# Position Details

## CSIRO Early Research Career (CERC) Postdoctoral Fellowship– CSOF4

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| The following information is for applicants |
| Advertised Job Title | CSIRO Postdoctoral Fellowship in Sustainability Science |
| Job Reference | 87141 |
| Tenure | Specified Term of 3 years Full-time  |
| Salary Range | AU$89,926 to AU$98,504 pa + up to 15.4% superannuation |
| Location(s) | Townsville, QLD |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens,
* Australian Permanent Residents and
* Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible onshore candidates)
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| Position reports to the | Team Leader, Collaborative and Indigenous Science, Sustainability Pathways Program, CSIRO Land and Water |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Pethie.Lyons@csiro.au or 07 4059 5017 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

**CSIRO Early Research Career (CERC) Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant research experience. These Fellowships aim to develop the next generation of future leaders of the innovation system through:

* A differentiated career development program to deliver capability excellence and breadth across all facets of the national innovation system;
* Research training via strategic research and development projects with a clear focus that will deliver real impact through science and engineering excellence;
* An innovative culture supporting the development and demonstration of original thinking and expertise leading to peer-recognition; and
* Opportunities to develop skills and experience in collaborative research teams to effectively work within national and global multi/transdisciplinary and multi-stakeholder environments.

CERC Fellows **are appointed for three years full-time or equivalent.**

The Reef Trust Partnership and the Reef 2050 Plan brings together researchers, government managers, Traditional Owners as First Nations peoples, farmers, fishers and other stakeholders to generate novel and effective recovery pathways for the Great Barrier Reef. Crown-of-Thorns Starfish (COTS) are a key environmental threatening process on the iconic GBR, and ~$20m/year is spent culling COTS to protect key reef assets within the GBR. To decide where these investments will be targeted, the Great Barrier Reef Marine Park Authority annually identifies “high priority locations” for COTS control using advanced digital decision-support tools balancing a range of environmental, economic and social values. As part of this project, the CERC Postdoctoral Fellow will co-develop methods with Traditional Owners to ensure that Traditional Owner values are included in this process. Addressing this social-technological gap will require knowledge collaboration that facilitates the mobilisation of cultural resources for sustainable conservation outcomes and digital tools to enable adaptive decision-making processes and CARE-based data practices. The CERC Fellow will develop the underpinning science to meet this need.

This is an exciting and unique niche of global research need, exploring new approaches across the social-ecological-technological nexus, by: 1) co-developing participatory methods to facilitate the institutional processes necessary for inclusive digital transformation; 2) co-designing digital and social-technical tools to equitably incorporate Indigenous-derived data into national environmental digital decision-making processes; and then 3) implementing them in a real-world high-impact case study with crown-of-thorns starfish. The CERC Fellow will work ethically and in partnership with Traditional Owners for mutual benefit, reciprocity, trust and respect to develop and test new methods that account for their Indigenous knowledge systems and First Nations-led co-design of Reef recovery pathways.

The CERC Postdoctoral Fellow will work with an exciting supervisory team of CSIRO experts in Indigenous collaborative science, and socioecological and pest management modellers, international leaders of Reef-catchment restoration ecology at Central Queensland University, and global leaders in biocultural approaches for conservation practices and policy from the Hawaiʻi Institute of Marine Biology, University of Hawai‘i Mānoa. By the end of the fellowship, the Fellow will be positioned to positioned to become a world leader in the development of social-ecological-technical capability incorporating multiple knowledges in national-scale digital decision-making tools.

### Duties and Key Result Areas

Under the direction of senior research scientists and engineers, this CERC Fellow will:

* + Use participatory methods and co-design approaches to develop digital tools that account for Traditional Owner priorities for COTS control in ways that maintain their ownership and security of their data and knowledge and enable cross institutional processes for inclusive digital transformation in COTS prioritisation;
	+ Carry out innovative research to co-design data governance innovations and digital socio-technical tools to generate collective benefit and equitable outcomes, manage risks and protect Indigenous rights in sharing data;
	+ Based on these co-designed processes and governance arrangements, design and, with colleagues, implement digital tools that can securely represent Traditional Owner values and priorities within the digital prioritisation process of a national environmental management program.
	+ Actively engage with Traditional Owners, Reef Restoration Adaptation Program researchers and key actors of the Great Barrier Reef Foundation to consider governance innovations in environmental management systems and policy;
	+ Carry out ethical research investigations requiring originality, creativity, innovation and mutually respectful partnerships;
	+ Recognise and exploit opportunities for innovation and the generation of new theoretical perspectives
	+ Utilise design thinking methodology to plan and prepare research proposals, and apply non-academic impact methodology to research projects
	+ Record, manage, ensure the security of, and analyse data / information using relevant domain data science techniques.
	+ Proactively undertake development to grow effective researcher capabilities to support career goals.
	+ Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

The CERC Fellow learning, development and training programis developed between the CERC Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellow’s capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:

* Discipline-specific techniques and protocols
* Professional growth
* Project management
* Communication and influencing skills
* Working and collaborating with others

## **Selection Criteria**

#### CSIRO is an Equal Opportunity employer working hard to recruit world-class talent that represents the diversity across our society. As part of our commitment to Aboriginal and Torres Strait Islander employment outcomes, preference will be given to Aboriginal and Torres Strait Islander candidates who meet the role criteria.

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A doctorate (or will shortly satisfy the requirements of a PhD). The doctorate must be in a relevant discipline area, such as co-developed Indigenous research or digital research field such as information technology, or similar.

Please note: To be eligible for this role you must have **no more than 3 years** (full time equivalent) of relevant research experience.

1. A current driver’s licence
2. Experience in working with diverse stakeholders, rightsholders and multiple knowledge systems to identify collaborative solutions to complex, dynamic sustainability problems e.g. biodiversity loss, climate change,
3. High-level cultural competency and abilities to work effectively in relationships of trust and respect with Traditional Owners as First Nations People
4. Experience organising, storing and processing data, including sensitive data, securely.
5. Understanding of environmental management models in sustainability science, and their applications to co-generate policy and solutions.
6. Demonstrated interdisciplinary and transdisciplinary research skills and capacities that transcend scientific disciplines and diverse cultures.
7. High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including the presentation of research outcomes at national and international conferences.
8. A sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.
9. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable**

1. Software development experience
2. Quantitative analysis experience
3. Remain productive, positive and resilient in complex, ambiguous and/or uncertain environments.
4. **The ability to work effectively as part of a multi-disciplinary, potentially regionally dispersed research team, plus the motivation and discipline to carry out autonomous research.**

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

To be appointed to this CERC Fellowship role within CSIRO, candidates will be expected to commence employment by 31 January 2023. Candidates are also required to have **submitted** their doctoral thesis at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4-1 (AU$87,068). Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test- <https://ielts.com.au/>)

**Our value proposition**

We want CERC Fellows to join our world class science, engineering and digital teams to solve big, complex problems that make a real difference to the future of Australia and the world.

You'll get to work with some of the most talented minds in their fields, not just in Australia, but in the world. At CSIRO, we spark off each other, learn from each other, trust each other and collaborate closely to achieve more than we could individually.

Find out more about our CSIRO Early Research Career (CERC) Fellow Experience Employee Value Proposition (EVP) [here](https://www.csiro.au/en/careers/postdoctoral-fellowships).

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Land and Water](https://www.csiro.au/en/Research/LWF%22%20%5Co%20%22Land%20%26%20Water-%20CSIRO%20Website) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted