



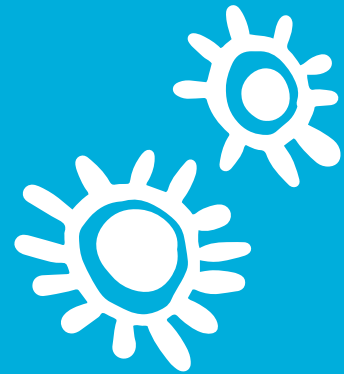
Australia's National
Science Agency



Indigenous Collaboration and Partnerships 2023-24

Acknowledgment of Country

CSIRO acknowledges the Traditional Owners of the lands, seas and waters, of the area that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to Elders past and present. CSIRO is honoured to partner and collaborate with Aboriginal and Torres Strait Islander communities across the nation, and we acknowledge the contributions of all Aboriginal and Torres Strait Islander peoples, staff and partners towards our vision for reconciliation.

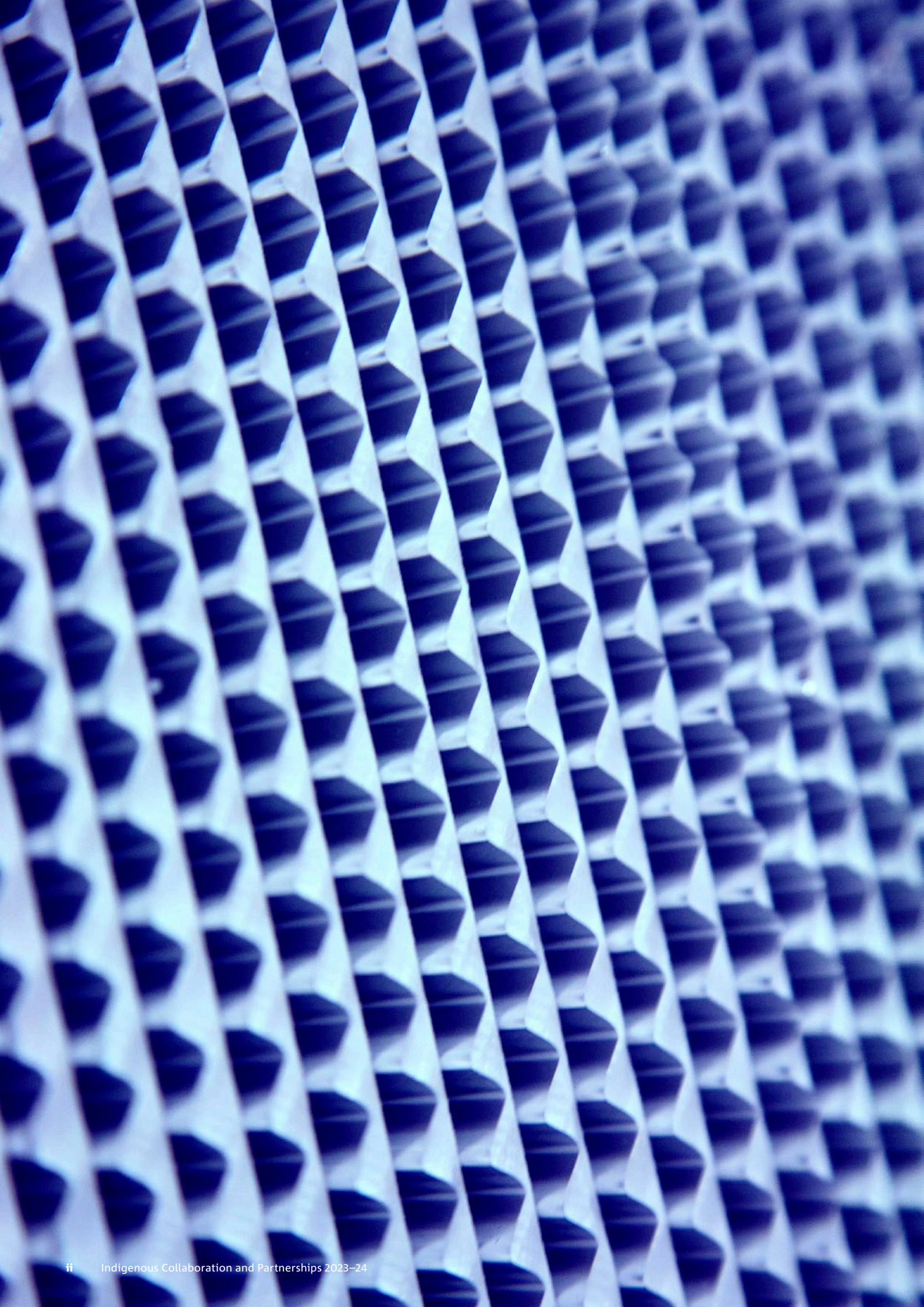


Cover top: We have partnered with Tiwi Resources and the Portaminni Trust to co-design a prawn farm pilot to create a more sustainable future for the Tiwi Islands.

Cover bottom: Low power magnification of a prawn's colourful swimming legs, known as pleopods.

Contents

About us.....	1
Foreword.....	2
Leader’s message.....	3
CSIRO’s ambitions	4
Executive summary.....	6
1 Introduction	9
1.1 Background.....	9
1.2 Report objectives	10
1.3 Methodology	10
1.4 Report structure	11
1.5 Key audience.....	11
2 Supporting government priorities for advancing Indigenous science.....	12
2.1 Alignment with key government priorities.....	12
2.2 Supporting the National Agreement on Closing the Gap efforts	12
2.3 Connections and pathway	14
3 Measuring our contribution to the National Agreement on Closing the Gap Priority Reforms.....	18
3.1 Connection and engagement	19
3.2 Science and technology translation.....	20
3.3 Capacity building and improving standards	22
3.4 Reputation in the research and development (R&D) sector	30
3.5 Impact delivered.....	33
4 Sharing our lessons learned.....	37
4.1 Our journey towards reconciliation.....	37
4.2 Creating a workplace where staff are respected and celebrated.....	37
4.3 Strengthening our understanding of Indigenous knowledge and science	40
4.4 Nurturing opportunities for Indigenous-led science	40
5 Concluding remarks.....	41



About us

We are Australia's national science agency, solving the greatest challenges through innovative science and technology.

We are one of the largest and most multidisciplinary research organisations in the world, creating a better future for Australia.

Our purpose

Our purpose is to solve the greatest challenges through innovative science and technology.

We are established by and operate under the provisions of the *Science and Industry Research Act 1949* (SIR Act), which sets out our functions and powers. The governance, performance and accountability of our operations, including the use and management of public resources, are set out in the *Public Governance Performance and Accountability Act 2013* (PGPA Act) and *Rule 2014* (PGPA Rule).

We are a corporate Commonwealth entity within the Industry, Science and Resources portfolio. We have a Board and Chief Executive and deliver value aligned to our Portfolio Budget Statement and our Minister's Statement of Expectations.

Our outcome

Our outcome, consistent with our legislation and stated in our Portfolio Budget Statement, is to produce innovative scientific and technology solutions to national challenges and opportunities to benefit industry, the environment and the community, through scientific research and capability development, services and advice.

We provide the essential scientific research and advice needed by a broad range of stakeholders, including conducting research pursuant to national priorities. We collaborate with innovators to convert discoveries and ideas into technologies, services and best practices that benefit the nation. Our impact extends beyond Australia; we are a regional leader in informing international policy and development for climate, biodiversity, sustainability and food security.

We deliver around \$13.3 billion of benefit to the nation each year as a result of our science, securing our future national prosperity as well as environmental and social benefits.

Source: RTI CSIRO Return on Investment Report 2024.

Our vision

CSIRO. Creating a better future for Australia.



Foreword

It is with great enthusiasm that I present the inaugural CSIRO Indigenous Collaboration and Partnerships Report. This report marks a significant step forward in CSIRO’s journey to building stronger partnerships with Aboriginal and Torres Strait Islander communities – partnerships that can define a better future for all Australians.

I am encouraged by the progress outlined in this report and the organisation’s commitment to elevating Indigenous voices, knowledge and science. By prioritising Indigenous-led research, fostering strong relationships with Indigenous communities, and addressing critical challenges facing contemporary society, CSIRO aims to deliver tangible benefits for Aboriginal and Torres Strait Islander peoples.

However, this is just the beginning. The report highlights the progress CSIRO has made, while also acknowledging the areas it needs to improve. We are committed to learning from our experiences, adapting our approaches, and ensuring that Indigenous voices are central to our decision-making processes.

As an organisation, CSIRO not only has an obligation to pursue science that makes a difference to the lives of Australians and the world we inhabit, but an opportunity to work with, learn from, and give voice to Indigenous knowledge systems and generations of scientific observation, enquiry and thought.

Our collective ambition must focus on unlocking the full potential of Indigenous Knowledge to create a better future for all Australians.

I commend the team for their hard work and look forward to witnessing the continued growth of CSIRO’s collective ambition towards achieving that vision.



Professor Alex Brown
CSIRO Board Member

A proud member of the Yuin nation, Professor Brown is the first Indigenous scientist appointed to the CSIRO Board, bringing a wealth of experience in understanding and overcoming health inequalities and bridging connections across science ecosystems. Alex is an internationally recognised clinician and researcher who has worked in Aboriginal and Torres Strait Islander health for his entire career. He is the Professor of Indigenous Genomics at the Telethon Kids Institute and the Australian National University.

Endorsement

On behalf of the National Indigenous Australians Agency (NIAA), I am delighted to endorse the CSIRO Indigenous Collaboration and Partnerships 2023–24 report. This report engages critically with the Priority Reforms and principles set out in the National Agreement on Closing the Gap, spotlighting case studies that demonstrate the mutually beneficial rewards of inclusive as well as innovative approaches. To achieve true outcomes for First Nations people and communities, government agencies have a responsibility to deconstruct historically prohibitive frameworks and champion transformation. This report signifies an achievement towards reconciliation, exemplifying a commitment to systematic change that puts in place foundations to better inform future direction.



Jody Broun
CEO, National Indigenous
Australians Agency

Jody Broun is an Yinjibarndi woman from the Pilbara in Western Australia, who has maintained strong connections to Country, community and culture throughout her life. Jody is passionate about social justice, community-led co-design, and making a difference through changing the way government does business with Aboriginal communities and stakeholders.



Leader's message

As the Director of Indigenous Science and Engagement at CSIRO, I am honoured to introduce this report on Indigenous collaboration and partnerships. This document highlights the significant value that Indigenous science and knowledge systems bring to our organisation and to our nation, and the importance of meaningful partnerships in driving reconciliation.

For over 65,000 years, Aboriginal and Torres Strait Islander peoples have been Australia's First Scientists, observing, experimenting, and innovating to thrive, prosper and care for Country. These traditional knowledges and practices offer unique insights that enable new ways to approach innovative solutions and technologies for the benefit of all Australians. By embracing Indigenous science, we acknowledge the historical and ongoing contributions of Aboriginal and Torres Strait Islander people and tap into a rich source of creativity and problem-solving.

Our commitment to reconciliation is unwavering, and we recognise that genuine partnerships are essential to achieving this goal. Through strategic collaborations with Indigenous-owned businesses and organisations, we are creating opportunities for economic development and enabling career pathways for Aboriginal and Torres Strait Islander people. These partnerships ensure that our research is informed by and responsive to the needs of Indigenous communities as well as building capability within our organisation.

While we are proud of the progress we have made, we acknowledge that there is still work to be done. This report highlights our achievements and challenges, demonstrating our resolve to continue improving. Our efforts align with government priorities, including the National Science and Research Priorities and the outcomes of the National Agreement on Closing the Gap, as well as our own Reconciliation Action Plan and complementary strategies.

This report showcases the power of collaboration and the shared value that emerges when Indigenous ways of knowing, being and doing ignite the capability of Australia's national science agency. I extend my gratitude to the Indigenous partners, colleagues, and the broader community for their trust, guidance, and collaboration.

Together, we are forging a brighter future for Australia and contributing to a more innovative research sector.



Dr Chris Bourke
Director, CSIRO Indigenous
Science and Engagement

Dr Chris Bourke leads Indigenous Science and Engagement at CSIRO, Australia's national science agency. Chris is a Gamillaroi man and Australia's first Indigenous dentist. In an extensive career he has held clinical positions in the private and public sector including his own private dental practice, Aboriginal Medical Services, public hospitals and state/territory health departments. From 2011 to 2016, Chris was a Member of the ACT Legislative Assembly, with various ministerial portfolios.

CSIRO's ambitions

Our ambition is to further embrace Indigenous science and knowledge, enhancing our capability, and responding to the priorities of Aboriginal and Torres Strait Islander partners. We discuss where we are and where we want to be to achieve deeper levels of learning and a stronger sense of purpose in supporting Indigenous-led research. This learning journey is an opportunity for us to grow as an organisation and enable all our people to create value for Aboriginal and Torres Strait Islander partners and Australian society more broadly.

Designing system change to support Indigenous-led research

Indigenous-led research empowers Aboriginal and Torres Strait Islander governance, decision-making and knowledge systems in setting the research agenda, approach, assessment, evaluation and solutions at each stage of the research lifecycle. For research to be Indigenous-led, Aboriginal and Torres Strait Islander people must hold legitimate decision-making responsibilities, ownership and authority with oversight, visible presence and power throughout the process, resources, ideas and benefits.¹

This research is underpinned by Indigenous governance, determining how science is developed, and how knowledge is shared, used and translated. It is informed by Aboriginal and Torres Strait Islander priorities, perspectives, values and voices,² ensuring inherent rights governing land, sea and water are recognised.³ CSIRO also prioritises having Aboriginal and/or Torres Strait Islander people lead the research or establishing governance structures that ensure Indigenous oversight and decision-making.

Embracing Indigenous governance in determining how science is developed and knowledge is shared, used and translated requires the recognition of Indigenous peoples and their ways of understanding the world around them, and committing to a process that enables effective system change. As Australia's national science agency, we will strive to collaborate with Aboriginal and Torres Strait Islander people to address their research priorities. We will also work with interested parties to facilitate the harmonisation of Indigenous scientific knowledge and practices within the innovation ecosystem. Focusing on Indigenous-led, inclusive and collaborative system change, we aim to partner to develop coordinated responses to the broader external context.

Our ambition is to create Indigenous-led science partnerships that support Aboriginal and Torres Strait Islander peoples, benefit knowledge holders and deliver solutions for all Australians. This requires shifting from a 'science push' approach to one that focuses on supporting the learning and translation of Indigenous science and intellectual property (IP), while aligning with local community needs.

We speak to a bigger picture that makes sense at the local community-level and gains broad support for improving governance of Indigenous knowledges and practices. We recognise that starting this dialogue involves demonstrating our commitment to driving behaviour change.

Co-design

We are working towards Indigenous-led research to advance Indigenous rights and achieve reconciliation. In some cases, co-design can be used as a governance arrangement where all partners have equal collaboration and decision-making responsibilities throughout the project.⁴

- 1 Australian Institute of Aboriginal and Torres Strait Islander Studies (2020) 'AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research', Australian Institute of Aboriginal and Torres Strait Islander Studies. [aiatsis-code-ethics-jan22.pdf](#). (Accessed 23 September 2023).
- 2 Robinson, C. J., Macdonald, J. M., Douglas, M., Perry, J., Setterfield, S., Cooper, D., Lee, M., Nadji, J., Nadji, S., Nayinggul, A., Nayinggul, A., Mangiru, K., Hunter, F., Coleman, B., Barrowei, R., Markham, J., Alderson, J., Moyle, F., May, K., & Bangalang, N. (2022). Using knowledge to care for country: Indigenous-led evaluations of research to adaptively co-manage Kakadu National Park, Australia. *Sustainability Science*, 17(2), 377–390. <<https://doi.org/10.1007/s11625-021-01015-9>>; NHMRC (National Health and Medical Research Council) 2018, National Statement on Ethical Conduct in Human Research.
- 3 United Nations 2008, United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), United Nations: Department of Economic and Social Affairs. (Accessed 23 September 2023). <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>
- 4 Woodward E, Hill R, Harkness P and Archer R (eds) (2020) 'Our Knowledge Our Way in caring for Country: Indigenous led approaches to strengthening and sharing our knowledge for land and sea management. Best practice guidelines from Australian experiences', NAILSMA and CSIRO, Cairns, Australia. Online: <csiro.au/en/research/indigenous-science/indigenous-knowledge/our-knowledge-our-way>.

A co-design process with Aboriginal and Torres Strait Islander people needs to consider place-based approaches to empower and drive local solutions. Co-design methods incorporate Indigenous voices and provide opportunities for Aboriginal and Torres Strait Islander people to determine best practices for working with Indigenous knowledge. Co-design is not a process of consultation or knowledge extraction but rather involves two-way learning that is ethical and defined by the community.

