# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Research Scientist in Quantitative Pest Management (Feral Animal Ecology and Management) |
| Job Reference | 84764 |
| Tenure | Specified Term of 3 years  Full-time |
| Salary Range | AU$102,724 to AU$111,165 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 | All Candidates |
| Position reports to the | Team Leader, Adaptive Biosecurity Management |
| Client Focus – Internal | 30% |
| Client Focus – External | 70% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Jens Froese via email at [Jens.Froese@csiro.au](mailto:Jens.Froese@csiro.au)  *Please do not email your application directly to Jens Froese. Applications received via this method will not be considered.* |
| 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](mailto: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

The role of Research Scientist staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have opportunities for collaborating with other researchers across the research program and CSIRO, building networks, pursuing innovative ideas and developing new research and development opportunities.

The Research Scientist in Quantitative Pest Management will be part of the biosecurity research program of CSIRO’s Health & Biosecurity business unit. This multi-disciplinary program undertakes research to reduce the actual and potential economic, environmental, and social impacts of national priority pests, weeds and diseases of agricultural and environmental concern. As a member of the Adaptive Biosecurity Management team, the Research Scientist will help develop novel methods, tools and digital platforms that enable land managers and policy makers monitor, evaluate, and manage invasive species and other biothreats.

Based in Townsville, this role will conduct scientific research that integrates spatial data, field collected data and remote data-streams to enhance adaptive land management with a focus on invasive species and biosecurity risks. Through contributions to strategic research projects and broad engagement, the Research Scientist will help facilitate the ongoing digital transformation of CSIRO’s research capabilities and Australia’s biosecurity system towards increased resilience and improved outcomes.

The role will initially focus on research that delivers into a large ongoing partnership ([#spacecows](https://news.microsoft.com/en-au/features/spacecows/)) between CSIRO, four Indigenous Land Management organisations (NAILSMA, Aak Puul Ngantam, Mimal Land Management and South Cape York Catchments), universities (James Cook University and Charles Darwin University) and digital technology companies (Kineis, Microsoft). The project aims to develop enhanced economic, cultural, and environmental outcomes through efficient management of large feral vertebrates (buffalo, cattle, pigs) on Indigenous properties in remote Northern Australia. The Research Scientist will help to develop the next generation of land management tools by integrating feral animal tracking, high resolution environmental and anthropogenic data to optimize management activities through space and time. This role will involve working in remote northern Australia with Indigenous ranger groups and other stakeholders. It will also include travel throughout Australia and internationally, requiring occasional extended trips away from home and occasional weekend work.

### Duties and Key Result Areas

Under the direction and/or guidance of senior research scientists and engineers, the Research Scientist in Quantitative Pest Management will:

* Contribute to scientific research that integrates spatial data, field collected data and remotely sensed data-streams to enhance adaptive land management with a focus on invasive species and biosecurity risks.
* Develop analytical pipelines to translate near real-time animal movement data into dynamic models of herd abundance, movement and connectivity through space and time.
* Contribute to the development of land management tools that integrate animal models, environmental, economic and cultural data to support feral animal management strategies particularly on Indigenous owned and managed land in remote northern Australia.
* Work with collaborators and digital technology partners on integrating tools into cutting-edge data management, analytical and delivery platforms.
* Maintain a focus on client needs and the adoption of research outputs and outcomes, including co-development of research products and decision support tools that translate analytical outputs into easily interpreted end products for use by non-scientific stakeholders.
* Participate in planning research projects and assume responsibility for scheduling, leading and completing major parts of projects, including allocating and directing tasks where appropriate.
* Recognise opportunities for innovation and incorporating novel perspectives and/or approaches in the context of existing as well as potential future research directions.
* Work collaboratively as part of multi-disciplinary, regionally dispersed teams to carry out innovative, impactful research of strategic importance to CSIRO.
* Produce scientific papers suitable for publication in high quality international journals and for presentation at national and international conferences, and present or write research reports and communication materials for clients, collaborators and technical/community stakeholders.
* Record, manage, and analyse data/information using relevant domain data science techniques.
* Maintain confidentiality when dealing with commercially or culturally sensitive information.
* Develop and contribute to new, multi-disciplinary research projects, including negotiation and securing of external funding requirements.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

## **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 responses by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **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 change.

## **Selection Criteria**

#### Essential

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

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as Ecology, Ecological Applications, or a relevant area of Statistics and/or Data Science.
2. Proven strong quantitative analytical, statistical and/or machine learning/artificial intelligence skills, combined with an ability to source, interpret and utilise empirical data.
3. Demonstrated experience working with spatiotemporal data and addressing spatially explicit problems in ecology, statistics and/or machine learning/artificial intelligence.
4. Proven ability to lead projects or components of multi-disciplinary projects, demonstrating a client focus and an ability to deliver science-based solutions.
5. Demonstrated strong communication skills, both written and verbal, needed to make research accessible to diverse audiences in constrained time frames, including the ability to publish impactful scientific papers and effectively present research outcomes to clients, collaborators, and technical/community stakeholders.
6. A record of science and/or technological innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations to develop appropriate solutions to research challenges.
7. A current and valid Australian drivers’ licence.

## **Desirable**

1. Experience working with a range of relevant scientific computing languages and software, and high performance and/or cloud computing systems.
2. Experience working with animal movement and behaviour datasets.
3. Experience working within Northern Australian land management systems.

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 Check or equivalent. Please note that people 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).
* The successful candidate will require the willingness and ability to travel throughout Australia and internationally, requiring occasional extended trips away from home and occasional weekend work.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

Find out more about CSIRO [Health and Biosecurity](https://www.csiro.au/en/Research/BF)