior staff member sits on the Hub's Steering Committee and several projects were developed specifically to respond to their research needs.

- The Hub has worked very closely with Parks Australia and the Director of National Parks on research in Kakadu National Park. This included six projects with significant Indigenous involvement including the development of Indigenous Research Priorities, the establishment and support for the Kakadu Indigenous Research Committee and Indigenous-led projects on Healthy Country Indicators.
- The NAER Hub has collaborated with DAWE on a number of projects, including:
 - Environmental Water Needs of the Mitchell River, and 4.6: Environmental Economic Accounting for the Mitchell River (Project 1.3.1)
 - Environmental Water needs for the Fitzroy River (Project 1.3.3).
 - Indigenous Water Needs for the Fitzroy River (Project 1.5).
 - Defining Metrics of Success for Feral Animal Management in Northern Australia (Project 2.5).
 - Prioritising Threatened Species in Northern Australia (Project 3.3).
 - Kakadu National Park’s Threatened Species (Project 3.4).
 - Monitoring, Mapping and Safeguarding Kimberly Bilbies (Project 3.5).
 - Developing eDNA methods for tropical waters and 4.5: Developing eDNA methods to detect Top End animals (Project 4.3).
 - Assessing Mangrove Dieback in the Gulf (Project 4.4).
 - Research Priorities for Indigenous Protected Areas Across Northern Australia (Project 5.1).
 - Lessons from Top End Indigenous Fire Management (Project 5.2).
 - Multiple Benefits of Indigenous Land and Sea Management Programs (Project 5.3).
 - Knowledge Brokering for Indigenous Land Management (Project 5.4).
 - Phase 1: Bininj/Mungguy Natural resource management research priorities for Kakadu National Park, and 5.5: Phase 2: Bininj/Mungguy Healthy Country Indicators (Project 5.5).
 - Investing in Indigenous cultural and natural resource managers (Project 5.6).
 - Cultural Connections (Project 6.3.3).

4.3.5 TSR Hub

The TSR Hub links with many Commonwealth agencies in several ways, including the following:

- Collaborating with *Parks Australia Division* in DAWE on projects at Booderee and Kakadu that had high levels of Indigenous engagement and provided paid work to traditional owners/Indigenous rangers.
- Facilitating connections between the *Office of the Threatened Species Commissioner* in DAWE and Indigenous groups, including facilitating meetings. Also, promoting some of the Commissioner’s Indigenous engagement activities through the TSR Hub’s communications.
- Undertaking two-way research projects in collaboration with TOs and land managers to support improved monitoring and land management strategies on a number of IPA.
- Working with CSIRO to deliver Indigenous led projects that had high levels of Indigenous engagement.
- The TSR Hub has collaborated with DAWE on a number of projects, including:
 - Saving an endangered bettong with fire – a controlled fire and predator experiment in the Wet Tropics (Project 1.3.3).
 - Monitoring threatened species in IPAs: Bilbies in the Martu Native Title Determination (Project 3.2.2.2).
 - Strategic planning for the Eastern Curlew (Project 5.1.1).
 - Collaborating with Indigenous people in threatened species research and management (Project 6.2).
 - Conserving Alwal, the golden-shouldered parrot (Project 6.2b).
 - National monitoring priorities, process and prospectus for threatened species (Project 7.5).

4.3.6 TWQ Hub

The TWQ Hub links with many Commonwealth agencies in several ways, including the following:

- The TWQ Hub continues to work with the TSRA and the Prescribed Bodies Corporates to understand the community's concerns on the water quality and the ecosystem health threats to the Torres Strait from the Fly river run-off.
- Duane Fraser, Acting Chair of the Indigenous Advisory Committee to the Minister for the Environment is a member of the TWQ Hub Steering Committee.
- The TWQ Hub responds to requests from DAWE for case studies on Indigenous Engagement within the Hub.
- The TWQ Hub supports Traditional Owners in their aspirations for co-governance and co-management of the Great Barrier Reef and has collaborated with GBRMPA on several projects as noted earlier in this Chapter.
- The TWQ responds to requests for advice on Indigenous matters from NAILSMA and other Land Councils or TO organisations if and when required.
- The TWQ Hub has collaborated with DAWE on the following projects:
 - Implementation of the crown of thorns starfish research strategy: regional strategies (Project 3.1.1), and Crown-of-thorns starfish: surveillance and life history (Project 4.1), and Matching the Crown-of-Thorns Starfish Integrated Pest Management to the scale of the new Control Program (Project 5.1), and Innovations in COTS control on the GBR (Project 6.1).
 - Reducing sediment loads to the Great Barrier Reef: developing optimal approaches for treating alluvial gully erosion (Project 3.1.7).
 - Best practice coral restoration for the Great Barrier Reef, and 6.5: Improving coral condition through better informed resilience-based management (Project 4.3).
 - Identifying the water quality and ecosystem health threats to the high diversity Torres Strait and far northern GBR from runoff from the Fly River (Project 2.2.1)
 - Science evaluation of coastal wetland systems repair projects across GBR catchments (Project 3.3.2).
 - Assessing the Gulf of Carpentaria mangrove dieback (Project 4.13).
 - Restoring ecosystems from catchment to reef (Project 6.2).
 - Reducing end-of-catchment fine sediment loads and ecosystem impacts (Project 6.4).
 - Learnings from applied environmental research programs: Elements for success (Project 6.7).
 - Integrated Environmental Assessment to inform Environmental decisions (Project 6.8).

4.4 Findings and Conclusions

This Chapter reviewed the programs and research activities of selected Commonwealth Agencies and Departments relating to environmental and climate science research activities to examine their engagement with Indigenous Australians, to ascertain to the extent to which the agencies and departments interact with the NESP Hubs' research activities and outputs as contributors and/or end users and, where possible, to identify key research themes and questions regarding Indigenous environmental and climate science research themes and questions.

As agencies or departments of the Commonwealth with a wide range of responsibilities in relation to the environment more broadly, their engagement with Indigenous peoples arises from the Australian Government's commitment to engagement with Indigenous peoples, as reflected for example, in the earlier COAG agreements dating back to 2008 (cited earlier) and more recently the formal Partnership Agreement between COAG and the National Coalition of Aboriginal and Torres Strait Islander Peak Organisations which came into effect in March 2019 (COAG, 2019).

The commitment to working closely with Indigenous Australians on environmental matters also arises from the fact that Australia is a signatory to the UN *Convention on Biological Diversity* (CBD) (The Secretariat of the CBD, 1992) and the UN *Declaration on the Rights of Indigenous Peoples* (DRIP) (UN, 2007), which several of the agencies and departments refer to on their websites and in their documentation relating to Indigenous engagement. These international instruments are also identified in DAWE's IEPS for the NESP as being among the key drivers for Indigenous engagement. Interestingly, many of the agencies make explicit reference to Article 19 in the UN DRIP relating to the principle of free, prior and informed consent when it comes to working with Indigenous peoples' ecological knowledge and cultural and intellectual property. The agencies acknowledge that the principle of free, prior and informed consent is seen as the benchmark for working with Indigenous peoples. This principle is discussed in more detail in **Chapter 8**.

SGSEP draws the following observations about the Commonwealth agencies and departments and their Indigenous engagement and research activities, however, with the caveat that these matters need to be verified with Aboriginal and Torres Strait Islander peoples from around Australia in the very early stages of NESP2.

This review of Commonwealth agencies and departments with environmental responsibilities shows there is an increasing recognition and acceptance by Commonwealth agencies and departments of the value of engaging with Indigenous peoples about environmental and climate science matters because of their intricate cultural knowledge about the natural environment and the Indigenous peoples' resilience in the face of increasing pressures.

Most of the agencies have adopted Indigenous engagement strategies and have developed partnerships or other collaborative working arrangements that enable the agencies and departments to work together with Indigenous peoples on matters of mutual concern or interest. Some of the agencies have an Indigenous advisory structure in place to provide specialist advice or input to research topics and research design, to act as a sounding board for new ideas or approaches, to monitor performance against agreed targets or outcomes, and to reach out to a wider audience of Indigenous peoples as potential end-users of the research the agencies undertake.