An example of co-design is the development of protocols with Jawoyn people (Traditional Owners of Jarrangbarnmi, also known as Koolpin Gorge) to guide the purpose and practice of aerial drone monitoring of valuable habitats and species in the southern region of Kakadu National Park.⁵

Strength-based approaches to guide research

Strength-based approaches focus on the strength, resilience, abilities and knowledge of individuals or communities rather than from a discourse based on deficit (e.g. limits or weakness).⁶ These approaches are underpinned by methodologies that incorporate Indigenous perspectives into research frameworks, empowering Indigenous communities and incorporating their priorities, knowledges and practices.⁷ The purpose of strength-based approaches is to refocus research on the assets and strengths of individuals and communities to respond to the challenges they face.

Further embracing Indigenous science and knowledges

Indigenous knowledges, including epistemologies, are underpinned by holistic systems that connect multiple dimensions of human wellbeing and environmental harmony. These are derived from 65,000 years of cultural experience formed with science through experimentation and observation. This is unique on a global level.

By upholding Indigenous rights we can champion and embrace Indigenous science and knowledges to enable innovative solutions that incorporate human- and country-centred design, for the benefit of all Australians. An example is how Indigenous knowledge brings unique perspectives to climate change and risk, shaped by history, culture and economic conditions. These insights – such as observations of sea level rise, changes in plant growth and animal behaviour, and the presence of water and fire patterns – highlight the difference that incorporating Indigenous knowledges with CSIRO's science resources can make in addressing climate change, health and wellbeing for Australia and globally.

We recognise that Indigenous perspectives and ways of knowing, being and doing can enhance capability across our organisation. Our vision is to foster new forms of collaboration, to mobilise scientific, Indigenous and practitioner knowledge to create pathways to sustainable futures.

Driving change at scale

Undertaking large-scale multidisciplinary science for the priorities identified by Aboriginal and Torres Strait Islander people relies on respectful, equivalent relationships. Our experience in building respectful, equivalent cross-cultural expertise to address challenges includes using test-bed projects to assess the research viability and build relationships before scaling up.

In practice, we have used Expression of Interest (EOI) processes and Land Use Agreements with Indigenous communities to evaluate research projects before scaling them. Maintaining a competitive position requires continually refreshing our science by exploring new application domains with partners. We realise that we cannot deliver impact alone and need to work with strategic partners that have complementary capabilities. Our collaboration with Aboriginal and Torres Strait Islander partners includes investing in growth areas aligned with our science strengths.

5 Macdonald, J. M., Robinson, C. J., Perry, J., Lee, M., Barrowei, R., Coleman, B., ... Douglas, M. (2021). Indigenous-led responsible innovation: lessons from co-developed protocols to guide the use of drones to monitor a biocultural landscape in Kakadu National Park, Australia. *Journal of Responsible Innovation*, 8(2), 300–319. <<https://doi.org/10.1080/23299460.2021.1964321>>.

6 Fogarty, W., Lovell, M., Langenberg, J. & Heron, M-J. 2018, Deficit Discourse and Strengths-based Approaches: Changing the Narrative of Aboriginal and Torres Strait Islander Health and Wellbeing, The Lowitja Institute, Melbourne; Bourke, C., Lahn J., Gibb, C., Lennard, N., (2020) Assessing the support of health leadership for increased Indigenous participation in the health workforce. *Australian Health Review*44, 505-511; Hammond W, Zimmerman R. A strengths-based perspective. *Resiliency initiatives*. 2012.

7 Thurber, K. A., Thandrayen, J., Banks, E., Doery, K., Sedgwick, M., & Lovett, R. (2020). Strengths-based approaches for quantitative data analysis: a case study using the Australian Longitudinal Study of Indigenous Children. *SSM-Population Health*, 12, 100637.

Executive summary

We are committed to collaborating with Aboriginal and Torres Strait Islander communities to develop Indigenous-led science solutions for addressing significant challenges and creating a better future for Australia.

We value Indigenous knowledge systems, rooted in a deep understanding of the interconnectedness of all things, which have sustained life in Australia for 65,000 years through diverse perspectives and practices. Our support for these knowledge systems fosters innovative solutions that benefit all Australians.

We assessed our organisational processes, people strategies and systems to evaluate our policies and programs affecting Aboriginal and Torres Strait Islander people and to identify areas for improvement. Overall, this evaluation highlighted both strengths and opportunities for development.

We embrace a culture of continuous learning and capture lessons that benefit everyone. These include:

- identifying opportunities to strengthen reconciliation and ensuring practices are accountable, culturally safe and responsive to Indigenous needs
- improving governance structures for Indigenous engagement by appointing key leaders and developing cultural capability workshops and principles for Indigenous Cultural and Intellectual Property (ICIP)
- continuing to foster collaborative partnerships and advance Indigenous scientific capability by addressing cultural, social, environmental and economic priorities.

STRENGTHS

Leadership and Indigenous engagement: CSIRO promotes leadership and foster connections by providing resources for involvement in Indigenous research projects and collaborations with Indigenous enterprises. We prioritise engagement with Indigenous science and the maintenance of enduring, equivalent relationships with Indigenous communities.

Market and society collaboration: We work to establish and deepen collaborations that translate research results into market and societal benefits, supporting Indigenous-led research and enabling Indigenous enterprises and communities to explore innovative pathways.

Capacity building and ethical practices: We focus on capacity building and improving standards by working with Aboriginal and Torres Strait Islander staff to offer sustainable career pathways. We also acknowledge the need to enhance the capacity of all staff to work respectfully with Indigenous communities and knowledge systems. We embed ICIP principles to promote ethical practices and recognise contributions.

DEVELOPMENT AREAS

Resourcing and managing recruitment: We are unlikely to meet our aspirational Innovate Reconciliation Action Plan (RAP) target of 5% Aboriginal and Torres Strait Islander staff representation by December 2024, due to challenges in resourcing and managing recruitment processes.

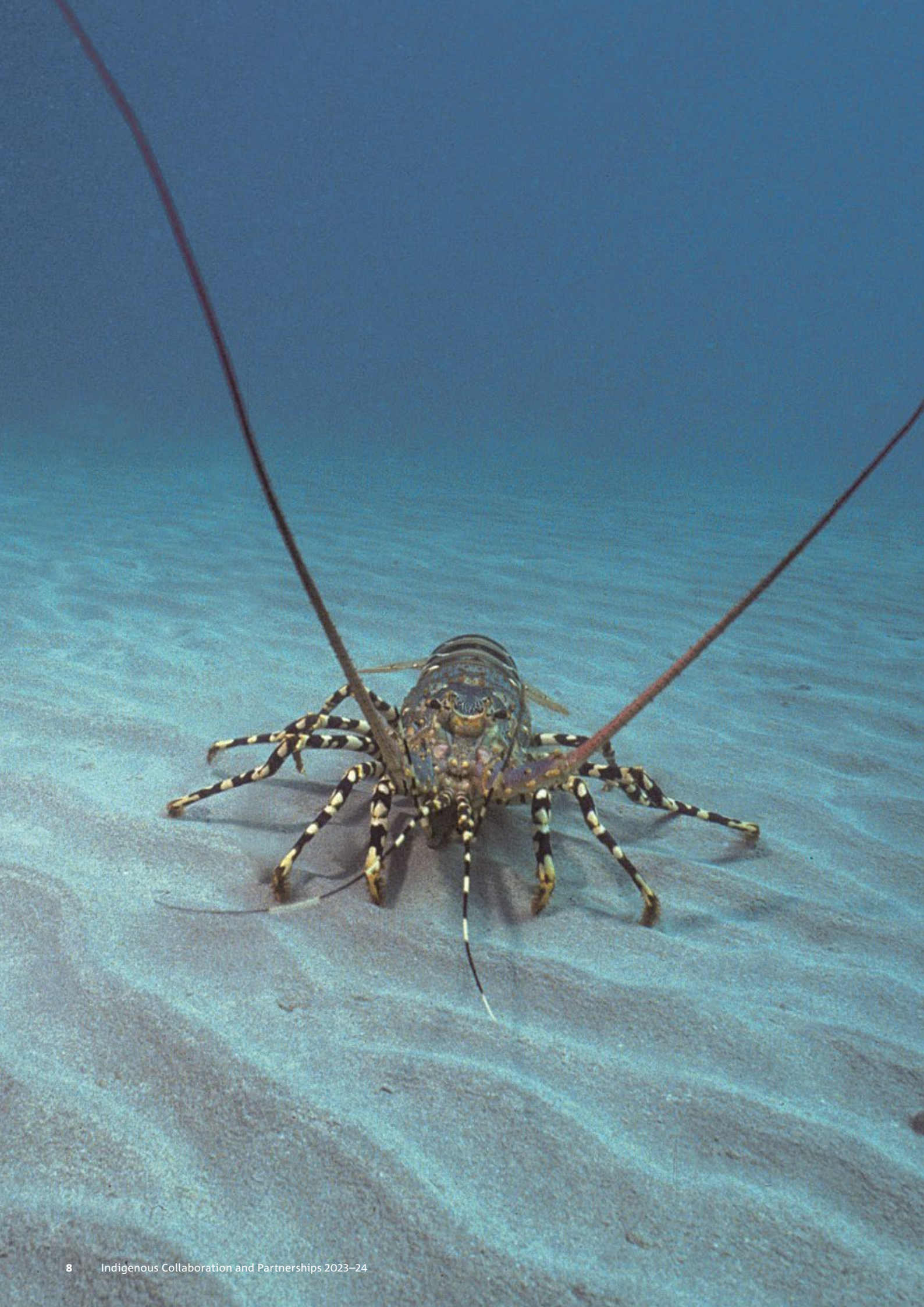
Data collection and project management: There are gaps in our data collection processes for generating insights about research investment, and project management maturity varies across CSIRO in engagements with Indigenous partners.

Research partnerships and impact evaluation: Research partnerships between CSIRO and Indigenous collaborators have not yet reached the stage of co-ownership of registerable project IP or collaborative commercialisation models. Post-project impact evaluations are needed to assess long-term outcomes.

Our 2023–24 performance

PERFORMANCE DIMENSION ⁸	FINDINGS	RATING
Connection and engagement	Promotes leadership and fosters connections, providing resources for involvement in Indigenous research projects and collaborations with Indigenous enterprises. Prioritises engagement with Indigenous science and maintains long-standing relationships with Indigenous communities, honouring and integrating their viewpoints, traditions and methods into research endeavours.	● On track
Science and technology translation	Aims to establish and deepen collaborations to translate research results to the market and society. Supports Indigenous-led research, enabling Indigenous enterprises and communities to explore innovative pathways and position themselves at the forefront of emerging enterprises and technologies. For example, CSIRO and strategic partners facilitated initial community engagement about mosquito interventions following Free, Prior and Informed Consent (FPIC) guidelines with Gur A Baradharaw Kod Torres Strait Sea and Land Council (GBK). This project aims to safeguard human health, promote economic activity and improve the lives of Torres Strait and Pacific region communities, reduce the burden on hospitals and limit the spread of mosquito-borne diseases to Australia.	● On track
Capacity building and improving standards	<p>Highlights include efforts in capacity building, particularly by offering sustainable career pathways for Aboriginal and Torres Strait Islander scientific and support staff. Governance and management processes ensure oversight and empowerment to manage operations and minimise risks. ICIP principles are embedded to promote ethical practices, collaboration, and recognition of Aboriginal and Torres Strait Islander contributions.</p> <p>However, we are unlikely to meet our aspirational Innovate RAP target of 5% Aboriginal and Torres Strait Islander staff representation by December 2024. Challenges in resourcing and recruitment processes are key constraints. Creating a deeper pool in the labour market of Indigenous candidates for scientific roles is another challenge. For example, only 58 Indigenous people completed PhDs in 2022 compared to around 9,200 non-Indigenous PhD graduates. We have supported the Federal Government’s Indigenous Procurement Policy (IPP) since July 2016. However, further analysis is needed to assess whether our performance meets targets.</p>	● Monitor
Reputation in research and development (R&D) sector	We have a strong reputation in the research and development sector. The ‘Our Knowledge Our Way’ guidelines exemplify Indigenous leadership through an open and transparent process. We have successfully delivered around 220 Indigenous-related research projects since 2017–18. However, gaps in data collection and varying levels of project management maturity limits a full understanding of research investment’s impact and connections with Aboriginal and Torres Strait Islander communities. Additionally, research partnerships have not yet reached the stage of co-ownership of registerable project IP or collaborative commercialisation models.	● Monitor
Impact delivered	Strong evidence of outcomes has been delivered. Over time, post-project impact evaluations will be required to assess whether research addresses Indigenous priorities. For example, CSIRO’s Healthy Country AI and Digital program suggests Indigenous-led evaluations can inform research design and success. Indigenous women rangers in this program have gained self-confidence and commitment to family and cultural duties, while benefiting from culturally safe ways to collect, use and share data for decision-making.	● On track

⁸ Table 1 outlines the definitions of these performance dimensions that we used for undertaking the process evaluation.



1 Introduction

We aim to have a profound and positive impact on the most significant challenges and opportunities facing Australia and humanity. Our values, objectives and priorities are interconnected, providing a foundation for building sustainable and meaningful partnerships with Aboriginal and Torres Strait Islander people.

The knowledges that enabled Aboriginal and Torres Strait Islander Peoples to live and thrive across Australia for 65,000 years were developed through science, using experimentation and observation. Indigenous knowledges are based on holistic systems thinking that connects multiple dimensions of human wellbeing and environmental harmony.

Our support for Indigenous science and knowledge systems enables the development of innovative solutions and technologies. While approaches have often centred on Western epistemologies and ontologies, investing in Indigenous-led frameworks, sciences and knowledge systems opens new, human- and country-centred solutions to benefit all Australians.

We have developed ICIP principles to guide how the benefits from this collaborative work should flow to Indigenous and non-Indigenous people through two-way capacity building, knowledge sharing and co-production.

This report presents the results of a process evaluation,⁹ marking the starting point in transforming our ways of working with Aboriginal and Torres Strait Islander staff and partners. This self-assessment focuses on our organisation as the primary unit of analysis, with an emphasis on learning to uplift and improve our capability. It evaluates our research policies and programs affecting Aboriginal and Torres Strait Islander people and complements our Reconciliation Action Plans (RAPs).

The self-assessment process evaluates what works and under what circumstances, providing insights for developing an Indigenous science strategy, our work with Indigenous businesses, and engaging with Aboriginal and Torres Strait Islander staff and communities.

1.1 Background

As Australia's national science agency, our purpose is to solve the greatest challenges through innovative science and technology. We provide benefits to industry, the environment and the community through scientific research and capability development, services and advice.

The primary purpose of this process evaluation is to investigate and examine internal strategies, processes, programs and systems, as well as our science engagements with Indigenous partners. This report tracks the progress of our capabilities and commitment to Indigenous-led research. Historically, data from Indigenous-related evaluations has not consistently represented communities. We now aim to document progress made toward ensuring improved practices in the future.

We capture views, knowledges, practices and engagement approaches to assess how reconciliation and innovative science can improve ways of working with Aboriginal and Torres Strait Islander people. We discuss how CSIRO supports the Federal Government's Closing the Gap initiative, meets the expectations of the National Agreement on Closing the Gap¹⁰ and identifies gaps in our practices to find areas for improvement. This report also documents lessons learned from our research engagements with Aboriginal and Torres Strait Islander people.

To achieve this, the process evaluation:

- assesses how we are progressing against the performance outcomes we set
- examines considerations for improving the implementation of processes, people and system strategies.

⁹ Process evaluations examine whether organisational policies and programs are implemented and operate as planned. A process evaluation can be used to identify opportunities for improvement and can provide a baseline for future evaluations. Productivity Commission (2020) A Guide to Evaluation under the Indigenous Evaluation Strategy, October 2020, p.23. Accessed on 18 December 2023, <<https://www.pc.gov.au/inquiries/completed/indigenous-evaluation/strategy/indigenous-evaluation-guide.pdf>>.

¹⁰ National Agreement on Closing the Gap 2020. Accessed 23 September 2023: <<https://www.closingthegap.gov.au/national-agreement>>.

1.2 Report objectives

Our objectives for assessing our performance are:

- to achieve greater Indigenous participation and leadership in our research, development agenda and activities
- to ensure Indigenous science endeavours adhere to cultural and ethical approaches that are respectful, appropriate and aligned with Indigenous rights.
- to manage Indigenous science investment activities in a way that provides both tangible and intangible benefits for Aboriginal and Torres Strait Islander people and communities.

1.3 Methodology

1.3.1 Data collection

This report draws on data that is already available and collected from across the organisation. An evaluation methodology that relies exclusively on existing data to assess Indigenous-related research, programs and engagement can provide valuable insights into historical trends, program efficacy and the impact of research initiatives. Our approach therefore involved analysing data from past reports, annual performance, program records and institutional databases. By synthesising this information, we identified patterns, outcomes and areas for improvement.

