# Position Description

## Research Scientist/Engineer – CSOF5/6

The following information is for applicants

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| Advertised Job Title**:** | Ecosystem/Epidemiological Modeller |
| Job Reference: | 59998 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | * All Candidates
 |
| Percentage of Client Focus - Internal: | 30% |
| Percentage of Client Focus - External: | 70% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries  | If after reading the position details above you require more information please contact: **Beth Fulton** via email: Beth.Fulton@csiro.au |
| Contact Details For Applying | Call 1300 984 220 or email careers.online@csiro.au.  |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon  |

## Role Overview:

You will work in a team conducting research into ecosystem-based management of the coastal and offshore waters of Australia in relation to activities such as fishing, energy, mining, tourism, environmental conservation, and urban and rural development.

The approach is based on a scientific understanding of the functioning and dynamics of ecological systems and the interactions of multiple human activities within them. It requires a thorough understanding of marine ecological modelling, model uncertainty and modern approaches to the science-management interface. The work will include: collation and analysis of spatial and temporal data (biological primarily, but potentially also economic and social); modelling of ecological and socioecological processes; assisting with multicomponent marine risk assessments with a particular focus on ecological processes (with epidemiological and contaminant uptake and impact related processes an area of particular interest) and development and implementation of complex marine ecosystem models.

Play a key role in the development of a strong program of research within a multi-disciplinary group of about 30 scientists working to support the sustainable use of Australia's marine resources. You will be required to travel, teach/supervise students and also be responsible for the development and leadership of projects including interactions with clients and relevant policy makers in the climate and natural resource management sectors.

## Duties and Key Result Areas:

* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* 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.
* Undertake in experimental and/or observational research activities, often requiring the supervision and/or training of others to ensure experiments are established in accordance with research design, or as required.
* 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 plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

**Additional responsibilities for CSOF6 appointment:**

* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* As opportunities arise take on new leadership roles – both of science projects but also team and line management roles
* Represent the CSIRO on stakeholder and expertise based panels and advisory committees

## Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **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.**
6. **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.

## Selection Criteria:

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

**Essential Criteria for CSOF5 and CSOF6 appointment**

1. A doctorate and or equivalent postgraduate research experience in a relevant discipline area, such multispecies and ecosystem modelling, quantitative ecology, empirical process modelling, epidemiological modelling
2. Demonstrated experience in formulating, implementing and applying models of aquatic ecosystems, including trophic and biophysical interactions in a spatially-explicit context***.***
3. Understanding of ecological processes in marine environments and/or social and behavioural drivers of human behaviour (at individual, group or institutional scales)
4. Strong written and oral communication skills including the ability to interact with a broad range of audience types (form lay people, to regulators, policy makers and scientific audiences), publish research results, prepare reports and present the results of scientific investigations at national and international conferences and stakeholder meetings.
5. A demonstrated record of publication in quality, peer reviewed journals.

**Additional Essential Criteria for CSOF6 appointment**

1. Substantial research experience in formulating, implementing and applying ecosystem or epidemiological models, with evidence of leading projects or team work in this area.
2. Significant demonstration of experience in the initiation of original research work and development of innovative approaches to research problems, including drawing together the information sources required for assembling ecological, ecosystem or epidemiological models.
3. Demonstrated experience with securing research funding and working with stakeholders to shape proposals and jointly developed work programs.
4. Extensive record of publication in quality, peer reviewed journals and/or the grey literature (i.e. major reports to recognised regulatory or international bodies that further health, disease or pathogen control, sustainability, conservation or resource management).

## Desirable Criteria:

1. An appreciation of the principles of resilience and ecosystem-based management and knowledge of Australia’s marine and estuarine ecosystems.
2. Evidence of the development of empirical models and/or epidemiological models.

## Special Requirements:

Appointment to this role may be subject to conditions including security/national police/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents 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).- <https://ielts.com.au/>

## About CSIRO:

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Oceans and Atmosphere](https://www.csiro.au/en/Research/OandA)

[Marine Resources and Industries](https://www.csiro.au/en/Research/OandA/Areas/Marine-resources-and-industries) provides scientific knowledge and tools to support sustainable development of Australia’s marine resources, including mitigation of environmental impacts and conservation of marine biodiversity. The science deals with interactions across all sectors, in particular the interactions between the oil and gas, seabed infrastructure, fisheries and conservation sector.