



Australian Government

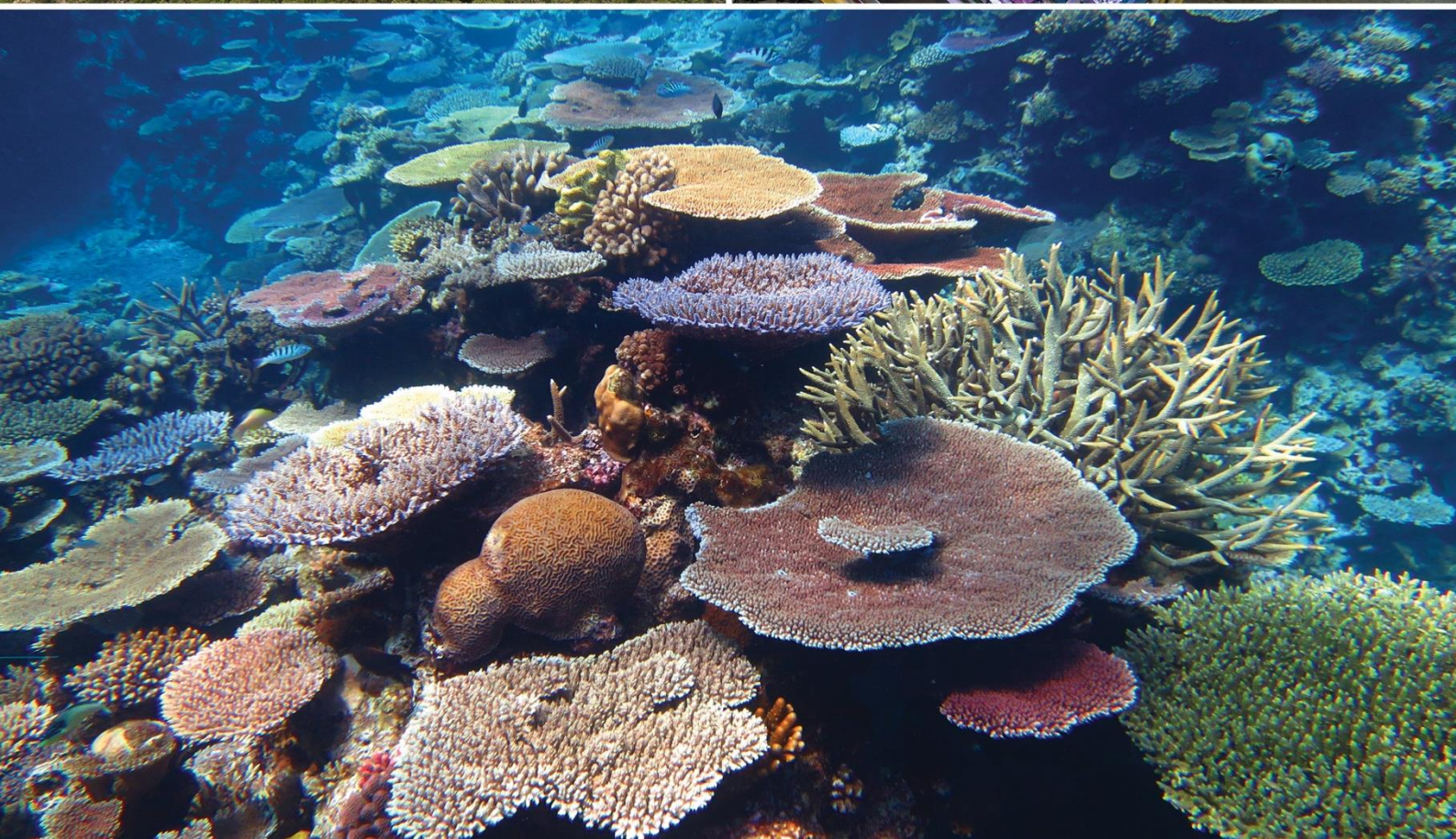


AUSTRALIAN INSTITUTE  
OF MARINE SCIENCE

RESEARCH SCIENTIST – ECOLOGICAL  
STATISTICIAN

KNOWLEDGE SYSTEMS TEAM

CANDIDATE INFORMATION PACK





## CONTENTS

About AIMS	3
About Knowledge Systems team	4
About our Research Scientist – Ecological Statistician role	5
How to apply	6
Key Selection Criteria	7
Position Description	8
About Townsville, Darwin & Perth	12



AIMS was awarded [Athena Swan Bronze status](#) in 2020 by the [Science in Australia Gender Equity \(SAGE\)](#) program. This award recognises AIMS' commitment to improving gender equity, diversity and inclusion in STEMM disciplines.