1.3.2 Analysis

This report assesses the available data against 5 performance dimensions to provide a framework for interpreting our progress, areas for development, and the limitations and challenges we face in achieving these elements.

Table 1 outlines the performance dimensions and definitions used for the process evaluation.

1.3.3 Limitations

Relying solely on existing data presents significant limitations, particularly in the context of Indigenous-related evaluations. First, existing data may not adequately capture the current needs, perspectives or experiences of Aboriginal and Torres Strait Islander people, organisations or communities. It is often outdated or collected without their direct involvement. This can result in an incomplete or skewed understanding of the issues at hand. Furthermore, such data may not reflect the unique cultural, social, economic/socio-economic and historical contexts crucial for effectively evaluating Indigenous programs. The reliance on secondary sources can also perpetuate biases present in the original data, further limiting the validity and reliability of the evaluation findings. Therefore, while useful, this methodology requires careful consideration of its limitations and should, where possible, be supplemented with Indigenous-led and community-engaged approaches to ensure a more comprehensive and culturally sensitive evaluation.

Table 1: Performance dimensions of CSIRO's self-assessment process

PERFORMANCE DIMENSION	DEFINITION
Connection and engagement	Effectively engage Indigenous research and research translation partners to deliver innovative, sustainable and holistic solutions for Aboriginal and Torres Strait Islander communities.
Science and technology translation	Maintain high-quality, impact-focused science capability and resources to elevate and invest in Indigenous knowledge and knowledge systems.
Capacity building and improving standards	Embrace Indigenous knowledge and science to enhance our innovation capacity, build cultural capability and support the development of an Indigenous STEM talent pipeline.
Reputation in R&D sector	Uphold social accountability by co-designing system change to support Indigenous-led research.
Impact delivered	Contribute to significant economic, social and cultural benefits for Aboriginal and Torres Strait Islander people through the innovation ecosystem.

1.4 Report structure

This report is structured in 3 parts:

Part 1	illustrates our program logic for supporting change and contributing to better outcomes for Aboriginal and Torres Strait Islander peoples within the context of the National Agreement on Closing the Gap and Australia's National Science and Research Priorities.
Part 2	examines what we have achieved and identifies opportunities to enhance our capability to deliver Indigenous research, engage with Indigenous businesses and build an Indigenous STEM workforce pipeline.
Part 3	reflects our lessons learned through our engagement with Indigenous partners and Aboriginal and Torres Strait Islander staff, as well as our efforts to embrace and elevate Indigenous knowledges and science.

1.5 Key audience

This process evaluation has been developed with 7 primary audiences in mind.



2 Supporting government priorities for advancing Indigenous science

Key messages

- Our science program aligns with key government priorities, supporting change and contributing to better outcomes for Indigenous Australians.
- The Indigenous Science and Engagement Program (ISEP) aims to prioritise science solutions for Indigenous Australia, embrace Indigenous leadership in science delivery and inspire talent to create national impact.
- Our support for the National Agreement on Closing the Gap includes contributions to the 4 Priority Reforms: Formal partnerships and shared decision making; Building the community-controlled sector; Transforming government organisations; and Shared access to data and information at a regional level.

In this section, we illustrate how our science program aligns with key government priorities. We also outline our program logic, demonstrating how we are supporting change and contributing to better outcomes for Aboriginal and Torres Strait Islander people. We provide context for our Indigenous-related research program by identifying connections with Australia's refreshed National Science and Research Priorities.

2.1 Alignment with key government priorities

Our Corporate Plan 2024–25 reflects the Australian Government's Statement of Expectations.¹¹ To meet these expectations, we are committed to building stronger relationships with Aboriginal and Torres Strait Islander people.

We aim to provide national leadership in supporting Indigenous science and research engagement, including incubating and accelerating Indigenous science opportunities. This ambition is supported by our investment of \$38.16 million in 80 Indigenous research projects during 2023–24, aiming to create positive impacts for all Australians.¹²

Through our ISEP, we strive to lead national science through an Indigenous knowledge and science lens to deliver:

- science solutions prioritised by Indigenous Australians
- pathways that embrace Aboriginal and Torres Strait Islander leadership in science delivery
- talent that is inspired and equipped to make a national difference.

ISEP works across CSIRO to drive activities that contribute to solving the challenges faced by, and meeting the aspirations of, Aboriginal and Torres Strait Islander people and communities.

2.2 Supporting the National Agreement on Closing the Gap efforts

The National Agreement on Closing the Gap establishes a partnership between government and peak Indigenous organisations. Central to the agreement are 4 Priority Reforms intended to drive change in how governments engage with Aboriginal and Torres Strait Islander people and communities:

- Formal partnerships and shared decision making
- Building the community-controlled sector
- Transforming government organisations
- Shared access to data and information at a regional level.

11 CSIRO Strategy Corporate Plan 2024–25. Accessed on 29 August 2024, <<https://www.csiro.au/en/about/Corporate-governance/Corporate-Plan/24-25-corporate-plan#:~:text=2024%E2%80%9325%20strategy&text=A%20stronger%20national%20innovation%20system,strengthen%20our%20nation%27s%20STEM%20pipeline>>.

12 In 2023–24, the National Health and Medical Research Council (NHMRC) expended \$75.2 million on 216 active research grants related to Aboriginal and Torres Strait Islander health research, which represents 8.4 per cent of total grant expenditure through the Medical Research Endowment Account (MREA). Accessed on 4 December 2024, <<https://www.nhmrc.gov.au/file/22786/download?token=huj39VzD>>; The Medical Research Future Fund's Indigenous Health Research Fund (IHRF) is providing \$160 million over 11 years from 2018–19 for Indigenous-led research to tackle health issues facing Aboriginal and Torres Strait Islander people. In 2023–24, the Minister for Health and Aged Care announced the awarding of \$30.8 million for 26 new research projects through the IHRF's 2022 grant opportunity. Source accessed 15 August 2024, <<https://www.health.gov.au/ministers/the-hon-mark-butler-mp/media/308-million-for-health-research-that-listens-to-indigenous-communities?language=en>>; The Australian Research Council (ARC) administers the Discovery Indigenous scheme to support research projects led by an Aboriginal and/or Torres Strait Islander researcher. Discovery Indigenous grants include support for Discovery Australian Aboriginal and Torres Strait Islander Awards (DAATSIAs), which are fellowships available to eligible Aboriginal and/or Torres Strait Islander researchers. As at 15 August 2024, grant funding under the Discovery Indigenous grants scheme totalled \$8.97 million, with an average grant size of approximately \$1 million.

The Commonwealth Closing the Gap Actions Table¹³ demonstrates how our actions align with the National Agreement on Closing the Gap efforts. The measures show how we are transforming as an organisation to support the delivery of science outcomes for Indigenous partners. This list showcases some of the actions we are taking within the Indigenous science domain and does not represent the full scope of our initiatives.

Table 2 outlines both new and ongoing actions we are implementing, as depicted in the Commonwealth Closing the Gap Actions Table. These actions exemplify progress towards building culturally safe and responsive policies and programs.

The following section of the report provides further details on the measures we are taking in response to the Priority Reforms.

Table 2: CSIRO actions in the Commonwealth Closing the Gap Actions Table (24 May 2024)

ACTION	PRIORITY REFORM	OUTCOME	IS THE INVESTMENT 100% INDIGENOUS SPECIFIC?	TOTAL INVESTMENT	DELIVERY START DATE	DELIVERY END DATE
Board appointment	One Three Three	03 08 17	Yes	Internally funded (a)	2/03/2023	2/03/2028
CSIRO Indigenous Employment Strategy	Three	07 08	Yes	Internally funded (a)	1/07/2022	31/12/2024
CSIRO Indigenous Graduate Program	Three	05 06 07 08	Yes	\$12.0 million	13/03/2023	30/06/2026
CSIRO Indigenous Jobs Map	Four	08 17	Yes	Internally resourced (b)	22/01/2022	30/08/2023
CSIRO Indigenous Procurement Strategy	Two Three	07 08	Yes	Internally funded (a)	1/06/2023	N/A
CSIRO Indigenous Research Grants Programs	One Three	08 17	Yes	Internally funded (a)	31/10/2022	31/10/2026
CSIRO Indigenous Science and Engagement Program	Two Three	15 16	Yes	\$26.0 million	1/05/2021	1/07/2026
CSIRO Indigenous STEM University Scholarships	Two Three	05 06	Yes	\$5.5 million	1/01/2024	Ongoing
CSIRO Reconciliation Action Plan (c)	Three	14 15	Yes	Internally funded (a)	1/01/2021	1/12/2023
Living STEM	Three	04 05 14 16	Yes	\$1.5 million	1/08/2023	31/01/2026
CSIRO and James Cook University Partnership (d)	One	05 06 07	No	\$0.2 million	17/12/2021	16/12/2026

Notes: This excludes the Young Indigenous Women’s STEM Academy. (a) Costs absorbed within existing resources. (b) Internally resourced from existing staff. (c) Superseded by CSIRO’s Stretch Reconciliation Action Plan (RAP) 2024–2027. (d) The CSIRO and James Cook University Partnership agreement is under review.

¹³ Commonwealth Closing the Gap Actions Table | NIAA; The Commonwealth Closing the Gap Actions Table provides an annual update on initiatives to support efforts for the National Agreement on Closing the Gap. The Action Table provides transparency in monitoring and public reporting on the transformation of mainstream agencies and institutions. Actions are as at 24 May 2024.

2.3 Connections and pathway

We are a customer-focused organisation, committed to understanding better how our science and technology solutions and broader activities contribute to positive outcomes for Indigenous partners. Our focus on translating science and technology into practical products and services has led us to refine how we engage with Indigenous partners and manage knowledge translation.

The next section outlines our investments and collaborations with Indigenous partners.

2.3.1 Connections with the National Science Statement and National Science and Research Priorities

On 12 August 2024, the Australian Government released the National Science Statement and the refreshed National Science and Research Priorities (NSRPs). The National Science Statement identified 5 imperatives¹⁴ for shaping the national science system and policy. It highlights the critical role we play in impacting the future of innovation science and technology,¹⁵ while expanding opportunities for Aboriginal and Torres Strait Islander scientists.

Consistent with our organisational strategy, we aim to increase Aboriginal and Torres Strait Islander participation and inclusion in our research and development agenda, and to help address the challenges and meet the aspirations of Aboriginal and Torres Strait Islander communities.¹⁶

The NSRPs emphasise the importance of investing in Indigenous knowledge and recognising Indigenous perspectives on science:

Indigenous and Western scientists provide diverse and often complementary approaches to knowledge gathering and interpretation of the natural environment. Yet to date, there have been few opportunities for Indigenous scientists to work with Western scientists and have their knowledge seen as equal. This acknowledgment and interaction would allow both to understand each other's knowledge systems and methodologies and to share them, benefitting the scientific community more broadly, and Australia.¹⁷

— Professor Bradley J. Moggridge

The NSRPs identify challenges facing Australia that require a coordinated, multidisciplinary and multisector approach. The priorities are:

- Priority 1: Transitioning to a net zero future
- Priority 2: Supporting healthy and thriving communities
- Priority 3: Elevating Aboriginal and Torres Strait Islander knowledge systems
- Priority 4: Protecting and restoring Australia's environment
- Priority 5: Building a secure and resilient nation

Our approach to impact management assumes that to fully understand the value of research, it is essential to track how research translates into real-world benefits. CSIRO's impact areas explain how our science programs deliver the priorities and maximise the benefits for Indigenous partners.

We define impact as:

an effect on, change or benefit to the economy, society and environment, beyond contributions to academic knowledge.¹⁸

14 Australia's National Science Statement, p.5 Accessed on 12 August 2024, <<https://www.industry.gov.au/publications/national-science-statement-2024>>.

15 Australia's National Science Statement recognises CSIRO's 'extraordinary history of globally significant inventions, from the insect repellent in Aerogard to the Hendra virus vaccine to handheld light detection and ranging (LIDAR)'. Australia's National Science Statement, p.6.

16 CSIRO Strategy Corporate Plan 2023–24. Accessed on 12 August 2024, <<https://www.csiro.au/en/about/corporate-governance/corporate-plan/23-24-corporate-plan>>.

17 Professor Bradley J. Moggridge; Australia's National Science and Research Priorities, p7. Accessed on 13 August 2024 <Australia's National Science and Research Priorities (industry.gov.au)>.

18 CSIRO Impact Evaluation Guide, p.6. Accessed on 14 June 2024, <https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjp9f6r hoeHAXUEamwGHdHvCzwQFnoECAYQAQ&url=https%3A%2F%2Fwww.csiro.au%2F~%2Fmedia%2FAbout%2FFiles%2FOur-impact-framework%2FCSIROImpactEvaluationGuide_WEB.pdf&usq=AOvVaw39M42srvZ_v85lo6HLH_Qh&opi=89978449>.

Figure 1 (a Sankey diagram) illustrates the relationship between CSIRO’s research with Indigenous partners and the Indigenous focus of the NSRPs. The diagram highlights the connections between CSIRO’s Indigenous-related research ‘impact areas’¹⁹ and NSRPs.

The nodes in the flow diagram reflect the distribution of our research investments with Indigenous partners across our science programs, showing the balance of these investments relative to the impact areas for Indigenous-related projects. The bands, or links, between the nodes represent the frequency with which our impact areas align with the 5 NSRPs.

They reflect the strength of connection between our research efforts and each NSRP priority, showing how our investments flow towards key national priorities, particularly in Indigenous knowledge and environmental protection.

In 2023–24, our research investment with Indigenous partners has been most strongly aligned with Priority 3: Elevating Aboriginal and Torres Strait Islander knowledge systems and Priority 4: Protecting and restoring Australia’s environment.

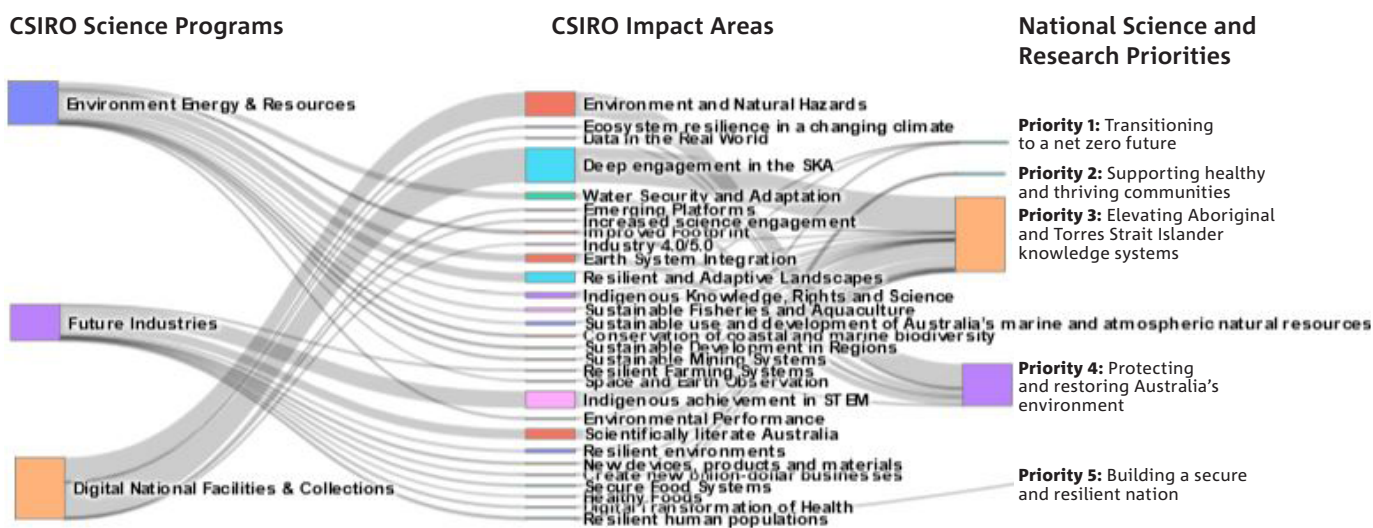


Figure 1: Flow between CSIRO impact areas for Indigenous-related research and Australia’s National Science and Research Priorities 2023–24

19 CSIRO’s Research Units are the core vehicle for research impact delivery. They integrate all activities, from capability development through to science delivery and client and commercial engagement. Research Unit goals specify the nature of science to be undertaken within the context of broader national challenges and research priorities. A Research Unit refines how it will achieve its goal through articulating the broad areas of impact it is planning to deliver. Within CSIRO, the articulation of a Research Unit’s future intended impact, characterised using the program logic and described in Impact Statements, is undertaken at the Program level. Impact Statements (which summarise several impact pathways developed at a lower level closer to the research) are aggregated up to describe achievement of Program and Research Unit goals. CSIRO’s impact evaluation framework. Accessed on 14 June 2024, <<https://www.csiro.au/en/about/corporate-governance/ensuring-our-impact/a-csiro-wide-approach-to-impact#:~:text=The%20CSIRO%27s%20Impact%20Framework%20is,outcomes%20into%20long%20term%20impact>>. CSIRO Leadership Team <<https://www.csiro.au/-/media/About/Files/CSIRO-Leadership-Team-Chart.pdf>>

Table 3 presents the value of our total investment²⁰ in Indigenous-related research, with a significant portion directed towards Priority 3: Elevating Aboriginal and Torres Strait Islander knowledge systems and Priority 4: Protecting and restoring Australia’s environment as outlined in the NSRPs.

