# Position Details

## Research Scientist/Engineer – CSOF6/7

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| The following information is for applicants | |
| Advertised Job Title | Integration Modeller |
| Job Reference | 80741 |
| Tenure | Specified Term of 4 years |
| Salary Range | **CSOF6:** AU$117,917 to AU$138,176 pa (pro-rata for part-time) + up to 15.4% superannuation  **CSOF7:** AU$141,949 to AU$157,055 pa (pro-rata for part-time) + up to 15.4% superannuation  \*Applications may be considered across two capability levels and the successful candidate will be appointed at the level commensurate with their skills and experience. |
| Location(s) | Canberra ACT (preferred) or Melbourne VIC (considered) |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader, Environmental Futures |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Russ Wise via email at [russell.wise@csiro.au](mailto:russell.wise@csiro.au) or phone +61 2 6246 4374 |
| 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 area 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 is the national science agency that undertakes research to make life better for Australia and Australians. CSIRO have partnered with the Bureau of Meteorology, Geoscience Australia, and the Australian Bureau of Statistics in creating the newly established Australian Climate Service.

The Australian Climate Service (ACS) was established to address a series of recommendations from the Royal Commission into National Natural Hazard Arrangements, and will be the Commonwealth’s trusted provider of data, information, and knowledge-based services to support the prevention or reduction of disaster risks and to improve preparation, response and recovery from disruptions and disasters due to natural hazards in Australia.

The ACS brings together Australia’s leading climate, natural hazard, and socio-economic information and expertise in a customer-led and mission-focussed national capability.

The ACS has commenced a major 4-year program of work, in which CSIRO will lead a series of customer-oriented projects. The Integration Modeller will support the delivery of this large complex of ACS projects through the building of foundational integration modelling capabilities. The role will interface closely with the Resilience Investment Lead, the Senior Systems Economist, and Digital Lead roles to ensure alignment of the integration modelling approaches with the wider digital tools and platforms being developed.

The role will lead the design and build of frameworks and modelling technologies and capabilities to generate integrated scenarios of climate-hazard-exposure-vulnerability, to underpin (drive) spatial analyses of local, regional or national development trajectories and investment opportunities that may be possible under multiple combinations of policy, planning and financing mechanisms. The role will be responsible for developing approaches to link the dynamics of biophysical hazards (such as fire or flood) in place-based situational contexts, to the economic and investment environment and for developing approaches to evaluate the performance of investments with respect to resilience over time, and under different scenarios.

This role will involve working in inter-disciplinary teams and settings comprised of biophysical, data, social and economic scientists, financial analysts, and a diversity of stakeholders across business, government, and community. The Integration Modeller will lead research to collaboratively develop novel conceptual frameworks and analytical methods and tools to:

* integrate spatial and temporal climate, hazard, biophysical, economic, and social data to inform assessments of place-based (local to regional scale) risks, vulnerabilities, and resilience under scenarios of climate and socio-technical change.
* evaluate performance of options or interventions for disaster recovery, disaster risk reduction and resilience under a range of scenarios based on diverse qualitative and quantitative measures of social, economic, environmental and resilience outcomes.
* inform and support the development and use of participatory systems analysis of disaster risks and leverage points to mitigate these – to inform the design and development of modelling tools and assessment processes.
* support the research team to develop novel approaches to participatory co-design of policies, plans and investment cases amongst government, industry, investors and community.

In this role, the Integration Modeller may also have opportunity to work with and support other aligned projects across CSIRO’s Land and Water Business Unit portfolio of activity due to the substantial and growing demand for evidence-based (quantitative) assessments and projections of changes in biophysical and socio-economic variables under different policies and development choices.

Applications are invited across two job classification levels and the successful candidate will be appointed at the level commensurate with their skills and experience.

### Duties and Key Result Areas:

This role will work with relevant ACS project leads and research teams in CSIRO to:

* Apply expertise and experience of emerging climate, social, environmental and technological opportunities and challenges, along with the needs of relevant government agencies, business and community, to deliver to CSIRO’s ACS research portfolio.
* Add value and make relevant to decision makers the substantial data and digital capabilities being built through the ACS and digital transformation projects.
* Communicate research approaches and results to clients and the scientific community through presentations and written reports, which will include the preparation of documents for publication in scientific journals and commercialisation applications.
* Provide trusted advice to government and industry policy makers, planners and risk assessors and broker knowledge to non-scientific audiences.
* Lead, collaborate, or supervise staff to ensure that research is established and delivered in accordance with the research design and ethical and privacy requirements and to the satisfaction of clients.
* Undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.
* 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 trans-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.

## **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:** 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

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

1. A PhD, or equivalent relevant work experience, in applied, systems-based, qualitative and quantitative applications of integration modelling and analysis.
2. Significant experience working in inter- or trans-disciplinary projects and comfort in working with a mixed public-private sector research team and a wide range of collaborative partners.
3. Demonstrated experience and ability to work within and apply systems thinking or systems-based approaches to research & development and undertake collaborative qualitative systems mapping.
4. Experience using qualitative and quantitative data to inform applied place-based stakeholder research and/or policy and investment decisions of government or industry, incorporating stochastic analysis capabilities within new or existing modelling approaches.
5. Demonstrated experience in engaging, convening and facilitating diverse sets of stakeholders such as communities, government, and business for co-design processes.
6. Ability and willingness to take a constructive learning approach to novel change, adapting at personal and team levels.

## **Desirable:**

1. Understanding and practice of Adaptation Science.
2. Financial or economic systems knowledge.
3. Understanding and experience in data platforms, data technologies, data socio-technical architectures.

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.

## **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:

* 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)

Find out more about CSIRO’s research on [Climate and Disaster Resilience](https://research.csiro.au/dsp/climate-and-disaster-resilience/) and [Enabling Resilience Investment](https://research.csiro.au/enabling-resilience-investment/)

Find out more about the [Australian Climate Service](https://www.acs.gov.au/)