*The Australian Institute of Marine Science acknowledges the Traditional Owners of the land and sea on which we work. We recognise the unique relationships and enduring cultural and spiritual connection that Aboriginal and Torres Strait Islander people have to land and sea, and pay our respects to Elders past, present and future.*

**Photographic credit:** Shaun Hahn, Joe Gioffre, Christian Miller, Steve Clarke, Christian Miller, Chris Brunner, Nick Thake, David Deeley

# ABOUT AIMS

The Australian Institute of Marine Science is a corporate Commonwealth entity established under the [Australian Institute of Marine Science Act 1972](#) (AIMS Act). As Australia's tropical marine research agency, it is [our mission](#) to provide the research and knowledge of Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management and protection of its unique ecosystems.

To accomplish [our mission](#), AIMS delivers independent science to help realise three key long-term impacts for the nation:

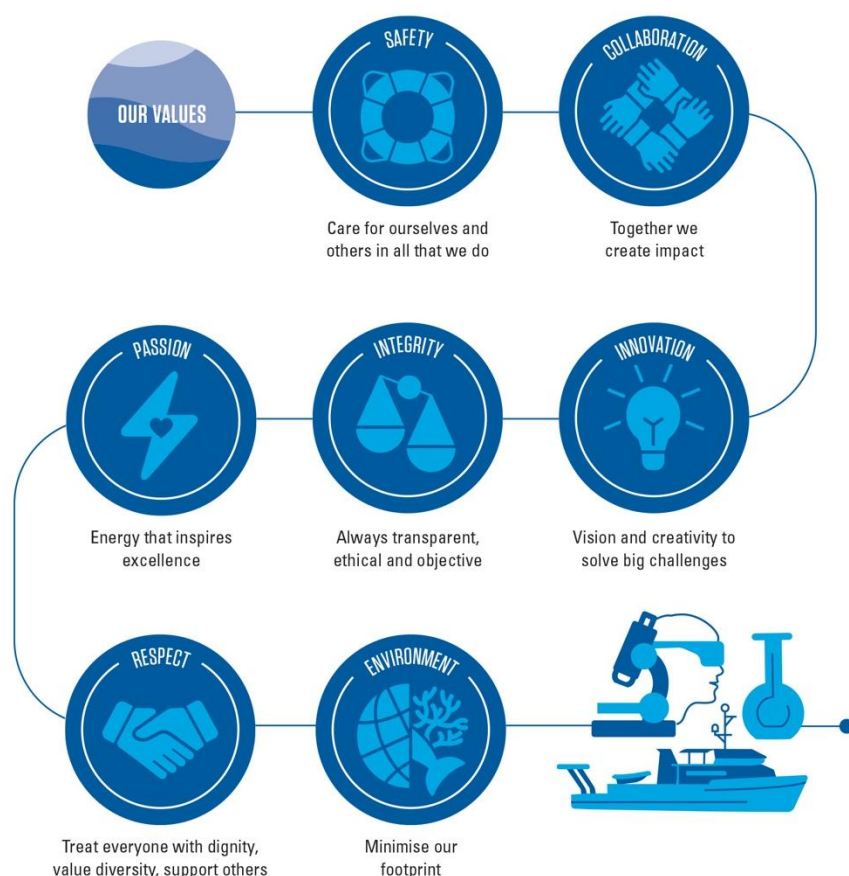
- Improve the health and resilience of marine and coastal ecosystems across northern Australia.
- Create economic, social and environmental net benefits for marine industries and coastal communities.
- Protect coral reefs and other tropical marine environments from the effects of climate change.