Table 3: Alignment of CSIRO’s Indigenous-related research with the National Science and Research Priorities, total investment in 2023–24

NATIONAL SCIENCE AND RESEARCH PRIORITIES	INVESTMENT (\$MILLION)
Priority 1 Transitioning to a net zero future	0.55
Priority 2 Supporting healthy and thriving communities	0.52
Priority 3 Elevating Aboriginal and Torres Strait Islander knowledge systems	18.04
Priority 4 Protecting and restoring Australia’s environment	18.44
Priority 5 Building a secure and resilient nation	0.62

2.3.2 CSIRO’s Indigenous pathway to impact

CSIRO’s science research is designed to create a range of economic, social, cultural and indirect benefits for Aboriginal and Torres Strait Islander people and communities. These impacts arise both through how we engage with Indigenous partners and from the outcomes of our research.

The CSIRO *Indigenous Pathway to Impact* maps our approach to delivering research outputs in collaboration with our funding partners and through Indigenous and non-Indigenous partnerships. This program logic describes how resources are allocated and mobilised to produce our research outputs, which deliver value to Aboriginal and Torres Strait Islander people through their successful uptake and adoption. It also identifies the building blocks for what we plan to deliver and the changes we expect to achieve by creating strong partnerships, executing strategic actions and improving organisational capabilities.

The pathway highlights the expected benefits contributed through science, cultural and socioeconomic outcomes for Aboriginal and Torres Strait Islander people. Our Impact Framework²¹ underpins our Indigenous Pathway to Impact (Figure 2), which summarises the process of creating impact – starting with the deployment of inputs to conduct research, producing research outputs, leading to short- and medium-term outcomes, and culminating in long-term impacts.

The ultimate aim of the Indigenous Pathway to Impact is to improve our understanding of the economic, social, environmental and cultural effects of our work and to design research engagements that maximise these outcomes.

²⁰ We use our corporate project finance and audit reporting IT platform (‘Opportunity to Deliver’ (O2D)) to validate and capture accurate data on all Indigenous-related research projects. We manage more than 5,000 research projects and assign ‘tags’ to classify Indigenous-related research within the O2D IT platform.

²¹ CSIRO’s Impact Framework defines what we mean by ‘impact’, describes the types of impacts we are looking to monitor and how we aim to generate them. Planning, monitoring and evaluating impact is based on a theory of change model called program logic. Accessed on 14 June 2024, <<https://www.csiro.au/en/about/corporate-governance/ensuring-our-impact/a-csiro-wide-approach-to-impact>>

Purpose statement

We partner with Aboriginal and Torres Strait Islander people to create a better future for Australia

Inputs: What we invest

Financial inputs

- Internal CSIRO projects
- CSIRO co-investment
- External grant funding
- Industry partners

Rightsholder and stakeholder participation

CSIRO, governments, industry, and research partnerships and collaborative networks.

Trans-disciplinary practice and learnings from prior projects with Indigenous people.

Policy and strategy

Strategic planning for fostering and generating new ideas from research.

Governance

- Indigenous Science and Engagement Program (ISEP)
- Indigenous Advisory Group (IAG)
- Reconciliation Action Plan
- Indigenous Cultural and Intellectual Property (ICIP) principles

Activities: What we do

Administer funding and grants for research with Indigenous partners by engaging with Indigenous communities, organisations and forums to identify opportunities.

Identify Indigenous-led approaches to recognise integrity, shared visions, respectful relationship and reflective learning, including through enterprise-wide strategies for Indigenous employment and engagement.

Work with Indigenous communities, organisations and forums to identify opportunities for research, capacity building and creating Indigenous-driven science solutions.

Build a growing evidence base to better guide investment planning and strategic decision making for the factors that drive improved outcomes for Aboriginal and Torres Strait Islander people, communities and environment.

Outputs: Our deliverables

Deliver science solutions to support sustainable futures for Indigenous people, cultures and Country and enable acceleration and incubation of Indigenous-led science opportunities.

Enterprise framework and tools for bringing together Indigenous knowledge, values and priorities across CSIRO.
An Indigenous STEM workforce pipeline.

Cultural capability and acknowledgement of the role of Indigenous knowledge holders.
Improved knowledge and capability across/within CSIRO for culturally responsive initiative design and demonstrating impact at scale.

ICIP Principles included in implementation plans, procedures, guidelines and contractual arrangements (including for third party transactions).
Development of cultural capability for elevating translation of Indigenous knowledge and science.

Outcomes: The uptake, adoption or consumption of our work

Short-term outcomes

Co-design approach for developing and supporting sustainable long-term policy and planning.
Indigenous partners are informed and provided access to culturally relevant tools and resources.
Indigenous-led research projects that serve our shared interests.

Medium-term outcomes

Elevating and investing in Indigenous knowledge and knowledge systems is shaping policy and supporting more diverse perspectives on science and research.
Research is conducted on questions that are meaningful to Indigenous communities.

Long-term outcomes

Aboriginal and Torres Strait Islander people benefit from their Indigenous estate.
System change based on principles of rights and recognition, intergenerational leadership and cultural revitalisation.

Impacts: Benefits to economy, environment and society

Australian society is more inclusive and Indigenous rights are protected.
Australian innovation capacity uplift from growth in Indigenous-led science and STEM workforce growth.
Wellbeing, quality of life and future security.
Environmental stewardship and adaptability.
Connections with family, kinship and community.

Figure 2: Mapping the CSIRO Indigenous Pathway to Impact

3 Measuring our contribution to the National Agreement on Closing the Gap Priority Reforms

Key messages

- We engage in Indigenous research to improve outcomes for Aboriginal and Torres Strait Islander people, with an emphasis on two-way communication, trust-building, and respecting Indigenous perspectives and practices in research development and implementation.
- We collaborate with Aboriginal and Torres Strait Islander partners to develop technologies and methods that support Indigenous-led entrepreneurship and sustainable enterprises, ensuring their economic viability.
- Our employment strategy focuses on retaining Aboriginal and Torres Strait Islander talent, while our procurement strategy aims to deepen commercial relationships with Indigenous businesses, contributing to increased Indigenous employment and business engagement.

This section examines our performance in driving change as a government agency, focusing on how we work with Aboriginal and Torres Strait Islander people. The self-assessment process evaluates what works, and in what circumstances, and provides insights to improve our people strategies, culture, systems and processes.

In its first review of the National Agreement on Closing Gap, the Productivity Commission recommended that government agencies take action to address Priority Reform 3 by developing and executing an evidence-based transformation strategy for how they work with Indigenous people.²²

Table 4 summarises the performance framework we used in our self-assessment process. The following sections report on our performance across these dimensions.

Table 4: Performance dimensions of CSIRO's self-assessment process

PERFORMANCE DIMENSION	DEFINITION
Connection and engagement	Effectively engage Indigenous research and research translation partners to deliver innovative, sustainable and holistic solutions for Aboriginal and Torres Strait Islander communities.
Science and technology translation	Maintain high-quality, impact-focused science capability and resources to elevate and invest in Indigenous knowledge and knowledge systems.
Capacity building and improving standards	Embrace Indigenous knowledge and science to enhance our innovation capacity, build cultural capability and support the development of an Indigenous STEM talent pipeline.
Reputation in R&D sector	Uphold social accountability by co-designing system change to support Indigenous-led research.
Impact delivered	Contribute to significant economic, social and cultural benefits for Aboriginal and Torres Strait Islander people through the innovation ecosystem.

²² The Productivity Commission's Review of the National Agreement on Closing Gap was publicly released on 7 February 2024. Productivity Commission 2024, Review of the National Agreement on Closing the Gap, Study report, volume 1, Canberra. Accessed on 7 February 2024, <<https://www.pc.gov.au/inquiries/completed/closing-the-gap-review/report>>



3.1 Connection and engagement

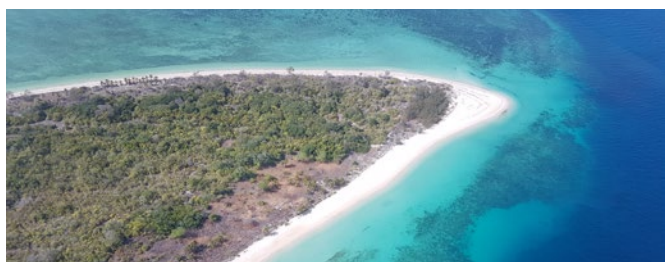
This section explores the cultural and operational elements within our organisation that contribute to fostering leadership, building connections, and securing resourcing for Indigenous research activities and partnerships with Aboriginal and Torres Strait Islander businesses.

3.1.1 Strengthening connectedness through Indigenous science engagement

Our Indigenous research engagements stem from opportunities identified to improve outcomes for Aboriginal and Torres Strait Islander people. Most of our activities, whether in science delivery or corporate tasks, are delivered through projects.

Our engagements involve frequent two-way communication, building trust and the continuous nurturing of relationships. By establishing connections and building trust at a local level early in the process, we aim to ensure that Aboriginal and Torres Strait Islander perspectives, values and cultural practices are respected and integrated into our research development and implementation.

Box 1 highlights an example of our long-standing relationship with Torres Strait Islander communities, where we have supported the conservation of the Indigenous estate since 1989.



Box 1: Supporting Torres Strait marine ecosystems and sustainable livelihoods

We have established a trusted reputation in Torres Strait through continuous two-way communication, collaboration and capacity building. In November 2023, we conducted our 35th annual population survey of the tropical rock lobster in the region.²³ The survey data informs the annual setting of a Total Allowable Catch (TAC) in Torres Strait. Sustainable fishing practices are essential as lobster populations can fluctuate significantly from year to year.

We also launched the new Torres Strait Marine Climate Change project, funded by Torres Strait Regional Authority (TSRA), which includes Torres Strait Islander representatives on the project's steering committee.²⁴ This enduring collaboration serves as a platform for additional projects, including research on a triple bottom line²⁵ approach for management, *bêche-de-mer* (sea cucumber), the development and implementation of a new harvest strategy policy, and the re-opening of a closed fishery²⁶ for a CITES-listed species, driven by Indigenous-led aquaculture efforts.

This work has informed and led the development of an engagement strategy for Indigenous fishing interests, focusing on Commonwealth waters. As part of this effort, we continue to apply novel genomics approaches to delineate and estimate the abundance of finfish stocks in Torres Strait, develop innovative harvest strategies that integrate Indigenous aspirations and plan adaptation strategies to account for climate change impacts.

Our connection to Aboriginal and Torres Strait Islander communities is also growing through social media. In 2023–24, we increased our Indigenous-focused social media activity with 249 posts on Facebook, Instagram, Twitter and LinkedIn, representing a 44.77 per cent increase from 2022–23. Additionally, our Double Helix magazine featured 22 internal and 31 external Indigenous-focused stories.

Further details about our approach to Indigenous science and engagement are presented in the next part on lessons learned.

3.2 Science and technology translation

This section discusses how we form partnerships and commercial relationships and catalyse entrepreneurial activity to successfully deliver science research with Aboriginal and Torres Strait Islander partners.

3.2.1 Supporting Indigenous partners with research translation

We collaborate with Indigenous-led research, enterprises and communities to explore innovative pathways that position these communities at the forefront of emerging enterprises and technologies. We aim to establish and deepen collaborations to ensure the translation of research results into practical, market-ready solutions and societal benefits.

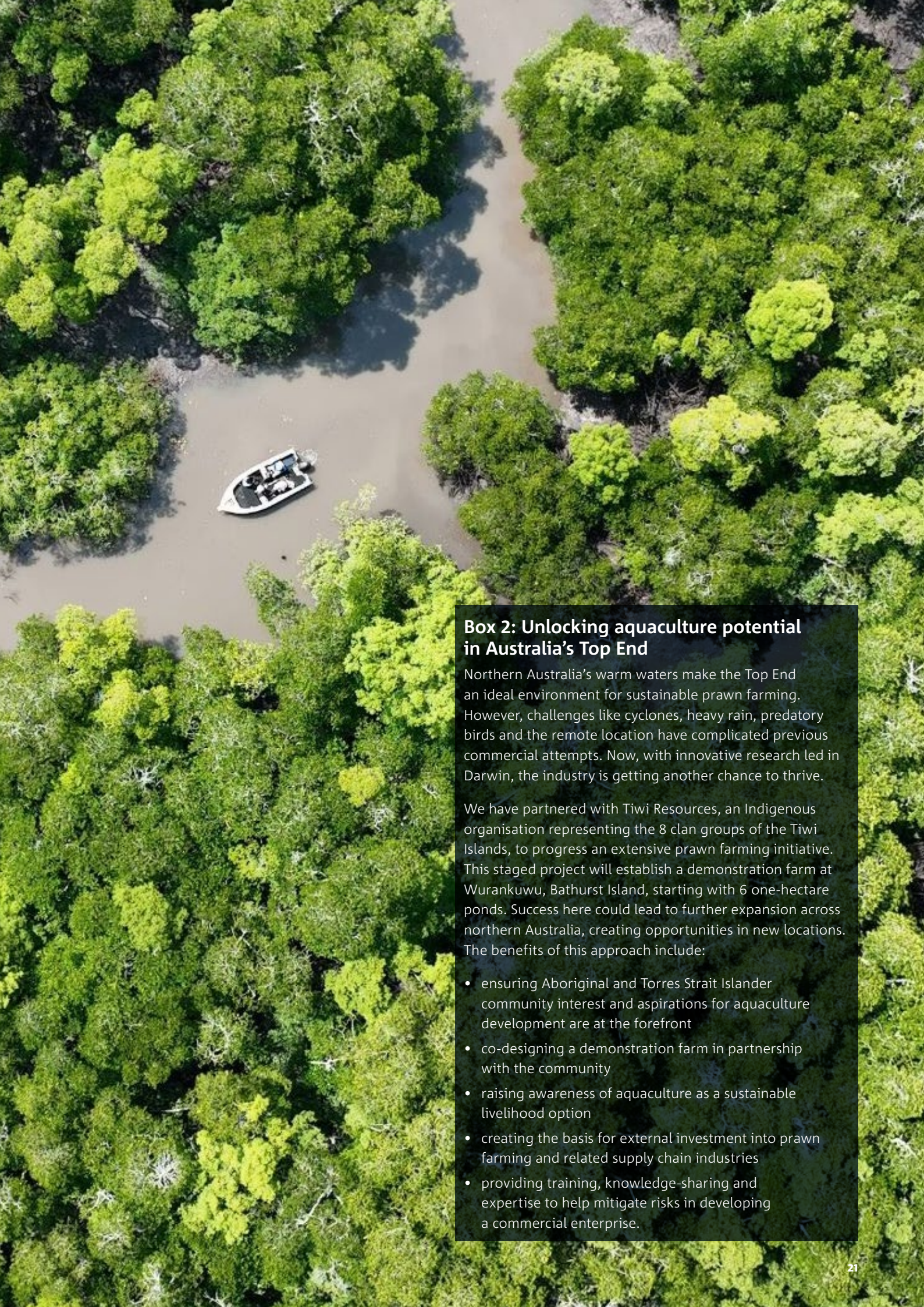
Box 2 provides an example of Indigenous science engagement through a project demonstrating the economic viability of extensive prawn farming technology. The initial engagement began with an EOI process to gauge interest from Indigenous communities. A key benefit of this process is that it flipped the engagement approach. Rather than presenting communities with a predetermined solution, we outlined potential benefits, allowing the communities to consider and determine if the project aligned with their aspirations.

23 CSIRO's Torres Strait tropical lobster survey is currently the longest running fishery-independent dive survey for any marine resource globally and includes critical baseline monitoring of habitats (for example, seagrass) and physical data that can help inform on climate change impacts and adaptation in the region. Our team first commenced these surveys in 1989, initially conducting a large-scale so-called benchmark survey to understand the full extent of the distribution and abundance of the lobster population in Torres Strait. Our team are responsible for conducting research surveys, processing and analysing data, modelling, engaging with Torres Strait Islanders and providing management advice for the region's major fisheries, which are considered world-leading in many respects. Plagányi, É., Dutra, L., Murphy, N., Edgar, S., Salee, K., Deng, R.A., Blamey, L.K., Parker, D., Brodie, S. (2024) Lessons from long-term monitoring of tropical rock lobsters to support fisheries management, *Fisheries Research*, Volume 275, July 2024, 107030; <<https://doi.org/10.1016/j.fishres.2024.107030>>.