In the case of the Great Barrier Reef and the Torres Strait regions, AIMS, GBRMPA and TSRA must work with Indigenous peoples because the Aboriginal and Torres Strait Islander peoples are the TOs of the Reef and the Torres Strait with evidence of their sea Country connections dating back many thousands of years. However, while significant progress has been made with respect to some matters (catchment and marine land and sea rights and some outstanding examples of productive partnerships), there is no lasting, continuously improving GBR-wide approach to empowering TOs in the governance of the GBR. With the future health of the GBR under serious threat from climate change and other stresses, it is now critical to harness the capacity of TOs and their Sea Country institutions for a new generation of reef protection and management arrangements into the future (CofA, 2018).

In many respects the same can be said of the Murray Darling Basin, except that the extent of dispossession and dislocation of the Aboriginal peoples from their ancestral lands was far more extensive and prolonged. This history manifests in differences in focus on livelihoods and wellbeing between the TOs of the lands and waters that comprise the Murray Darling Basin and the non-Indigenous interests in the Basin, especially over the health of the Basin and access to water and its use. This presents the MDBA with a different set of challenges when compared to GBRMPA and TSRA. For example, the MDBA has had to invest considerable effort in developing partnership agreements with both NBAN and MLDRIN to collect and share information across the Basin's Aboriginal communities and to help raise public awareness about Aboriginal interests and concerns relating to water. While these arrangements appear to be working to some degree, the river system is at breaking point because in the view of the Aboriginal elders, the river system is not being managed for the health of the river (Simons, 2020).

This review also finds there are considerable interactions between the Commonwealth Agencies and Departments and the NESP Hubs and on many levels and in a number of different ways, as documented in Part 4.3 above. For example, agency and departmental senior officials sitting on Hub Steering Committees or

on specific project reference groups are seen as being very supportive, relevant and constructive. Senior officials participating directly in significant events involving Indigenous peoples is also always seen as constructive and providing opportunities for two-way learning. Some of the agencies play an active role in several NESP Hub projects through being on a project's steering committee or through direct involvement, especially in terms of ensuring the outcomes of the research will aid the agency's management responsibilities for a particular asset. However, all of the interactions are important and valuable because in most cases they facilitate regular contact and information exchange between researcher and end user during the life of a project and in communicating the research outcomes and benefits.

Two events stand out for special mention because they were also mentioned by many of the Aboriginal and Torres Strait Islander stakeholders that SGSEP was able to interview. The two events are:

- The National Indigenous Gathering in February 2018 enabled Indigenous peoples from across the country to come together to discuss research themes and priorities for the NESP. The event brought together NESP Hub researchers involved in Indigenous research, governance or engagement, Indigenous Advisory group and Steering Committee members, NESP Hub and project leaders, Knowledge Brokers, and liaison staff, as well as members of the Minister's Indigenous Advisory Committee. The event provided a significant impetus for Indigenous engagement and capacity building, networking and sharing information. The only downside of this event, was that it was held in the third year of the NESP and the consensus among stakeholders is that this event needs to happen much earlier in the next iteration of the NESP.
- The opportunity for Indigenous people to be able to come to Canberra to brief Departmental and agency officials in their offices and to brief politicians at Parliament House on the outcomes of their research was mentioned by several stakeholders as very valuable because it enabled them to share their knowledge and understanding about their Country and how the investment in environmental and climate science research is beneficial, not only to them but also for all Australians. The significance of being able to come to Canberra or the agency/department's head office and to the federal politicians as projects are nearing completion and give a presentation about the research outcomes, should not be under-estimated.

For some agencies, the challenges include employment opportunities and career pathways into research institutions as the numbers of Indigenous peoples holding senior leadership positions in environmental and climate science research institutions is very small. Some agencies have included specific employment targets in their RAPs as a way of way of addressing these shortcomings.