Our research is focused on the priorities of our stakeholders, including Commonwealth, state and territory governments, industry and Traditional Owners. Our research continues to:

- Underpin Australia's environmental management of the Great Barrier Reef (GBR) to ensure that this World Heritage Area remains healthy and resilient.
- Support the sustainable development of coastal industries and ports across northern Australia.
- Provide the environmental baselines and condition and risk assessments required for current and future resource and industrial developments in Northern Australia.

At AIMS, [the way we work](#) guides our team members' on their collective journey towards the successful delivery of our [AIMS Strategy 2025](#) targets.

## THE WAY WE WORK





# ABOUT RESEARCH SERVICES PROGRAM'S KNOWLEDGE SYSTEMS TEAM

## **The Knowledge Systems Team**

The provision of access to, and the innovative presentation of scientific data are fundamental mechanisms by which AIMS provides value to stakeholders and the community. Further, in an age when environmental datasets can be extraordinarily large, complex and/or expensive, it is critical to be able to readily access and integrate datasets and derived models to deliver knowledge that supports evidence-based decision making. The Knowledge Systems team focuses on developing systems and platforms that facilitate ready access to environmental information and data from a broad range of data providers to support researchers and environmental managers. These systems focus on capturing and curating research project data, processing and visualising model data and automating data analysis. The team also provides data science and statistical analysis services to AIMS projects, enhancing the quality of the science delivered by AIMS.

## **Science to help tropical environment and Australians thrive**

Within the Knowledge Systems team, the growing team of Statisticians works closely with all Programs and research teams at AIMS, developing a dynamic and evolving portfolio of analysis and collaborations (internal and external). Currently, the team of Statisticians at AIMS is working towards:

- driving the synthesis of coral reef health and their ecological trends in Australia and internationally
- enhancing AIMS' capacity to design long-term monitoring programs in multiple marine tropical environments
- developing R packages to facilitate access to statistical models and internal datasets
- teaching statistics through some of our partner Universities (JCU and UWA)
- providing statistical assistance to Indigenous Partnership programs aimed at empowering Indigenous Australians to monitor their sea country



# ABOUT OUR RESEARCH SCIENTIST - ECOLOGICAL STATISTICIAN POSITION

## About this Opportunity

You will contribute to internationally recognised marine research by applying your advanced skills in experimental design and ecological statistics to the solution of complex problems of marine ecology, biodiversity and ecosystem health in a dynamic and changing environment. You will manage a portfolio of tasks including the analysis and interpretation of complex experimental, survey, and/or monitoring data and will provide statistical advice to colleagues on the design of experiments, analysis of data and use of statistical software. You will also collaborate with colleagues to produce scientific reports, papers and presentations.

## About you

You will have a PhD in science, or a related discipline, on a topic demonstrating the application of quantitative skills to ecological data. You will have experience analysing complex data sets, including time series and spatial data and be able to demonstrate:

- Sound and demonstrated theoretical and practical knowledge of both Frequentist and Bayesian statistical techniques
- Proficiency in using statistical software R or python
- Demonstrated experience with techniques to support reproducible research workflows
- Superior communication skills for presenting science verbally and in peer-reviewed literature
- The ability to work collaboratively in a team environment with professional and technical staff

NB: Non-Australian Citizens must hold an appropriate Visa with working entitlements that allows paid employment with AIMS for the term of the appointment, depending on the [Department of Home Affairs](#) current policies.

If, after reviewing the position description (refer pages 8 - 10), you believe that your qualifications, experience and professional capabilities will enable you to successfully deliver the position responsibilities, we would be very interested in hearing from you.

**Apply now** and join a world leading organisation with attractive working conditions which are detailed in our [Enterprise Agreement](#). The successful candidate for this exciting opportunity will be rewarded with:

- AIMS AOF Level 5 salary (\$109,976 to \$120,564 per annum) plus 15.4% superannuation
- Free Onsite Gym (in Townsville) and Optional Fitness passport
- 9-day fortnight
- Flexible Work Arrangements considered (including tele-working where possible)
- Generous leave provisions
- Full-time, 5-year Fixed Term opportunity
- Located in either: Townsville (Qld), Darwin (NT) or Perth (WA). Relocation Assistance available





# HOW TO APPLY

Your application submission for our Research Scientist – Ecological Statistician opportunity should include the following documentation:

- Current Resume (including the contact details detail for two current referees);
- Document addressing the Key Selection Criteria (refer to page 7) within the scope of the position description (refer to page 8-10); and
- A short cover letter.

**NB:** Our preference is that you include a list of your qualifications, publications, certificates and/or licences in your resume. Do not attach these documents to your application as these will not be provided to the selection panel.

**Shortlisted applicants** may be asked to complete a Personal Outlook Analysis Questionnaire using the Birkman Method.

**How to Apply:** Please submit your application via our [website](https://aims.gov.au) (aims.gov.au).

Further information on the application process and tips for addressing Selection Criteria is available in our [Recruitment Application Guide](#).

**Closing Date:** WEDNESDAY, 17 AUGUST 2022 (midnight, AEST).

**Recruitment Contact:** Position enquiries can be directed Dr Diego Barneche at [d.barneche@aims.gov.au](mailto:d.barneche@aims.gov.au)

**NB:** Applicant survey: All applicants will be invited to complete a voluntary survey after the vacancy closing date. Your responses to this survey do not form part of your application for this position. Further information about the purpose of this survey will be provided to you in the invitation.



# KEY SELECTION CRITERIA

Your application submission should address the following Selection Criteria. Please address each Selection Criteria in a separate paragraph (maximum 250 words per criteria) and in a single document. The selection criteria and your CV are the documents against which we assess your suitability for the position.

Your responses to the following Key Selection Criteria must evidence your suitability for this exciting opportunity within the scope of the position description (pages 8-10).

## Essential

- PhD in applied mathematics or statistics, quantitative ecology or on a topic demonstrating the application of mathematical and quantitative skills to ecological data
- Sound and demonstrable theoretical and practical knowledge of both Frequentist and Bayesian statistical techniques
- Demonstrated knowledge of the design of experiments and longitudinal studies
- Demonstrated experience in analysing complex data sets, including time series and spatial data
- Demonstrated experience with techniques to support reproducible research workflows in R or python
- Superior communication skills with proven ability at presenting science verbally and in the peer-reviewed literature
- Sound interpersonal skills with the ability to work successfully in a team environment, to collaborate with professional and technical staff and to foster an atmosphere of innovation, creativity, and excellence among others
- Personal initiative and the ability to work to deadlines
- Awareness of Occupational Health and Safety issues and a knowledge of, and commitment to, the principles of Equal Employment Opportunity

## Desirable

- Experience in project management with ability to deliver to external stakeholders in a timely and professional manner