24 Our researchers hosted a community event on Waiben (Thursday Island) in November 2023, and together with the Torres Strait Regional Authority (TSRA), launched a new research project that will provide vital information into the impacts of climate change on key fisheries in local waters. The new modelling project will use data that CSIRO has collected over the past 35 years as part of CSIRO's annual Torres Strait tropical lobster population survey.

25 Tropical rock lobster, sea cucumber and finfish fisheries support the lifestyles, livelihoods, and culture of families and communities across the Torres Strait, and as a source of income enable Torres Strait Islanders to live on country rather than seek employment elsewhere. Plagányi, É., van Putten, I., Hutton, T., Campbell, R.A., (2013) Integrating indigenous livelihood and lifestyle objectives in managing a natural resource, *PNAS*, February 26, 2013, vol. 110, no. 9, pp. 3639–3644; <<https://www.pnas.org/doi/abs/10.1073/pnas.1217822110>>.

26 Murphy, N., Skewes, T., & Plagányi, É. (2024) Boom and no bust for a teal fish in Torres Strait, Australia from combined forms of western and Indigenous management. *Conservation Science and Practice*, 6(2), e13073; <<https://doi.org/10.1111/csp2.13073>>.



Box 2: Unlocking aquaculture potential in Australia's Top End

Northern Australia's warm waters make the Top End an ideal environment for sustainable prawn farming. However, challenges like cyclones, heavy rain, predatory birds and the remote location have complicated previous commercial attempts. Now, with innovative research led in Darwin, the industry is getting another chance to thrive.

We have partnered with Tiwi Resources, an Indigenous organisation representing the 8 clan groups of the Tiwi Islands, to progress an extensive prawn farming initiative. This staged project will establish a demonstration farm at Wurankuwu, Bathurst Island, starting with 6 one-hectare ponds. Success here could lead to further expansion across northern Australia, creating opportunities in new locations. The benefits of this approach include:

- ensuring Aboriginal and Torres Strait Islander community interest and aspirations for aquaculture development are at the forefront
- co-designing a demonstration farm in partnership with the community
- raising awareness of aquaculture as a sustainable livelihood option
- creating the basis for external investment into prawn farming and related supply chain industries
- providing training, knowledge-sharing and expertise to help mitigate risks in developing a commercial enterprise.

3.3 Capacity building and improving standards

This section discusses the alignment of our governance and management processes with our commitment to fostering sustainable career pathways for Aboriginal and Torres Strait Islander staff.

3.3.1 Alignment of CSIRO’s governance and management processes

Our corporate frameworks operate in an integrated manner to ensure our Board has governance oversight of the organisation, while the Executive Team is empowered to manage operations, deliver science programs and minimise risks. The CSIRO Board includes leaders who are eminent in their fields, such as Professor Alex Brown, a proud member of the Yuin nation and the first Indigenous scientist to join the Board.

While we are proud of our achievements, we recognise that capacity building and improving standards is an ongoing journey. There are always opportunities to build on our lessons learned to deliver positive outcomes for all.

Our Innovate Reconciliation Action Plan (RAP) 2021–23²⁷ is championed by an internal Indigenous Engagement Implementation Committee (IEIC), supported by an Executive Sponsor from the CSIRO Leadership Team and advised by the external Indigenous Advisory Group (IAG).²⁸ Given our scale as a multidisciplinary organisation with sites across the country, we decided to maintain an Innovate-level RAP for our third plan, covering 2021–23. This allowed us to focus on embedding our RAP actions as part of our business as usual.

Capability

99%

staff completed online Aboriginal and Torres Strait Islander Cultural Awareness Training

2023 GARMA delegation

10 staff attended, including 5 senior leaders

CSIRO did not attend in 2021 or 2022 due to COVID

98%

of CSIRO leadership team participated in Cultural Safety training

Indigenous-led research

30

projects enabled by the Indigenous Research Grants Program

Supported by

\$6.3M

in funding

Indigenous Leadership

1

Board position

40%

of Research/Enterprise Unit advisory groups have Aboriginal and Torres Strait Islander representation

Indigenous Science and Engagement Program established

Indigenous Cultural and Intellectual Property Principles developed

Indigenous Jobs Map launched

Procurement

\$33.4M

spent on goods and services with Aboriginal and Torres Strait Islander businesses July 2021 – June 2024

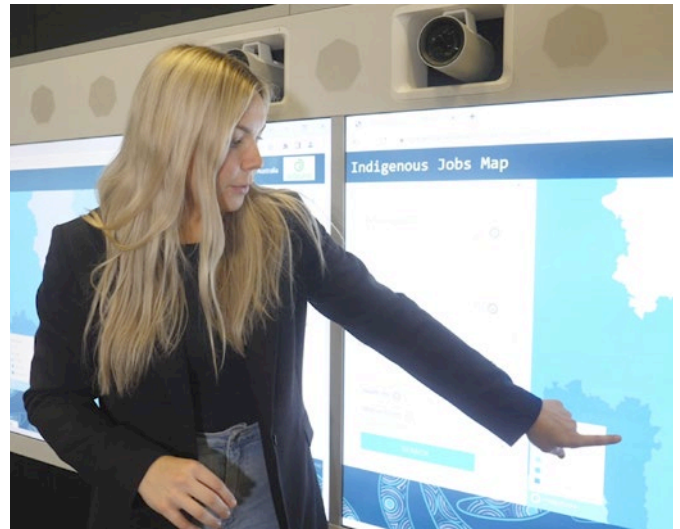
Indigenous Procurement Strategy launched

Figure 3: Highlights from CSIRO’s Innovate Reconciliation Action Plan 2021–2023

²⁷ CSIRO’s Innovate Reconciliation Action Plan 2021–23. Accessed on 12 June 2024, <<https://www.csiro.au/en/about/indigenous-science-and-engagement-program/reconciliation-action-plan>>.

²⁸ The external IAG operates under CSIRO’s Advisory Groups Charter. The IAG provides independent, external advice to CSIRO through a member of the Executive Sponsor, nominated by the Chief Executive. The IAG also assists CSIRO on broader strategic issues relevant to the sectors in which the Research Units and CSIRO’s other lines of business (National Facilities and Collections and CSIRO Services) and Enterprise Units operate, including oversight of CSIRO’s RAP and associated strategies.

Proactively, we took the time to evaluate and measure the progress of our Innovate RAP commitments to ensure they were delivering the intended positive impacts. Our Innovate RAP 2021–23 comprised 17 core actions, spanning 90 deliverables, aimed at building stronger relationships with Aboriginal and Torres Strait Islander people through knowledge sharing, education, employment opportunities and mutually beneficial partnerships. As of December 2023, 71 per cent of those actions and deliverables were ongoing, 2 per cent required action and 26 per cent had been achieved. Figure 3 highlights key achievements resulting from the actions undertaken in our Innovate Reconciliation Action Plan 2021–23.



Butchulla woman and research technician on the Indigenous Jobs Map project Shanae Burns with the Indigenous Jobs Map.

Partnerships

\$387K

sponsorship of Aboriginal and Torres Strait Islander organisations

69

Aboriginal and Torres Strait Islander research partnerships

5

Indigenous-owned enterprises participated in business development programs

Recognition

36/48

CSIRO sites display Aboriginal and Torres Strait Islander flags
Maximum achievable is 37/48

20/26

Australian CSIRO-owned sites formally acknowledge Traditional Owners in reception areas
Maximum achievable is 21/26

Student pathways

12

scholarships totalling \$5.8M

4

Indigenous Time at Sea Scholarship work placements

5

Indigenous Undergraduate Marine Career Pathways placements

Participation in Aboriginal and Torres Strait Islander STEM Education programs

270 students in FY21/22

386 students in FY22/23

492 students in FY23/24

Employment

2.46%

Aboriginal and Torres Strait Islander staff, increase of 112% since June 2021

Includes

15%

leadership

58%

research focused staff and

37

graduates with 14 undertaking a masters or PhD program

Aboriginal and Torres Strait Islander Employment Strategy developed

Launched CSIRO's Indigenous Graduate Program

In 2024, following endorsement from Reconciliation Australia, we are transitioning from the strong foundations built in our Innovate 2021–23 RAP to our Stretch RAP for 2024–27. This next phase will be marked by a deeper integration of Aboriginal and Torres Strait Islander worldviews into our governance systems.

Key to this transition will be incorporating structural and system-level models, such as Indigenous membership within governing groups like the Board, Indigenous Advisory Group, Executive Team, and research advisory and management committees. Strengthening these governance models includes the appointment of Aboriginal and Torres Strait Islander staff, particularly in senior roles, and further embedding Aboriginal and Torres Strait Islander perspectives across organisational frameworks – spanning strategies, policies and reporting mechanisms.

This approach ensures that Aboriginal and Torres Strait Islander voices are integral to decision-making processes and supports long-term, sustainable change within CSIRO’s governance structures.

3.3.2 Improved policies for respecting Indigenous Cultural and Intellectual Property

The development of the ICIP Principles represents a significant institutional framework for CSIRO, aimed at acknowledging and respecting the tangible and intangible aspects of Aboriginal and Torres Strait Islander Peoples’ cultural heritage and associated rights. The intent of these principles is to walk together for a better future and co-develop an inclusive approach to research and engagement with Aboriginal and Torres Strait Islander Peoples, grounded in mutual respect for their ICIP.

The ICIP Principles provide clear guidance for CSIRO people, partners and contractors to ensure respectful engagement with Aboriginal and Torres Strait Islander Peoples, and treatment and handling of ICIP.

Figure 4 illustrates these ICIP Principles, emphasising how they shape CSIRO’s interactions with Traditional Owners in ensuring ethical and responsible handling of cultural heritage.²⁹

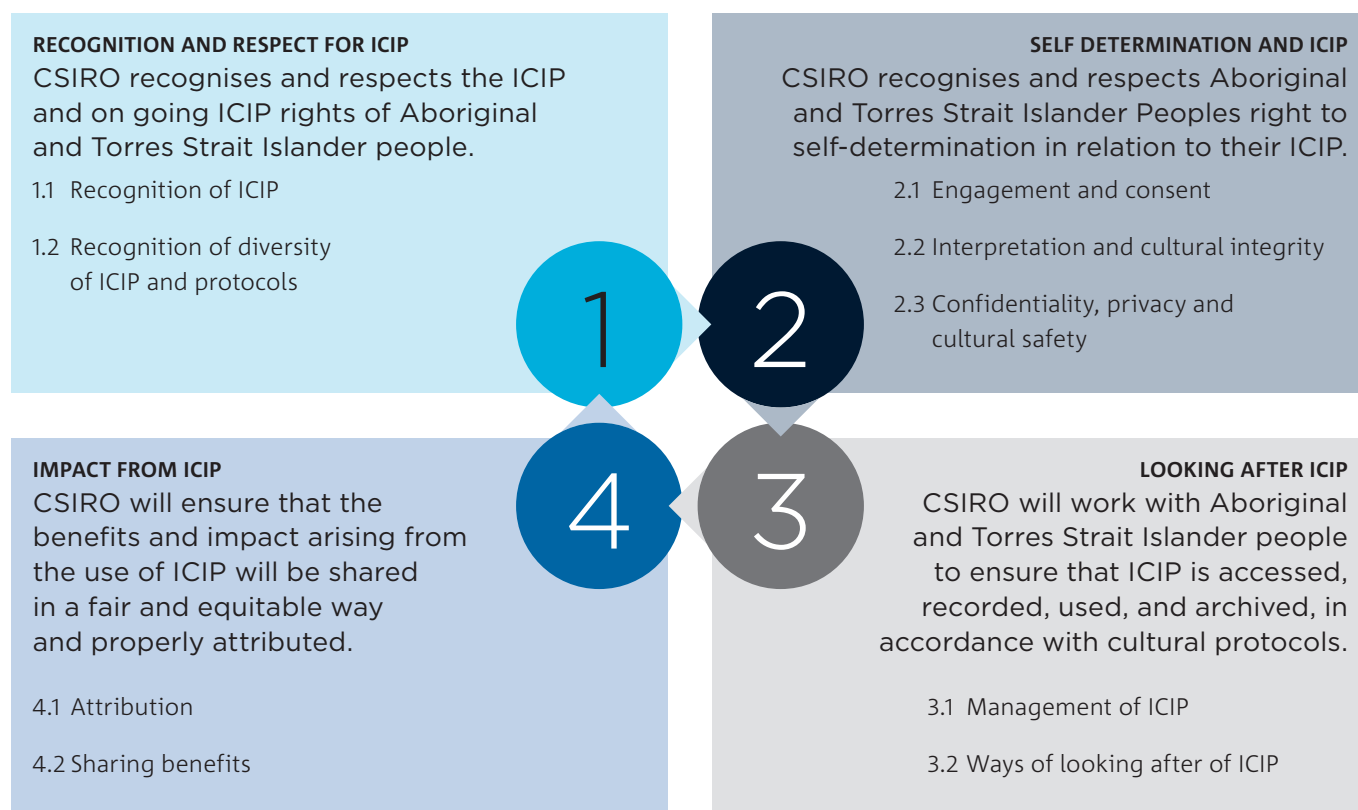


Figure 4: CSIRO’s Indigenous Cultural and Intellectual Property (ICIP) Principles

²⁹ The purpose of the ICIP definition in these Principles is to draw attention to the scope and content of cultural heritage included within that definition. In the case of ICIP rights, the definition draws attention to the rights that exist, or which are to be created, in relation to the ICIP. Accessed on 6 June 2024, <<https://www.csiro.au/en/about/policies/science-and-delivery-policy/indigenous-cultural-and-intellectual-property-principles>>.

CSIRO engages with ICIP through partnerships and collaborations, where access to existing ICIP is granted. We frequently become involved in creating records, information and outputs that document, contain or embody this ICIP. Additionally, Aboriginal and Torres Strait Islander peoples and communities often adapt or create new ICIP as part of research engagements with us. The ICIP Principles support Aboriginal and Torres Strait Islander control, decision-making, governance, participation and collaboration in determining the use of all forms of ICIP, ensuring it serves their own purposes.

Since the approval of the ICIP Principles in November 2023, we have been actively raising awareness of them, both internally (via intranet, seminars and articles) and externally (with Indigenous partners, research organisations and other government agencies). We have developed resources to ensure their effective implementation.

We also engage both internally and externally to gather feedback on our ICIP approach, refining practices accordingly.

An internal ICIP Implementation Working Group has been established to develop an e-learning module on ICIP and engage with an Indigenous law firm to review and improve additional contracting templates and guides. To support ongoing learning and adoption, we have developed an ICIP Advice Tracker to document questions and advice for our people as they implement the ICIP Principles. Insights from the tracker will help improve resources and support consistent applications across the organisation. These insights may also inform the development of a monitoring, evaluation and learning framework to assess the impact of the ICIP Principles.

One notable example of managing and safeguarding ICIP is the Indigenous seasonal calendars co-developed with Indigenous knowledge holders across Australia.³⁰ These seasonal calendars are important tools for sharing and learning about Indigenous knowledges and management of Country.³¹

When concerns have been raised by Traditional Knowledge holders about inappropriate use, we responded by improving our copyright and ICIP notices on the calendars, including the addition of QR codes. We also updated our website to include an educative piece on ICIP. We added cultural integrity context where we could (for example, language audio to pronounce words) and included ICIP specific terms and conditions for calendar download to keep track of who downloads the calendars and how users propose to use them for educational outreach purposes. Terms and conditions of accessing the Indigenous seasonal calendars requires users to:

- acknowledge and properly attribute who and where the ICIP came from
- respect the ICIP and treat it in the right way and maintain its cultural integrity.

The intention is that we can share this usage information with Indigenous knowledge holders to inform them of how their knowledge is being used across Australia and internationally.

Box 3 highlights an example of CSIRO's journey in putting the ICIP Principles into action.

³⁰ Indigenous seasonal calendars. Accessed on 13 June 2024, <<https://www.csiro.au/en/research/indigenous-science/indigenous-knowledge/calendars>>. Indigenous language groups from across Australia have partnered with CSIRO to co-develop seasonal calendars.

³¹ Woodward, E.L. & McTaggart, P. M 2016, Transforming cross-cultural water research, *Geographical Research*, May 2016, 54(2):129–142

Box 3: Indigenous seasonal calendars



Indigenous knowledge of the seasons is deeply localised and unique to each language group across Australia.

Our collaboration with the Traditional Knowledge holders of the Gulumoerrgin-Larrakia, Gooniyandi and Ngan’gi Peoples on seasonal calendars³² exemplifies how we implement the CSIRO ICIP Principles in practice.