In relation to Indigenous environmental and climate science research themes and questions, several recurring themes can be distilled from a review of the agencies and departments' activities. These include for example:

- Mapping of Indigenous weather, season and environmental knowledge.
- Governance of social-ecological systems for sustainable ecosystem stewardship.
- Cumulative impacts on marine and coastal ecosystems and their resilience to recovery under climate change.
- Impacts of climate systems/change on the environment, industries and communities in the Murray Darling Basin with a focus on four key actions to respond to the risks and prepare for impacts.
- Knowledge brokering for managing landscapes in a time of climate change, including the need for interdisciplinary science to address the extreme events, such as severe cyclones and harsh heat-waves.
- Water resource planning and cultural flows.
- Water quality and ecosystem health threats to the Torres Strait from Fly River runoff.
- Improving estimates of abundance and distribution of turtle and dugong in the Torres Strait.
- Documenting and quantifying Indigenous social and economic values of aquatic resources.
- Fire management: cultural fire management versus adverse fire events.
- Managing threatened species and their habitats.

- Managing feral animal problems to reduce impacts in protected areas and to protect important cultural sites.
- Collecting and collating baseline level of ecological data.
- Data and technology for monitoring of ecosystems and threatened species.
- Improving the recording and application of TEK for land and sea management.
- Improving regional, remote and Indigenous communities' ability to access, influence and participate in a circular economy.
- Reducing the impacts of plastic and packaging on the environment and oceans, reduce plastic pollution, and maximise benefit to the economy and society.

SGSEP also notes that DAWE interacts with Indigenous peoples on many issues across the full suite of the Department's environmental functions, including through providing secretariat support for and liaising with the Minister's IAC, the administration of various parts of the EPBC Act, input into the periodic SoE Reports, the management of Australia's marine parks, the management of NRS and IPAs, the selection of new IPAs, Indigenous heritage matters to with listing, management and protection of significant sites, joint management of three Commonwealth National Parks, direct involvement in the NLP, engagement with the CEWO on water allocations, and engagement with ABARES in the preparation of the periodic SoF Reports. And while the NIAA engages with Indigenous peoples across a very wide portfolio of policies and programs, in relation to this review of Indigenous engagement in the NESP, we only examined the IPA and Indigenous Ranger programs. The conclusion we draw from this review is that the level of engagement between Indigenous peoples and the two Departments on environmental and climate science related matters is daunting in its enormity. However, we draw attention to the fact that the division of responsibility for the management of the IPA program and Indigenous Ranger Program away from the environment and water functions of DAWE is seen as a retrograde step and not endearing toward closer links between research and practice in managing Australia's environmental resources.

In our discussions with various Indigenous stakeholders across the NESP Hubs and other stakeholders, concerns were expressed about the sum of all the parts of different engagements and the overall level of expectations and commitments being placed on Aboriginal and Torres Strait Islander people, organisations and communities to engage in environmental and climate science related matters. Several Indigenous stakeholders universally expressed concerns about the level of demands or expectations being placed upon them. The abolition of the former Aboriginal and Torres Strait Islander Commission and the constant changes in public sector policy, program and funding arrangements leaves a deep void in the capacity of Aboriginal and Torres Strait Islander people and communities to meet the demands being placed upon them by governments and research institutions and agencies. Without adequate support and funding for engagement activities above and beyond where people are paid as employees, there is a risk that the expectations for Indigenous engagement will fall short of the desired outcomes. Resources supporting Indigenous engagement are discussed in more detail in **Chapter 7**.

Another issue that was raised by Indigenous stakeholders was the apparent lack of clear linkages between the research outcomes and official plans and statutory documents that are intended to provide a framework for better environmental governance. For example, it is not always clear that research outcomes on threatened species and habitat protection are taken into consideration in developing threat abatement or recovery plans or whether the research outcomes are used in impact assessment decision making under the referrals and assessment processes under the EPBC Act. A matter the ANAO has also recently drawn attention to (ANAO, 2020:9).