# POSITION DESCRIPTION:

## RESEARCH SCIENTIST – ECOLOGICAL STATISTICS

<b>Team Membership:</b>	Knowledge Systems (6301)								
<b>Program:</b>	Research Services (6001)								
<b>Primary Location:</b>	Townsville, Perth or Darwin								
<b>Direct Supervisor:</b>	Research Scientist – Ecological Statistician (21185)								
<b>Position Classification:</b>	AOF Level 5								
<b>Functional Area:</b>	Research Scientist/Engineer								
<b>Position Summary:</b>	Contribute to nationally and internationally recognised marine research by applying advanced skills in applied mathematics, experimental design and biostatistics to the solution of complex problems of marine ecology, biodiversity and ecosystem health in a dynamic and changing environment.								
<b>Position Responsibilities:</b>	<p>Working under limited direction, this position will:</p> <ul style="list-style-type: none"> <li>• Manage a portfolio of tasks generally described as “ecological analysis and synthesis” with the tasks and roles to be defined by the Research Program Director but clearly including the analysis and interpretation of complex experimental, survey, and/or monitoring data.</li> <li>• Contribute to the design of research and monitoring projects and, in collaboration with other team members, produce quality scientific papers, technical reports and oral presentations.</li> <li>• Provide occasional quantitative advice to colleagues on the application of mathematical approaches to ecological questions including but not limited to population and community mechanistic and statistical modeling design of experiments and longitudinal studies, analysis of data, and the use of statistical software.</li> <li>• Develop innovative research methods and computational tools applicable to ecological studies of marine ecology, biodiversity, water quality or climate change.</li> <li>• Comply with AIMS’ workplace safety policies and procedures to ensure a safe workplace.</li> <li>• Comply with AIMS’ Intellectual Property policies and procedures to ensure AIMS intellectual assets are captured, managed, and protected.</li> <li>• Comply with AIMS’ Code of Conduct ensuring the standards of conduct required of an AIMS staff member are upheld.</li> </ul> <p>Adhere to, uphold, and demonstrate the AIMS values.</p>								
<b>Key Responsibilities and Performance Standards</b>									
<b>Science Outputs:</b>	<p>As lead or co-author, make scientific presentations, produce scientific papers for international refereed journals, and assist in the writing of reports to meet milestone deadlines.</p> <p>Advise colleagues on aspects of sampling and experimental design.</p>								
<b>Occupational Health &amp; Safety:</b>	<p>Comply with AIMS’ workplace safety policies and procedures to ensure a safe workplace.</p> <p>In line with AIMS’ Health and Safety Policy policies and procedures, successfully participate in Manual Task (Functional) Assessments and Fit for Work medical assessments as required.</p> <p>Minimum functional requirements:</p> <table border="1"> <tr> <td>Maximum lift expected (5kg, 10kg, 25 kg)</td><td>10kg</td></tr> <tr> <td>% role walking</td><td>5%</td></tr> <tr> <td>% role sitting</td><td>80%</td></tr> <tr> <td>% role standing</td><td>15%</td></tr> </table>	Maximum lift expected (5kg, 10kg, 25 kg)	10kg	% role walking	5%	% role sitting	80%	% role standing	15%
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% role walking	5%								
% role sitting	80%								
% role standing	15%								



## ABOUT THE LOCATIONS

	% role diving	0%
	Off-shore, remote location diving for extended periods of time.	No
	Required to work in confined spaces (including marine vessels)	No
	<p><i>Darwin or Perth location</i> - It is a requirement of this role that you are and remain fully vaccinated against COVID-19. Please note the sighting of proof of vaccination will be required as a pre commencement requirement.</p> <p><i>Townsville location</i> - AIMS strongly encourages all employees to be fully vaccinated against COVID-19. Whilst it is not currently a mandatory requirement for this role, AIMS reserves the right to review its position and policy on mandatory vaccinations. It may therefore become a mandatory requirement for this role in the future.</p> <p>Identify workplace hazards and take corrective action with your supervisor's guidance.</p> <p>Ensure visitors and staff for which you are responsible have completed the necessary OH&amp;S inductions.</p>	
<b>Intellectual Assets:</b>	Ensure compliance with AIMS' Intellectual Property policies procedures and guidelines to ensure AIMS' intellectual assets are appropriately protected and managed.	
<b>Delegations:</b>	<p>In line with <u>Financial and Contract Delegation Policy</u>, which includes authorisation levels for Financial, Enterprise Agreement (supervisory), HS&amp;E and General Administrative activities.</p> <p>Performance Management: Complete performance planning and evaluation annually.</p>	
<b>Teamwork/supervisory:</b>	<p>Direct Reports: 0</p> <p>To work as a member of a multi-disciplinary team that values diversity while ensuring the achievement of AIMS' goals and objectives.</p>	
<b>External Customer, Partner, Collaborator and Stakeholder Requirements:</b>	Contribute to building and maintaining positive relationships with all collaborators and end users. Respond to enquiries and resolve issues raised by external stakeholders. Communicate scientific results to external stakeholders	
<b>Internal Organisational relationships:</b>	<p>Reports to:</p> <p>First Level Supervisor: Research Scientist – Ecological Statistician (21185)</p> <p>Next Level Supervisor: Biostatistician (21113)</p> <p>Develop positive work relationships with other AIMS staff. Communicate results to internal stakeholders.</p>	
<b>Financial responsibilities and accountabilities:</b>	<p>Contribute to positional budget requirements.</p> <p>Manage AIMS funds in a responsible manner and within delegation.</p> <p>Comply with AIMS' <u>Fraud Prevention Plan</u> ensuring the standards of conduct and ethical behaviour required of an AIMS staff member are upheld and that suspected fraudulent activity is prevented and/or reported.</p>	
<b>Innovation, problem solving and continuous improvement responsibilities:</b>	<p>Initiate and progress research characterised by innovation, creativity, quality, and timely delivery of research goals.</p> <p>Assist in the improvement of the day-to-day operations, systems and processes associated with AIMS research.</p>	
<b>Planning responsibilities:</b>	<p>Performance Management:</p> <ul style="list-style-type: none"> <li>Plan work activities to ensure the achievement of timelines.</li> <li>Ensure timely and accurate completion of required tasks.</li> <li>Actively participate in own personal performance planning and evaluation.</li> <li>Successfully participate in the AIMS annual Performance and Development program.</li> </ul> <p>Contribute positional requirements to operational planning.</p> <p>Recruitment: Identify needs and recommend to supervisor.</p>	