Facilitated by Dr Emma Woodward, this collaborative effort translated Traditional Knowledge into a format that respects and preserves these Indigenous groups’ unique and highly localised knowledge. The seasonal calendars serve as vital tools for documenting and sharing their understanding of Country – showcasing a living testament to their heritage and enduring connection to the land.

The Western 4-season calendar often falls short of capturing the intricate weather patterns and ecological relationships in Australia. The wisdom of Aboriginal and Torres Strait Islander people – Australia’s First Scientists – offers a more nuanced understanding.

These seasonal calendars are complex and detailed ecological maps, illuminating the intricate interplay of plants, animals, water, weather, fire and even the stars. This knowledge guides local communities on the seasonal availability of foods, animal breeding patterns, and the appropriate land and sea management practices at any given time. The co-creation of these seasonal calendars demonstrates the power of collaboration and the importance of ensuring respectful feedback is appropriately addressed throughout the process.

“It’s about respecting Indigenous Knowledge and ensuring it is preserved for future generations,” Dr Emma Woodward said.

³² Woodward, E.L. 2010, Creating the Ngan’gi Seasons Calendar: Reflections on Engaging, *Indigenous Knowledge Authorities in Research*, Learning Communities: International Journal of Learning in Social Contexts, Issue 2, 2010, Teaching from Country. Arakwal Seasonal Calendar. Accessed on 31 October 2024, <<https://www.nespthreatenedspecies.edu.au/media/ncbltml/arakwal-seasonal-planning-calendar-2019-2.pdf>>.

3.3.3 An employer of choice for Aboriginal and Torres Strait Islander people

The CSIRO Aboriginal and Torres Strait Islander Employment Strategy 2022–2024 promotes strength-based employment models that build capabilities through innovation and accountability. The strategy focuses on retaining Aboriginal and Torres Strait Islander employees and fostering talent to ensure sustainable relationships and employment outcomes. Aboriginal and Torres Strait Islander employees are represented across various disciplines and roles within CSIRO, including conducting research, general management and enterprise services.

In addition to the employment strategy, our Corporate Plan outlines performance measures aimed at promoting the recruitment and retention of Aboriginal and Torres Strait Islander people. Our Impossible Without You campaign designated 50 roles specifically for Aboriginal and Torres

Strait Islander graduates. We are also proud of the achievements of the CSIRO Indigenous Graduate Program³³ and the CSIRO Indigenous STEM Scholarships.³⁴

Figure 5 maps the various support career pathways available for Aboriginal and Torres Strait Islander people at CSIRO, to create long-term, fulfilling employment opportunities.

Indigenous staffing increased from 2017–18 to 2023–24, reflecting the impact of employment initiatives aimed at increasing Aboriginal and Torres Strait Islander employee retention. Figure 6 (page 28) shows an increase in Indigenous employee representation at CSIRO over this period, with a narrowing gap between actual performance and the 5 per cent target set in the CSIRO Aboriginal and Torres Strait Islander Employment Strategy 2022–2024. Specifically, Indigenous employee representation increased from 1.84 per cent (116) in 2022–23 to 2.46 per cent (163) in 2023–24.

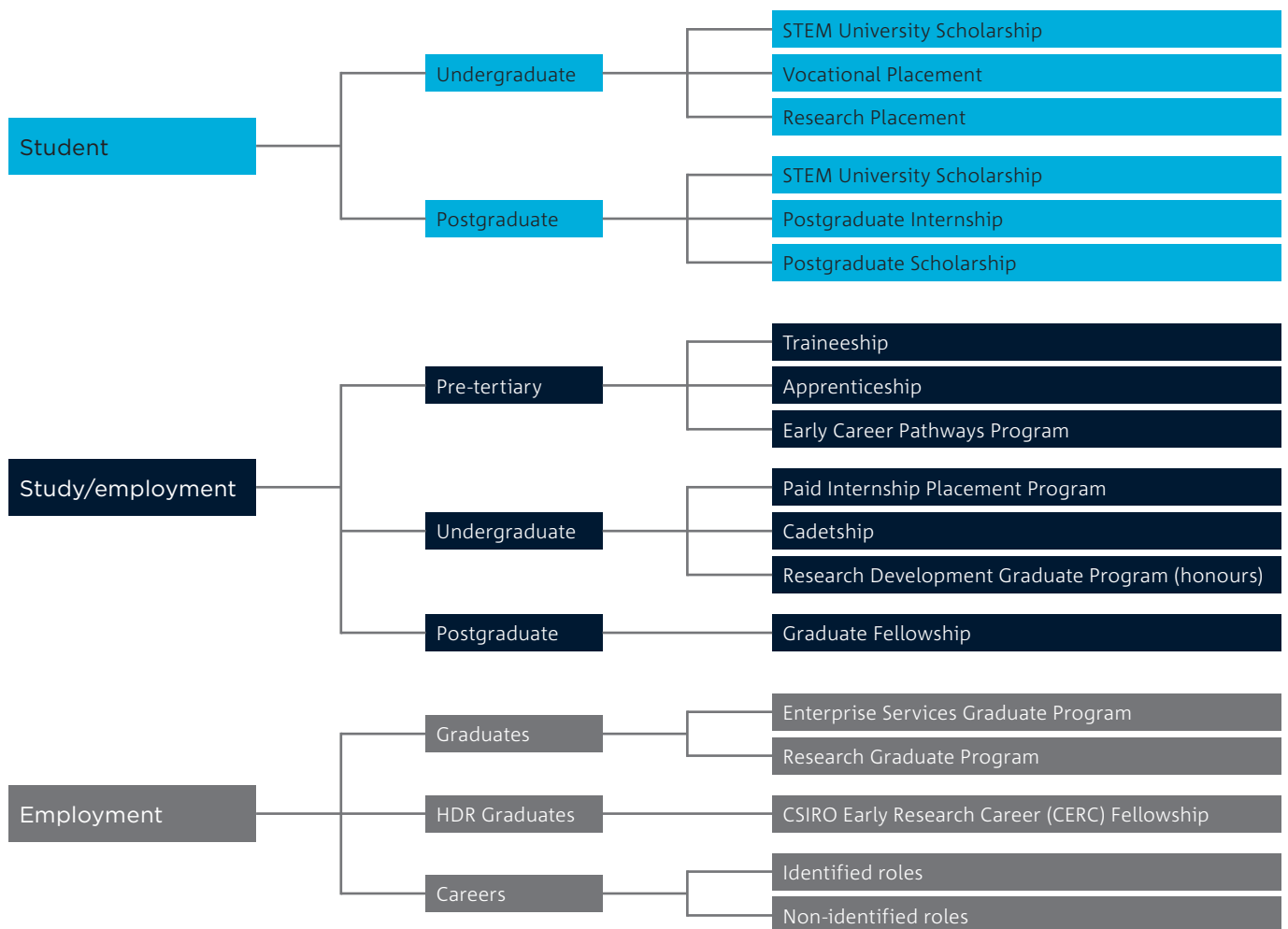


Figure 5: Career pathways for Aboriginal and Torres Strait Islander people

33 Research Fellowship Indigenous Graduate Program Accessed 13 June 2024, <https://pd.csiro.au/2023/People/23-00143_TAL_BROCHURE_IndigenousGraduateProgram-RF-IGP_WEB_230310.pdf>.

34 CSIRO Indigenous STEM Scholarship Accessed 13 June 2024, <<https://scholarships.uow.edu.au/scholarships/search?scholarship=2262>>.

However, we are currently unlikely to meet our aspirational Innovate RAP target of 5 per cent Aboriginal and Torres Strait Islander employee representation by December 2024. One of the key challenges has been resourcing and managing workflows, such as actively supporting Indigenous recruitment processes across a large organisation. This highlights the need for more robust design of employment strategies and planning. To meet future targets, we need to enhance recruitment processes and planning approaches across both our Research and Enterprise units.

While we are proud of the progress made, we acknowledge that further efforts are needed to better align inputs with desired outcomes in our employment programs.

We have also not yet met Indigenous employment targets under the Commonwealth Aboriginal and Torres Strait Islander Workforce Strategy. A significant constraint in achieving these targets is the requirement for higher degrees, such as PhDs, or specific professional qualifications in many scientific research roles. This creates a challenge in building a deeper pool of Indigenous candidates for these roles, which is critical for strengthening the Indigenous STEM talent pipeline. For example, in 2022, 58 Indigenous people completed a PhD compared to approximately 9,200 non-Indigenous PhD graduates across Australia.³⁵

We provide centralised holistic 360-degree support – physical, emotional and cultural – for Indigenous employees, their supervisors and teams to build cultural safety within our organisation. However, to retain Indigenous talent and continue progress in employment, further efforts are needed. Developing evidence-based strategies to enhance the Indigenous STEM talent pipeline is essential for future employment policy.

In response to this challenge, we developed and launched the Indigenous Jobs Map in 2022. This tool leverages AI to match Indigenous science and knowledge holders with job opportunities, highlighting historical roles in the job market and the qualifications required. The online platform aims to inform Aboriginal and Torres Strait Islander students, carers, teachers, advisors and workers about sectors, regions and qualifications sought by employers. It also helps employers understand how they can better align their job offerings with the Indigenous talent pool in their region and sector.³⁶

We also established 12 Indigenous STEM scholarships at key Australian universities, providing financial assistance to Aboriginal and Torres Strait Islander students and building a pipeline of Indigenous STEM talent for the nation. We invested \$5.8 million to reduce financial pressures and enable students to focus on impactful research projects. The program enriches the scientific landscape with diverse perspectives, fosters self-determination, and prepares students for impactful STEM careers.

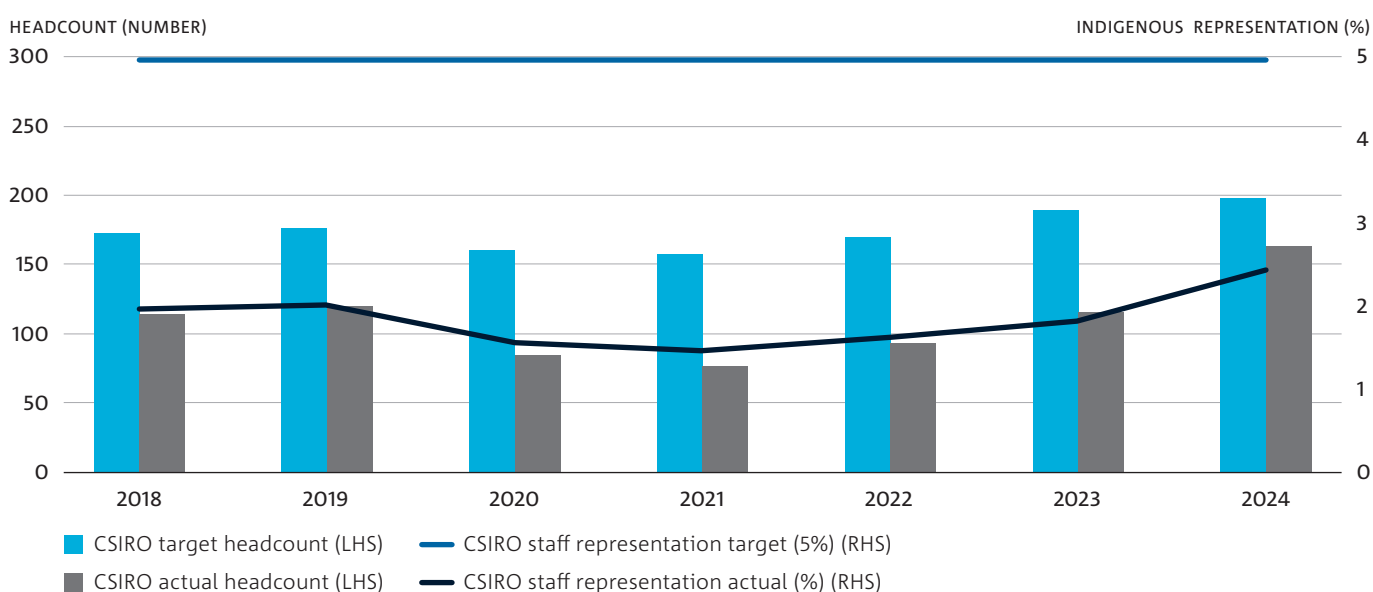


Figure 6: CSIRO's Aboriginal and Torres Strait Islander staff representation by proportion and headcount from 2017–18 to 2023–24

35 The Department of Education. Accessed on 26 June 2024, <<https://www.education.gov.au/higher-education-statistics/student-data>>.

36 CSIRO's Indigenous Jobs Map. Accessed on 24 June 2024, <<https://indigenous-jobsmap.csiro.au/#/background>>.

3.3.4 Working with CSIRO's business partners

We actively work with our business partners to strengthen Indigenous procurement and align our commercial relationships with Aboriginal and Torres Strait Islander enterprises. The CSIRO Indigenous Procurement Strategy serves as a framework for fostering partnerships with Indigenous businesses and building organisational capability through investment in these relationships. This strategy was co-designed by Indigenous CSIRO team members, ensuring it reflects a culturally inclusive approach to procurement and aligns with our Reconciliation Action Plan deliverables.

Since July 2016, we have voluntarily adhered to the Federal Government's Indigenous Procurement Policy (IPP).³⁷ Additionally, CSIRO is a member of Supply Nation, the leading directory of Indigenous businesses endorsed by the Australian Government.³⁸ We contribute to the annual IPP targets, which measure the number of Indigenous businesses awarded contracts and the overall volume and value of these contracts. We submit reports every 6 months to the Department of Industry, Science and Resources³⁹ reflecting our progress.

Our people are encouraged to consider Aboriginal and Torres Strait Islander-owned businesses when procuring goods and services, ensuring adherence to our internal procurement procedures and the Commonwealth Procurement Rules, including the core principle of 'value for money'.

Figure 7 outlines our performance in meeting IPP success measures, showcasing engagements with Indigenous suppliers and the number of contracts awarded to Indigenous businesses.

In 2023–24, although the number of Indigenous suppliers engaged and the number of contracts awarded to Indigenous businesses decreased compared to 2022–23, the average value of contracts with Indigenous suppliers increased. Indigenous-owned enterprises were awarded contracts worth \$19.47 million, up from \$12.61 million in the previous year.

We remain committed to expanding opportunities for Indigenous participation through supplier diversity. While the increase in the average value of contracts is a positive development, there is a clear need for more targeted efforts within CSIRO to drive demand for Indigenous goods and services. We are working to ensure sustained growth in the number of contracts awarded to Indigenous-owned businesses, supporting the long-term success and integration of Indigenous businesses in the supply chain.

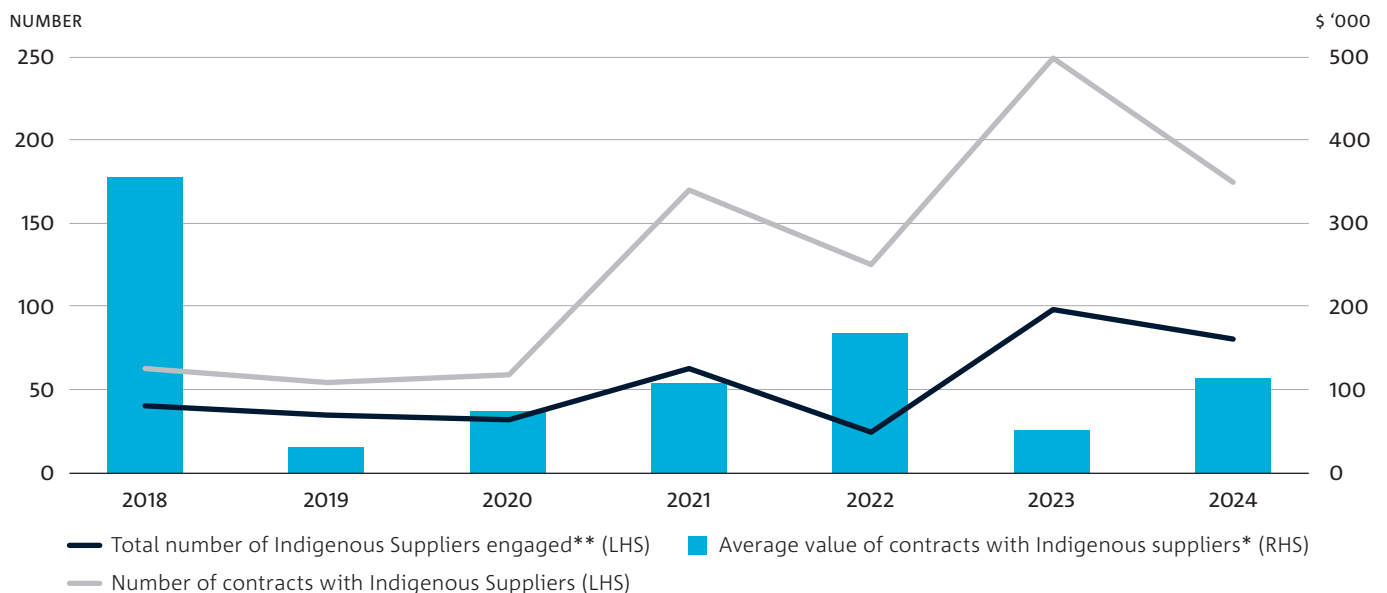


Figure 7: Number of Indigenous suppliers engaged and number of Indigenous businesses awarded a contract, 2017–18 to 2023–24

*Values include contracts that were also reported on AusTender. **Information was not required for part or all of the FY

37 The Commonwealth Government IPP is intended to significantly increase the rate of purchasing from Indigenous businesses. <<https://www.niaa.gov.au/indigenous-affairs/economic-development/indigenous-procurement-policy-ipp>>.

38 Indigenous businesses are defined in the Commonwealth Procurement Rules to be small- to medium-sized enterprises with at least 50% Indigenous ownership.

39 While CSIRO is a Corporate Commonwealth Entity (CCE) and is not mandated to comply with the IPP, we contribute to annual targets through our reporting within the Industry and Science Portfolio. Information reported in each period includes: contracts under \$10,000 (excluding those under \$100); sub-contracts with Indigenous businesses; contracts with Indigenous businesses not registered with Supply Nation; direct contracts with an incorporated joint venture, where the joint venture is at least 25% Indigenous owned; purchases with Indigenous business made using a Commonwealth credit card.

3.4 Reputation in the research and development (R&D) sector

In this section, we explore the strength of our reputation in the R&D sector, particularly in relation to our collaboration with Aboriginal and Torres Strait Islander partners. We assess whether there is robust evidence of effective engagement with priorities that are important to Indigenous partners and communities.

This analysis involves reviewing our research programs, evaluating Indigenous-related research investments and examining the scope of our engagements. Additionally, we identify gaps in our data collection processes that may hinder a full understanding of our impact and explore ways to address these gaps to ensure more meaningful, measurable outcomes. By doing so, we aim to ensure that our research aligns with the aspirations of Aboriginal and Torres Strait Islander communities.

3.4.1 Advancing priorities in Indigenous research

For research to be truly Indigenous-led, Aboriginal and Torres Strait Islander people must hold legitimate decision-making authority across all phases of the process. This includes ownership and control over decision-making, resource allocation and the direction of the project, ensuring that Indigenous perspectives are integral to setting the research agenda, approaches, evaluation and solutions.

One of the key examples of this approach is the development of the Our Knowledge Our Way guidelines (Box 4). These guidelines, centred around best practices in caring for Country, exemplify the question: ‘Who decides what is best practice and how is it determined?’⁴⁰ This initiative is a clear example of how Indigenous partners lead and influence research direction, ensuring that their knowledge and values are respected and implemented at every stage of the process.

This framework helps shift the traditional research paradigm, making it more inclusive and representative of Indigenous priorities. This ensures that the outcomes are aligned with the aspirations and needs of Indigenous communities.



Box 4: Our Knowledge Our Way in Caring for Country Best Practice Guidelines

The Our Knowledge Our Way guidelines exemplify Indigenous leadership in action, showcasing a successful Indigenous-led project based on transparency and inclusivity. These best practice guidelines amplify the voices of Indigenous land and sea managers who have developed effective methods for strengthening their knowledge systems and building partnerships to share knowledge in caring for Country.

The project was co-led by the North Australia Indigenous Land and Sea Management Alliance (NAILSMA) and us, with an Indigenous-majority project steering group established to ensure Indigenous leadership at every stage. The steering group issued a call for Indigenous people to submit case studies demonstrating best practices in incorporating Indigenous knowledge. The Our Knowledge Our Way guidelines are based on 23 peer-reviewed case studies, submitted by Aboriginal and Torres Strait Islander people and their representative bodies. Contributions from over 100 Indigenous individuals and organisations, including partners and co-authors, further enriched the project.

These guidelines highlight how Indigenous leadership and knowledge are central to successful land and sea management initiatives, providing a blueprint for future collaborations that honour Indigenous ways of knowing.

40 Woodward E, Hill R, Harkness P and Archer R (eds) (2020) ‘Our Knowledge Our Way in caring for Country: Indigenous led approaches to strengthening and sharing our knowledge for land and sea management. Best practice guidelines from Australian experiences’, NAILSMA and CSIRO, Cairns, Australia. Accessed on 14 May 2024, <[csiro.au/en/research/indigenous-science/indigenous-knowledge/our-knowledge-our-way](https://www.csiro.au/en/research/indigenous-science/indigenous-knowledge/our-knowledge-our-way)>. These Guidelines are a key output from a project of the Australian Government’s National Environmental Science Program, Northern Australia Environmental Resources Hub, titled Knowledge Brokering for Indigenous Land Management.

To foster holistic change and deliver meaningful outcomes, it is critical to collect real data from Aboriginal and Torres Strait Islander people that goes beyond impact case studies. Currently, we lack systematic data collection processes that would allow us to fully understand how our research investments impact Aboriginal and Torres Strait Islander communities. Gathering this data could provide valuable insights into tangible and intangible benefits associated with project delivery and enable a more comprehensive evaluation of our investment outcomes with Indigenous partners.

Much of our success and reputation hinge on how well we manage and deliver project outputs. The success of these projects is often measured within the parameters of approved business case frameworks, including time, cost, scope, quality, risk and benefits.⁴¹ Since 2017–18, CSIRO has overseen approximately 220 projects related to Indigenous-related research.

Figure 8 shows that from 2017–18 to 2023–24, the total value of Indigenous-related research conducted by us amounted to \$178.63 million. Over this period, the average annual project expenditure increased from approximately \$232,500 in 2020–21 to \$477,000 in 2023–24.

Despite our strong track record in project delivery, there is variability in the maturity of project management practices across our Research Units, particularly in their engagement with Indigenous partners. A key area identified for improvement is the incorporation of business realisation management approaches in our project management practices. This involves strengthening the way we negotiate and define project benefits and outcomes during the initial planning for research projects in partnership with Indigenous stakeholders. By focusing on this, we can better align project goals with long-term, meaningful benefits for Aboriginal and Torres Strait Islander communities, ensuring our research delivers lasting impacts.

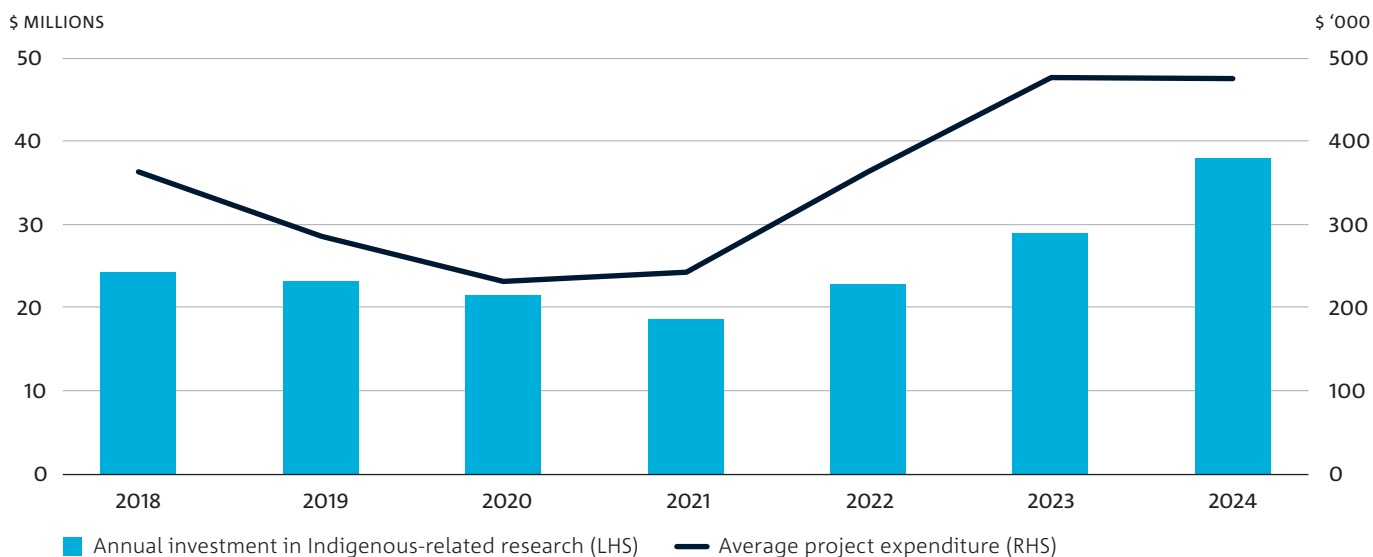


Figure 8: CSIRO annual total investment in Indigenous research projects

⁴¹ At a detailed project level, the expenditure associated with each research project can be an indicator of the maturity and scale of a project and its impact across CSIRO. We use our corporate project finance and audit reporting IT platform ('Opportunity to Deliver' (O2D)) to validate and capture accurate data on all Indigenous-related research projects. CSIRO manages more than 5,000 research projects and assigns 'tags' to classify Indigenous-related research within the O2D IT platform. CSIRO managed 80 Indigenous research projects with a total investment of \$38.16 million in 2023–24.

3.4.2 CSIRO’s publications involving Indigenous engagement

Since 2021, we have been using our internal review and approval system, ePublish, to tag publications⁴² involving Indigenous engagement with a specific identifier. ePublish not only manages the quality, IP and sensitivities of publications but also tracks the extent of Indigenous engagement in our research outputs.

To date, approximately 3 per cent of CSIRO’s publications – 331 in total – have been tagged as involving Indigenous engagement or arising from projects with Indigenous engagement.

Table 5 provides a breakdown of the types of engagement identified in the 3 per cent of research publications tagged in ePublish as involving Indigenous engagement.

CSIRO has a greater proportion of Indigenous research publications in *Plant & Animal Science* and *Environmental Science*, compared to the broader landscape of Indigenous research, which is predominantly published in *Social Sciences*, *Clinical Medicine* and *Psychology/Psychiatry*.⁴³

ePublish also helps classify CSIRO’s publications by their academic, technological and policy impacts.⁴⁴ The academic impact of CSIRO’s Indigenous research is in line with the national average, with a Normalised Citation Impact of 0.84 compared to Australia’s 0.94.⁴⁵ The technological impact⁴⁶ is relatively low, with only 42 references to more than 12,000 publications over 10 years. However, CSIRO’s Indigenous research has the highest policy impact rate among the 65 largest research institutions in Australia, with nearly 200 references to 103 publications produced over the last decade.⁴⁷

Table 5: Types of Indigenous engagement for CSIRO’s research publications (tagged in ePublish since July 2021)

TYPE OF ENGAGEMENT	% OF ENGAGEMENT OF THIS TYPE ^A
Research engages with Indigenous communities or people	45.9%
Research team includes Aboriginal or Torres Strait Islander people	37.2%
Research team includes Aboriginal or Torres Strait Islander organisations	21.8%
Permission to share knowledge/ICIP	21.50%
Research includes Indigenous knowledge or ICIP	19.6%
Research includes non-authorial contributions from Indigenous people	19.3%
Research was Indigenous-led	16.9%

^AA publication tagged as involving Indigenous engagement may fall into one or more of these subcategories.

3.4.3 Recognising and protecting intellectual property with Indigenous collaborators

Our ICIP Principles guide how we develop, implement and maintain collaboration agreements with Aboriginal and Torres Strait Islander partners to protect ICIP.

IP commonly developed through our research with Indigenous collaborators includes reports, images and other copyright-protected materials. These forms of IP are automatically protected under Australian Copyright laws and do not require registration.

42 The type of publications, which are entered into ePublish are: Journal articles, Books and book chapters, Conference abstracts, posters, presentations and papers, Client and technical reports and report chapters, Standards, online media, fact sheets and encyclopedia entries.

43 These publications were identified by searching the metadata recorded on the Web of Science using a specific search strategy to look at their titles, keywords and abstracts. Unlike ePublish, Web of Science focuses primarily on journal content and contains no reports.

44 In ePublish, academic, technological and policy classifications for impact relate to the number of references to CSIRO publications. Academic impact: number of references to the publications from scientific literature. Technological impact: number of references to the publications from patents. Policy impact: number of references to the publications from government and supranational agency policy documents.

45 Noting, that a low sample size reduces the accuracy of this result.

46 Technological impact is measured by counting patent references.

47 The average of 1.9 policy references per publication is the highest rate of the 65 largest institutions in Australia that were included in the analysis.

Since 2019, CSIRO's IP team has included a notification process in its IP disclosure system,⁴⁸ requesting researchers to report any potentially registrable IP that incorporates Indigenous Knowledge or involves inventors of Aboriginal and Torres Strait Islander heritage. However, results so far have been limited as IP related to Indigenous collaborations is often disclosed near the end of projects.

Currently, research partnerships between CSIRO and Indigenous collaborators have not yet generated significant registerable project IP captured in CSIRO's IP disclosure reports. As these collaborations continue to evolve, we expect an increase in registered IP reported arising from joint projects,⁴⁹ creating more opportunities to develop registerable project IP into products and services protected by IP rights, benefiting Indigenous businesses.

3.4.4 Our responsibilities for human research ethics with Aboriginal and Torres Strait Islander people

Ensuring research is conducted ethically and with the highest standards of integrity is essential for CSIRO to maintain community trust in our science and uphold our social licence to operate. Our governance framework aligns with the *Australian Code for the Responsible Conduct of Research 2018*, and the *National Statement on Ethical Conduct in Human Research 2023* (National Statement), and considers the *Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Code of Ethics for Aboriginal and Torres Strait Islander Research*. These codes guide us in ensuring our research activities have a positive impact and help us responsibly manage and minimise potential risks or harm.

In accordance with the National Statement, all CSIRO research involving human participants, communities, or their data or tissue must undergo independent ethical review by a human research ethics committee. These committees include Aboriginal and Torres Strait Islander researchers and community Elders to ensure Indigenous rights and perspectives are appropriately considered and addressed in the research.

In 2023, CSIRO's human research ethics committees reviewed 37 projects involving or of particular significance to Aboriginal and Torres Strait Islander people. There has been a noticeable shift in recent years from research that engages with Aboriginal and Torres Strait Islander people and communities to research that is driven and led by those communities. This change reflects our growing capacity to conduct Indigenous-led research and our commitment to working with Aboriginal and Torres Strait Islander people in a respectful and culturally safe manner, fostering two-way learning, relationship building and benefit sharing. We continue to monitor and report on our performance in this area through both internal and external reports.

3.5 Impact delivered

This section examines how our research outcomes and science engagement activities contribute to meaningful and appropriate impact for Aboriginal and Torres Strait Islander people, specifically through the innovation ecosystem.

3.5.1 Delivering successful impact for Indigenous partners

We are committed to consistently empowering Indigenous project partners to set the research agenda, approach, assessment, evaluation and solutions at every project phase. This involves ensuring research is informed by Aboriginal and Torres Strait Islander priorities, perspectives, values and voices,⁵⁰ as well as recognising the inherent rights governing land, sea and water.⁵¹

For instance, when addressing complex environmental management challenges, Aboriginal and Torres Strait Islander communities have sought to leverage innovative technologies such as drones and artificial intelligence (AI). However, these tools must be co-designed with Traditional Owners to ensure they benefit those communities.

Box 5 illustrates how CSIRO's Healthy Country AI and Digital program is empowering Indigenous rangers to manage their lands adaptively using digital technology.

48 CSIRO's Invention Disclosure Form (IDF) contains a data field used to record potential IP registration of the use of Indigenous knowledge and if any inventors have Aboriginal and/or Torres Strait Islander heritage.

49 It is noted that the IP reported is dependent on the terms and conditions of the collaboration. So for instance, if the collaboratively developed IP is assigned to the Indigenous knowledge holder and is ultimately not CSIRO's property, we do not have the right to seek protection. CSIRO and Indigenous partnerships can result in co-ownership of collaboratively developed project IP, generation of registrable IP and collaborative commercialisation models.

50 Robinson, C.J., et.al. (2022); AIATSIS (2020); NHMRC (National Health and Medical Research Council) 2018, National Statement on Ethical Conduct in Human Research, National Statement on Ethical Conduct in Human Research (2007) – Updated 2018 | NHMRC.

51 United Nations 2008, United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), United Nations: *Department of Economic and Social Affairs*. (Accessed 23 May 2024). United Nations Declaration on the Rights of Indigenous Peoples | Division for Inclusive Social Development (DISD).



Indigenous women rangers are supported to learn and apply digital skills to support their efforts to repair the health of their Country.

Box 5: Healthy Country AI and Digital program delivers on the ground benefits⁵²

Since 2019, the Healthy Country AI and Digital program has empowered Aboriginal and Torres Strait Islander communities to tackle environmental challenges. Co-developed with Traditional Owners, this world-first initiative has received several awards. It aims to survey species and habitats of cultural and ecological significance to Indigenous people. Ranger groups have been supported to gain skills in data collection and analysis to monitor changes to their lands.

