# Position Details

## Research Scientist/Engineer – CSOF6/7

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| The following information is for applicants | |
| Advertised Job Title | Senior Quantitative Systems Economist |
| Job Reference | 80781 |
| 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, Adaptation Pathways and Social Transitions |
| 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 Senior Quantitative Systems Economist will support the delivery of two projects within this large complex of ACS projects:

* The Resilience Investment Assessment Project where the objectives are to further develop scalable assessment, engagement and decision-support tools, processes and guidance to support the allocation of capital to investments that are resilient and suited to a changing climate; and begin to address the absence in foundational socio-technical architectures (data platforms and supply chains; ethical, legal, and social enablers) required to underpin a national resilience investment environment. More information on this work is available at: [Enabling Resilience Investment (csiro.au)](https://research.csiro.au/enabling-resilience-investment/)
* The Disaster Consequence Project with objectives to support more effective and coordinated response, recovery, preparedness, and broader disaster risk reduction (DRR) policy, program, and decision making through the improved, production, exchange and use of timely disaster impact and consequence data among Commonwealth and State/Territory and other actors across the disaster continuum. This will involve improving access to and integration of data that is currently collected and exploring the use of innovative solutions to addressing data, information and knowledge gaps.

The Senior Quantitative Systems Economist role will focus on developing approaches to assess the wider consequences for the economy that will permeate as a result of resilience investment decisions taken in a particular place. The role will develop approaches to factoring in systems perspectives and uncertainty into resilience investment assessments, combining qualitative and quantitative approaches.

This role will involve working in inter-disciplinary teams comprised of biophysical, data and social scientists and a diversity of stakeholders across business, government, community, and research to collaboratively develop conceptual frameworks and analytical methods and tools to:

• build an understanding of how economic activity can be affected, transmit or mediate climate shocks (e.g., identifying and assessing issues such as contagion, supply chain shocks, and regional social and economic diversity) across geographical or jurisdictional areas and government or private sector functions such as health- aged- and child-care, utilities, insurance, conservation, and finance;

• investigate and develop scalable concepts and methods for measuring economic, social and financial performance of investments/options/regions under scenarios of climate and disaster risk (e.g., related to quality of life and future wellbeing such as opportunity, equality, social function, jobs, income, and community resilience);

• assess value creation opportunities associated with disaster risk reduction and resilience building - underpinned by qualitative and quantitative analyses of gross value-added, direct and indirect benefits (e.g., social, natural and economic), and the impact of non-financial measures; and

• support the development of novel approaches to risk and resilience assessment and stakeholder engagement and support the co-design of government, industry or organisational policies, plans or funding decisions.

The role will be based within CSIRO Land & Water (L&W) which houses much of CSIRO’s integrated systems research capability that provides the information and technologies required by government, industry, and the Australian and international communities to protect, restore, and manage natural and built environments. In this role, the Senior Quantitative Systems Economist may also have opportunity to work with and support other aligned projects across CSIRO’s Land and Water Business Unit portfolio of activity.

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 business development officers in CSIRO to:

* Act as a trusted advisor, utilising knowledge of the complexity of the emerging climate, social, environmental, and technological opportunities, and challenges along with the needs of relevant government agencies, business, and community.
* Use professional expertise, diverse knowledge types (experiential, scientific, traditional), and research experience to formulate, develop and complete an approved applied research program aligned with the Resilience Investment Assessment project and the Disaster Consequence project under the ACS.
* 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 advice to organisational or government policy makers and planners and transfer 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.
* Anticipate and pre-emptively adapt to industry, government, and/or community needs and market direction through client liaison/networking and understanding of global and local trends
* 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 applications of quantitative economic modelling and analysis (e.g., ecological economics, sustainability economics, institutional economics).
2. Significant experience working in inter- or trans-disciplinary projects and demonstrated ability to apply the theory and practice of inter- and transdisciplinary science.
3. Demonstrated experience and ability to work within and apply systems thinking or systems-based approaches to research and development and undertake collaborative qualitative systems mapping.
4. Demonstrated experience and ability to develop quantitative economic models that integrate with biophysical, social or financial models/data.
5. Ability and willingness to take a constructive learning approach to novel change, adapting at personal and team levels.
6. High level interpersonal skills including a capacity to deal with complexity, ambiguity, rapidly changing priorities and demands, tensions and conflicts, in line with positive team values, cultures and behaviours.

## **Desirable:**

1. Demonstrated experience and ability in engaging, convening and facilitating diverse sets of stakeholders including communities, government, and business.
2. Understanding and practice of Adaptation Science.
3. Financial market knowledge such as funding and financing approaches, different types of investment /investors.
4. 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/)