# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Scientist - Environmental Data Analyst (Hydrology and Geomorphology) |
| Job Reference | 74628 |
| Tenure | IndefiniteFull-time |
| Salary Range | AU$100,710 to AU$108,985 pa (pro-rata for part-time) + 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 and Australian Permanent Residents
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| Position reports to the | Team Leader Material Fluxes |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Rebecca Bartley via email at Rebecca.Bartley@csiro.au or via text phone +61 427223100 |
| 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. |

### 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 through to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

Undertaking research and development in the Great Barrier Reef (GBR) and the adjacent catchments has, and will continue to be, of high strategic importance for CSIRO. This new position will be part of the Material Fluxes Team, based in Townsville, and primarily focused on research in the GBR catchments. The team has a strong focus on quantifying and evaluating the influence of land management on the environment (including changes in water, soil, terrain and vegetation) and the cost effectiveness of modifying management practices. This team has a strong field instrumentation focus, and this new role will be supporting the analysis and interpretation of data collected from a range of sites at various spatial scales.

The Research Scientist will help lead the integration and translation of field data with remotely sensed products and with spatial models of surface processes. Together these data sets will be integrated into digital workflows and used in multi-scale decision support tools.

In addition to work in the GBR catchments, this role will also contribute to CSIRO Land and Water’s strategic priorities around Digital water and landscapes, to explore data and model reuse, particularly in the context of terrain analysis. This position will work with the Digital Water and Landscapes projects to facilitate, test and support integrated data pipelines arising from multiple sources, and from multiple projects over a range of scales. This will improve CSIRO’s agility in the development and delivery of regional-to-national solutions in landscape management.

### Duties and Key Result Areas

* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Undertake analysis of hydrology and terrain data to support the evaluation of landscape restoration projects over different spatial and temporal scales. Some field data collection or validation may be required.
* Work with multidisciplinary teams to develop workflows that integrate different data pipelines that will underpin CSIRO’s Digital Landscapes and Water Strategic Initiative.
* Address problems promptly and in a constructive manner, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* 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.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed research team to carry out tasks in support of CSIRO’s scientific objectives.
* 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 Geomorphology, Hydrology or Engineering coupled with relevant research experience.
2. Strong background and system understanding of landscape scale terrain analysis and the application and interpretation of terrain data and other data in the context of water, agricultural and ecological resource assessments.
3. Experience in the acquisition, analysis and management of large spatial datasets using a range of programming languages including (but not limited to) GIS, Python and/or R.
4. Experience in applying a range of statistical analysis techniques to field and/or remotely sensed data.
5. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
6. Demonstrated ability to develop and maintain stakeholder relationships, together with strong written and oral communication skills.
7. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
8. Current Class C Driver’s Licence

## **Desirable**

1. Experience in the measurement and interpretation of water quality data including field data collection, laboratory processing, analysis/interpretation and publication.
2. Interest and aptitude in project leadership, staff management and mentoring.
3. Demonstrated ability to communicate complex scientific messages to a range of audiences.
4. 4WD and relevant First Aid experience and training.

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.
* The successful candidate will be required to undertake a pre-employment medical examination prior to commencement.
* The successful candidate must be willing and able to travel domestically and undertake fieldwork.

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* 1. People First
	2. Further Together
	3. Making it Real
	4. Trusted

Find out more about CSIRO [Land and Water](https://www.csiro.au/en/Research/LWF)