Beginning in early 2022, Indigenous women rangers have participated in the Healthy Country AI and Digital program, co-designing and completing digital training modules focused on using technologies such as camera traps and drones. Participants earn digital badges for their achievements, which are co-verified by senior cultural and technical authorities and awarded through Charles Darwin University. These badges serve as an online record of their assessments and achievements, which participants can share on social media and personal or professional websites.

The program has enabled a network of digital women rangers across the participating communities, reflecting their unique needs and experiences. It not only facilitates a culturally safe approach to collecting, using and sharing data for decision-making about caring for Country, but also enhances the self-confidence of women rangers while reinforcing their commitment to family and cultural responsibilities.⁵³

While the program continues to expand, it remains committed to its core principles regarding ethical data collection and analysis. This ensures its efforts:

- are governed by Traditional Owners
- reflect the priority concerns for local Aboriginal and Torres Strait Islander communities
- support on-ground adaptive management initiatives.

By integrating ethical AI with Indigenous Knowledge, the program delivers practical solutions for conserving vital ecosystems on Aboriginal and Torres Strait Islander lands, such as protecting turtle nests, combating invasive weeds or tracking herd populations. These solutions directly benefit Indigenous rangers and on-Country enterprises.

⁵² Robinson, C.J, et.al. (2022); Further information is available at <<https://healthycountryai.org/>>.

⁵³ Digital Women Ranger Program: Learning digital skills to care for Country together. Accessed 10 April 2024, <<https://healthycountryai.org/files/DigitalWomenRangersProgram.pdf>>; Indigenous women rangers earn responsible digital tech credentials, Accessed on 10 April 2024, <<https://research.csiro.au/ri/indigenous-women-rangers-earn-responsible-digital-tech-credentials/>>.

Box 6 highlights another example of how we are collaborating with Indigenous communities in Torres Strait and Pacific regions to safeguard human health and promote sustainable economic activity.

Box 6: Biological Control of Mosquito-Borne Diseases

The Indigenous Peoples of Zenadth Kes (Torres Strait) have lived in the interconnected network of islands between Australia and Papua New Guinea for over 50,000 years.

Zenadth Kes forms a key biosecurity border zone where diseases, invasive plants and various pests pose a threat to local communities and the Australian mainland.

CSIRO, alongside strategic partners, facilitated initial community engagement following Free, Prior and Informed Consent (FPIC) guidelines. CSIRO examined and presented a short list of known mosquito interventions to Gur A Baradharaw Kod Torres Strait Sea and Land Council (GBK), the peak body representing all Registered Native Title Body Corporates across the Torres and Endeavour Straits, which advocates for the collective interests of the region's Traditional Owners and provides input into policy and program development.

The project aims to safeguard human health and promote economic activity by:

- enhancing the safety and wellbeing of Torres Strait and Pacific region communities, reducing the burden on hospitals and healthcare systems
- reducing reliance on insecticides for more sustainable pest control with lower environmental impacts
- limiting the spread of mosquito-borne infectious diseases to Australia
- developing solutions for managing agricultural pests in Australia, such as fall armyworm, Mediterranean fruit fly, diamondback moth, Queensland fruit fly, buffalo fly and ticks.



Our scientific research and management of national research facilities have strong, direct connections with Aboriginal and Torres Strait Islander partners. Initiatives such as the establishment of Inyarrimanha Ilgari Bundara, our Murchison Radio-astronomy Observatory on Wajarri Country, serve as a model for future collaboration and remote application of CSIRO programs (see Box 7).

Box 7: Inyarrimanha Ilgari Bundara, our Murchison Radio-astronomy Observatory

Aboriginal and Torres Strait Islander people are Australia's first astronomers, with a long-standing knowledge of the sky passed down through generations. The Wajarri Yamaji in Western Australia have negotiated an Indigenous Land Use Agreement (ILUA) with the Australian and Western Australian governments together with CSIRO. The ILUA enables radio astronomy on Wajarri Country, including hosting the international SKA Observatory (SKAO)'s SKA-Low telescope, currently under construction.

The first outcome from the ILUA was the new dual name for the site: Inyarrimanha Ilgari Bundara, the CSIRO Murchison Radio-astronomy Observatory. Inyarrimanha Ilgari Bundara means 'sharing sky and stars' in the Wajarri language. It represents the Wajarri Yamaji's deep connection to the sky and Country while sharing it with the global astronomy community through the world-leading instruments on site, including the SKA-Low telescope as well as our ASKAP radio telescope.

Wajarri partnership in the observatory has ensured opportunities are available for community, including new SKA-Low telescope field technician roles with the SKAO and CSIRO. The roles were co-designed and delivered with the Wajarri community and Central Regional TAFE in Geraldton, Western Australia. The skills developed through the new field technician roles will provide long-term benefits, with applications in industries such as telecommunications and mining.





Ron Poantimilui holds up farmed tiger prawns in Vietnam as part of a collaboration with the Tiwi Island community to launch a pilot project for a tiger prawn industry.

4 Sharing our lessons learned

Key messages

- We are committed to applying what we've learned by identifying opportunities to strengthen the reconciliation process. Part of this involves assessing how our current approaches are accountable, culturally safe and responsive to the needs of Aboriginal and Torres Strait Islander people.
- Many of the ideas, governance models and practices that support Indigenous science engagement already exist within CSIRO. However, these good practices need to be strengthened, more widely implemented and sustained in a standardised manner. We acknowledge that the level of maturity and experience in engaging with Indigenous partners varies across our business areas.

In this section, we provide a historical perspective of our journey towards reconciliation. Using a thematic approach, we highlight our progress in addressing gaps in our systems, people strategies and processes to demonstrate the lessons we've learned and identify areas for future improvement.

4.1 Our journey towards reconciliation

Since 2007, we have implemented initiatives to foster employment, education, cultural awareness and investment in both existing research and new research frameworks, ensuring benefits are co-created and shared with Aboriginal and Torres Strait Islander communities. Through our 2007 Indigenous Engagement Strategy, we aimed to increase Indigenous participation in our research and development activities.

Over time, we have introduced programs such as the Indigenous Cadetship and Indigenous Traineeship, which began in 2012. These programs, along with our ever-evolving Indigenous employment strategies, have been designed to enable meaningful and sustainable change in recruitment and engagement with Aboriginal and Torres Strait Islander employees.

Our governance structure for Aboriginal and Torres Strait Islander engagement has also evolved to streamline communication and clarify responsibilities. In 2018, we appointed an Executive Manager to lead the Indigenous Engagement program, followed by the appointment of an Indigenous Science Program Director in 2021.

In 2021, the team launched workshops to build cultural capability across the organisation, developed a webpage dedicated to Indigenous science and engagement, and established the Indigenous Science and Engagement Program (ISEP) to deliver a strategic, organisation-wide approach to partnering with Aboriginal and Torres Strait Islander communities and organisations. In 2023–24, the team produced ICIP Principles for CSIRO.

4.2 Creating a workplace where staff are respected and celebrated

Our approach to Indigenous employment is centred on providing opportunities for Aboriginal and Torres Strait Islander people to learn and develop along a meaningful career pathway, with the flexibility to pursue external work experience and education. Aboriginal and Torres Strait Islander employment is a collective responsibility, and we are committed to fostering sustainable employment outcomes for Aboriginal and Torres Strait Islander people across all levels of the organisation.

Our functional areas are equipped with a range of tools to build Aboriginal and Torres Strait Islander employment capacity, focusing on areas where they can make the most impact. Our Research and Enterprise units are provided with metrics throughout the lifecycle of engagement with Aboriginal and Torres Strait Islander employment to ensure tailored strategies can be developed to address specific employment gaps.

While we offer various resources to enable sustainable career pathways for Aboriginal and Torres Strait Islander employees, we recognise the need to invest further in recruitment processes and workforce planning to strengthen the employment pipeline.

The following case study highlights the experiences of several Aboriginal and Torres Strait Islander team members.



Box 8: Career pathways for Aboriginal and Torres Strait Islander people

Indigenous Traineeship Program: Isaak Kadel

Isaak Kadel is a proud Torres Strait Islander man hailing from the Semsep tribe of Erub (Darnley) Island.

He started his career at CSIRO in 2014 through our traineeship program. Isaak honed his laboratory skills at TAFE while gaining hands-on experience working alongside CSIRO researchers. After completing the program in 2015, he transitioned to a research assistant role.

Isaak now works in aquaculture, conducting experiments and collecting data to improve the industry's sustainability, efficiency and cost-effectiveness. He focuses on finding practical solutions to challenges facing aquaculture.

"The traineeship program provided me with an opportunity to start a career in CSIRO that I wouldn't otherwise have known was available," Isaak reflected.

"Working with people who have years of experience and seeing where other Aboriginal and Torres Strait Islander staff have taken their career within CSIRO gives me confidence in taking on new challenges and opportunities to grow," he said.

Indigenous Cadetship Program: Zane Court

Zane Court, a proud descendant of the Gunggandji People of Yarrabah Mission, near Cairns, grew up in Goomeri, Queensland.

Zane is a Research Technician in our Collaborative and Adaptive Futures team, where he helps bring Indigenous Knowledge to the fore in his science. He started with CSIRO in 2021 through the Indigenous Cadetship Program.

Zane completed his Bachelor of Environmental Practice at the James Cook University, majoring in land and water management, and biodiversity conservation and management.

"Through co-designed projects led by Traditional Owner Groups during my cadetship, I gained insights into the vital interplay between Indigenous knowledge systems and scientific practices, enriching Western science's capacity to effectively steward the multifaceted environments across Australia, while also emphasising the significance of caring for Country," said Zane.

Ethan Towns: Bringing Indigenous perspectives to science

Ethan Towns, a Kamilaroi man, first encountered CSIRO at age 15 through work experience at our Myall Vale site near Narrabri, New South Wales.

Ethan then participated in the Indigenous Cadetship Program where his passion for entomology grew as he worked on classifying over 100 insects. Now completing a PhD in Entomology at the University of New England, Ethan also works as a Research Assistant at CSIRO.

Ethan's Kamilaroi identity is a very important part of his life, and he was guided by many influential Aboriginal role models, including his mentor at CSIRO Norman Winters. Ethan is particularly interested in enriching his research by incorporating Indigenous knowledge and perspectives.

"It placed me ahead of my peers before I started uni because I had already been exposed to dissecting insects and writing papers. As part of my cadetship, I also got to teach the summer students that were working at our site. It was a great feeling being able to share the skills and knowledge I had gained from my own experience with the next generation," said Ethan.



Kyah Chewying's journey in science

Kyah Chewying, a Walbunja woman from Yuin Country, developed a passion for science through her father's dedication to marine life conservation.

In 2018, she gained insight into a science career during work experience with CSIRO's Cotton Fibre Quality team.

Kyah then pursued a Bachelor of Science (Applied Ecology and Sustainability) at the University of Canberra, and in 2020 she gained practical experience working alongside scientists through the CSIRO Cadetship Program.

After graduating in 2023, Kyah completed her Honours in Marine Science. During this time, she participated in the CSIRO Indigenous Graduate Program, which enabled her to study full-time while working at CSIRO one day a week.

Kyah then transitioned to a full-time research technician role focused on Sea Country restoration with Traditional Owners.

Kyah is now a PhD student at the University of Wollongong, delving deeper into the realm of marine ecosystems. Through the CSIRO Indigenous Fellowship Program, she continues her work at CSIRO, dedicating one day a week to this important initiative.

"I believe that inviting new voices to the table is essential and long overdue. I'm committed to making that happen by showcasing the positive impact of Indigenous Peoples' learnings, skills, knowledge, and understanding of modern science," Kyah said.



Walbunja woman and research technician Kyah Chewying on a fieldwork trip at Batemans Bay collecting seagrass during her cadetship.

4.3 Strengthening our understanding of Indigenous knowledge and science

The CSIRO Indigenous Knowledge and Science Cross-Cutting Capability (IK&S CCC) connects and enhances science outcomes across our research projects and initiatives. By engaging with various science program areas, the IK&S CCC strengthens collaboration through presentations to leadership teams and hosting Community of Practice events. The outcomes of these activities are shared with the Indigenous Science and Engagement team to align with its organisational objectives.

Box 9 provides an overview of the IK&S CCC.

Box 9: Indigenous Knowledge and Science Cross-Cutting Capability

Launched in February 2022, the IK&S CCC is led by Dr Cass Hunter, a Kuku Yalanji and Maluiligal woman and Indigenous System Researcher with CSIRO based in Cairns.

The IK&S CCC serves as a platform for generating creative ideas and fostering shared learning to strengthen culturally respectful approaches when partnering with Aboriginal and Torres Strait Islander people. It is designed to be inclusive, purposeful and active, enabling peer-to-peer learning, building connections and addressing complex and often misunderstood topics.

Cass began her career at CSIRO as an Indigenous cadet in 1998. She has over 20 years of experience leading participatory action research, co-designing with Aboriginal and Torres Strait Islander communities, knowledge translation and best-practice design. Cass has seen our organisation grow in its commitment to culturally respectful partnerships with Aboriginal and Torres Strait Islander people.

4.4 Nurturing opportunities for Indigenous-led science

The CSIRO Indigenous Research Grants Program, launched in 2023, fosters collaborative partnerships based on science priorities identified by Aboriginal and Torres Strait Islander people, communities and organisations. These partnerships range across small-, medium-, and large-scale multidisciplinary projects.

The program promotes two-way learning, strengthening Indigenous scientific capability while contributing to solutions for national challenges. It is guided by a research paradigm that reflects the cultural, social, environmental and economic priorities identified by Aboriginal and Torres Strait Islander people and communities, advancing Indigenous science and capability and reinforcing self-determination (see Box 10).

Box 10: CSIRO Indigenous Research Grants Program⁵⁴

In its first year, the Indigenous Research Grants Program completed 3 grant rounds, approving over 30 applications and allocating \$6 million in funding. An independent review conducted in 2023 found that the program exemplifies best practice for grants where Aboriginal and Torres Strait Islander people are integral as participants and business partners. The review highlighted the program's potential for far-reaching positive impacts on Indigenous science and engagements with CSIRO.

All aspects of the program are Indigenous-led, from design and implementation to assessment and ongoing management.

⁵⁴ The Indigenous Research Grants Program is designed to address priorities raised by Aboriginal and Torres Strait Islander people, to support Indigenous science while simultaneously building the capability of Indigenous researchers. The Indigenous Research Grants are an initiative of the Indigenous Science and Engagement Program (ISEP). Accessed on 31 May 2024, <<https://confluence.csiro.au/display/IRGP/Indigenous+Research+Grant+Program>>.

5 Concluding remarks

This inaugural report on Indigenous collaboration and partnerships *marks the beginning of how we measure and report on our progress in transforming our ways of working to align with Indigenous-led priorities and aspirations.* Aboriginal and Torres Strait Islander people have extraordinary and diverse contributions to make across cultural, socio-economic and scientific domains. This report highlights our commitment to recognising and amplifying these contributions.

Our targeted strategies aim to connect with Aboriginal and Torres Strait Islander partners and deliver meaningful economic, environmental and social impacts through innovation. We are dedicated to collaborating with Australia's First Scientists to develop innovative, sustainable and holistic solutions that address our nation's greatest challenges and create a better future for all.

CSIRO continues to evolve by partnering with Aboriginal and Torres Strait Islander people. These partnerships guide us in using reconciliation as a lens to reflect on our core business, sphere of influence, workforce, relationships and the broader impact of our scientific research. Our experience shows that by listening to and learning from Aboriginal and Torres Strait Islander voices, and prioritising their needs, we can generate large-scale, lasting impacts.

Our commitment to reconciliation also calls for a deeper understanding of our role as Australia's national science agency, transforming the way we work with Aboriginal and Torres Strait Islander partners. We recognise the significant potential of these efforts to benefit all Australians.

Self assessment of our performance helps us evaluate the readiness and capability of our people, client focus, processes, data and technology. This forward-thinking approach encourages us to apply our technical expertise to solve internal challenges, improve governance and enhance transparency in how we drive change. Respectful partnerships with Aboriginal and Torres Strait Islander partners ensure mutual benefits for Indigenous organisations and communities and CSIRO.

As we continue to deliver the benefits of our science and engagement programs, our commitment to collaboration remains strong. We are determined to be a model of sustainable culture and practice, befitting a world-class research organisation working together with Aboriginal and Torres Strait Islander people to advance outcomes through innovative science and technology.

As Australia's national science agency,
CSIRO is solving the greatest
challenges through innovative
science and technology.

CSIRO. Creating a better future
for everyone.

Contact us
1300 363 400
+61 3 9545 2176
csiro.au/contact
csiro.au