## ABOUT THE LOCATIONS

<b>Communication responsibilities:</b>	Effectively communicate with team members, visitors and other staff to achieve goals. Disseminate data and information to internal and external clients in a style appropriate to the audience and context. Support AIMS social media presence Participate in, and support, AIMS communications as requested.
<b>Skills and Knowledge</b>	
<b>Essential Skills and Knowledge:</b>	Knowledge of statistics (both Frequentist and Bayesian) and other quantitative skills appropriate for the analysis of ecological and spatial data including population, community and ecosystem modeling, as well as the design of experiments, surveys, and longitudinal studies. Demonstrated experience with techniques to support reproducible research workflows in R or python Ability to supervise staff and students and collaborate with others in the conduct of research and the production of technical reports and scientific papers.
<b>Desirable Skills and Knowledge:</b>	Project and time management skills. Advanced knowledge of marine ecology.
<b>Qualifications and Experience</b>	
<b>Essential Qualifications and Experience:</b>	PhD in applied mathematics or statistics, quantitative ecology or on a topic demonstrating the application of mathematical and quantitative skills to ecological data. Sound and demonstrable theoretical and practical knowledge of both Frequentist and Bayesian statistical techniques. Demonstrated knowledge of the design of experiments and longitudinal studies. Demonstrated experience in analysing complex data sets, including time series and spatial data. Demonstrated experience with techniques to support reproducible research workflows in R or python. Superior communication skills with proven ability at presenting science verbally and in the peer-reviewed literature. Sound interpersonal skills with the ability to work successfully in a team environment, to collaborate with professional and technical staff and to foster an atmosphere of innovation, creativity, and excellence among others.
<b>Desirable Qualifications and Experience:</b>	Experience in project management with ability to deliver to external stakeholders in a timely and professional manner.
<b>Technology and Equipment</b>	
<b>Technology &amp; Equipment Used:</b>	Networked personal computer and general office equipment. Microsoft Project, Microsoft 365 applications
<b>Special Requirements</b>	
<b>Other Special Requirements</b>	Current QLD C Class Open Drivers Licence (or equivalent) or the willingness to obtain. Successfully participate in Manual Task (Functional) Assessments and Fit for Work medical assessments, as required. Strong commitment to and sound knowledge of principles and practices of Occupational Health and Safety and Workplace Diversity and Inclusion Non-Australian Citizens must hold an appropriate Visa with working entitlements that allows paid employment with AIMS for the term of the appointment, depending on the relevant <u>Department of Home Affairs</u> policies.



# ABOUT THE LOCATIONS

## Townsville (QLD) Facility

AIMS headquarters is south of Townsville, Queensland at Cape Ferguson. We are about 50 km from Townsville's CBD, is an international landmark in tropical marine science and home to the [National Sea Simulator \(SeaSim\)](#). We are adjacent to the centre of the Great Barrier Reef and surrounded by a 207-hectare national park and marine reserve. The area is free from development, is biosecure and has access to clean seawater and a protected harbour.

