Position Details

Research Scientist/Engineer – CSOF 5 or CSOF 6

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| The following information is for applicants |
| Advertised Job Title | Research Scientist/ Engineer – Carbon & Vegetation Modelling |
| Job Reference | 72003  |
| Tenure | IndefiniteFull-time |
| Salary Range | CSOF5 - AU$98,735 to AU$106,848 pa + up to 15.4% superannuationCSOF6 - $113,338 to $132, 811 pa + up to 15.4% Super |
| Location(s) | Canberra or Melbourne preferred (other locations may be considered) |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/NZ Citizens and Australian permanent residents only. |
| Position reports to the | Team Leader – Carbon Cycling & Vegetation Processes Team |
| Client Focus – Internal | 30% |
| Client Focus – External | 70% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Jacqui England via email at jacqui.england@csiro.au  |
| 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 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.

This role will contribute to the area of Natural Capital Accounting, with a focus on working closely with government on carbon dynamics in soils and vegetation to inform policy around emissions reduction and accounting of greenhouse gas emissions. This is a senior position within the team and the role will contribute to a range of projects to develop landscape analytics and decision-making capability based on a core understanding of carbon, water and nutrient cycling in forest and landscape systems and how management of these systems is best influenced to maximize benefits to farmers, communities, and the nation.

The Research Scientist will join the Carbon Cycling & Vegetation Processes team within CSIRO’s Land and Water business unit. This team is primarily based across Canberra and Melbourne, however this role will interact with other teams within the Group who are geographically dispersed throughout Australia.

The role will be appointed at either CSOF 5 or CSOF 6 based on demonstrated relevant experience in relation to the duties/key result areas and required competencies, and selection criteria.

### Duties and Key Result Areas:

* Contribute to and/or lead aspects of scientific projects, including the written and oral communication of results and their implications.
* Undertake research on terrestrial carbon accounting with a focus on data analytics, and contribute to development of the Australian Government’s Full Carbon Accounting Model (FullCAM).
* Conduct research that integrates process-based models with contemporary data streams to enhance industry and government decision making capabilities and capacity for risk assessment.
* Develop/use AI and machine learning technologies for landscape and forestry analytics and decision making.
* Maintain confidentiality when dealing with commercially sensitive information.
* Represent CSIRO externally, including in public forums, with industry or the research sector or with Government.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* 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, communicate research results to clients and the scientific community through oral and written reports and journal papers.
* 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.
* 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, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

**Additional duties and key result areas for appointment at the higher CSOF 6 level**

* Act as a trusted advisor, utilising knowledge of client’s business and understanding of their underlying needs.
* Anticipate industry and/or community needs and market direction through client liaison/networking and identify and adapt quickly to changes.
* Within broad guidelines, use professional expertise, knowledge of other disciplines and research experience/achievement to formulate, develop and complete an approved research program with general direction as to the aims of activities.
* Provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* Undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.

### Required competencies:

**For appointment at CSOF 5**

* **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:** 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 changes.

**For appointment at CSOF 6**

* **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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria**

#### **Essential:**

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as environmental science, vegetation ecology or closely related field.
2. Demonstrated skills in data analytics and mathematical modelling, with proficiency in programming languages such as R, Python, C++, or other relevant programming languages.
3. Demonstrated skills in modelling spatial data and GIS.
4. Good communication and interpersonal skills, including working constructively with colleagues, collaborators and/or clients.
5. A publication history of authorship on scientific papers in peer reviewed journals and/or reports.

## **Desirable:**

1. Demonstrated experience or ability to apply data analytics and mathematic modelling to vegetation dynamics and associated ecosystem-level processes (such as the cycling of nutrients, carbon and/or water).
2. Experience with writing scientific proposals.
3. Capacity and/or interest in the integration of environmental, economic and social aspects of environmental decision making into quantitative models.

#### **For appointment at the higher CSOF 6 level, the below additional criteria will also need to be met:**

#### **Essential:**

1. Demonstrated experience in developing and leading projects and/or activities within larger projects, including effectively managing resources and delivery of project/activity outputs.
2. An emerging national or international reputation and extensive publication record in environmental science or closely related field.
3. Demonstrated ability to develop and maintain stakeholder/collaborator relationships.
4. A record of science innovation and creativity, including the ability and willingness to incorporate novel ideas and approaches into scientific investigations.
5. Proven ability to undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.

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.

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

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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)