### Finding us ([link to our Website page](#)):

Head south from Townsville on the Bruce Highway (A1). Approximately 37 km from the city centre, turn left at the signposted turn-off to AIMS, onto Cape Cleveland Rd. Follow this road for a further 16 km until you arrive at the Institute.

Please note there is **no public transport** to the Institute however employee commuter car arrangements are detailed in our [Enterprise Agreement](#) (Part I – Commuting Arrangements – Cape Ferguson).

### Living in Townsville

Townsville is a vibrant and rapidly growing city in North Queensland. Surrounded by the Great Barrier Reef, numerous coastal islands, the Wet Tropics rainforest and the outback, and less than two hours by plane from Brisbane, the region experiences a warm tropical climate with more than 300 days of sunshine each year.

A diverse economic base with strengths in government administration, health, defence, education, marine science, natural resource management, manufacturing and mining, ports and shipping and agriculture supports a current population of over 190,000 people.

Boasting a relaxed lifestyle, residents of Townsville enjoy access to world class educational, medical, sporting and recreational facilities. Townsville attracts high quality national and international festivals, cultural and sporting events.

For further information visit [www.townsville.qld.gov.au](http://www.townsville.qld.gov.au).

## Darwin (NT) Facility

Our research in Darwin takes place at the Arafura Timor Research Facility (ATRF), only 15 minutes' drive from the city centre, within the boundaries of the North Australia campus of the Australian National University and adjacent to the Charles Darwin University.

The Arafura–Timor region, in which Darwin is a scientific and commercial hub, is linguistically, culturally and biologically diverse, which provides valuable links between the biophysical and social sciences.

### Finding us:

From the Darwin CBD, follow the Stuart Highway for several kilometres, then turn left onto Bagot Road and head towards Casuarina. Stay on Bagot Road until it becomes Trower Road, turn left onto Dripstone Road, and then right into Ellengowan Road at the roundabout in front of Charles Darwin University.

The sign at the front of the complex reads: 'North Australia Research Unit and Arafura Timor Research Facility'. There is reserved car parking within.

There is no direct public transport to the office.

# ABOUT THE LOCATIONS

## Living in Darwin

Darwin is a modern capital city highly valued by its diverse and highly multicultural population, with a strong position in business and industry.

Darwin has evolved from its days as a laid back frontier town and while it still retains its relaxed charm, it has become a sophisticated city. Many visitors are surprised to find that it has accommodation, eateries, clubs, pubs, museums and other amenities that are equal to what you'll find in the southern cities.

Our city is both modern and multicultural, boasting a population made up of people from more than 60 nationalities and 70 different ethnic backgrounds. The city is characterised by its many exciting cultural festivals and weekly food and craft markets.

For further information visit [City of Darwin Website](#).

## Perth, Western Australia

Perth is a vibrant city and an exciting hub located on the west coast of Australia. Perth sits along the Swan River and is surrounded by unique landscapes, from Australian bushland in the west to rolling coastline 12 km east of the city. Perth is a fast-developing region, with a population of over 2 million people. Perth's diverse economic base is supported by key industries including Professional, Scientific and Technical Services (the largest industry employer), Government and Administration, Resources, and Health. Perth offers an array of opportunities for residents including exploration of diverse outdoor spaces, world-class national and international cultural and sporting events, architectural and historical attractions, and access to high-quality health, entertainment, medical, educational and sporting facilities. Perth is also recognised as the sunniest capital city in Australia.

## AIMS Perth Site

AIMS in Perth is co-located within the Indian Ocean Marine Research Centre (IOMRC) at the University of Western Australia (UWA)'s Crawley campus. You can reach the UWA campus by heading south-west from Perth CBD on Mounts Bay Rd. Our office is on Level 3 of the Indian Ocean Marine Research Centre, on Fairway. There are several bus routes to the campus:

- Bus 97, which leaves from Subiaco train station
- Buses 102 and 107, which leave from the Wellington St train station in the CBD, and
- Bus 950 travelling from Perth City to the UWA campus.

All these routes stop at UWA near the corner of Stirling Hwy and Fairway.

More information: [www.perth.wa.gov.au](http://www.perth.wa.gov.au)

