

IMAS Strategy 2025–30

UNIVERSITY of TASMANIA



Institute for Marine and Antarctic Studies





Our Vision

A globally sustainable future where Tasmania is positioned as a leading example of ocean science and responsible management of marine and polar environments.

Statement of Purpose

Address critical sustainability challenges affecting the temperate and Southern Oceans and the Antarctic region by generating knowledge and capabilities to:

- 1. Conserve Australia's temperate marine ecosystems,**
- 2. Protect the broader Southern Ocean and Antarctica, and**
- 3. Support the sustainable management and low-impact production of seafood-based protein.**

Our focus is on understanding and informing evidence-based responses to the environmental changes and emerging challenges in these regions.

◀ Cover: A diver measuring giant kelp to monitor their growth, survival and reproduction.

◀ The Institute for Marine and Antarctic Studies (IMAS) building on Hobart's waterfront.

Challenges

- Our marine environments are in crisis from the human pressures of climate change, over-exploitation and pollution. This threatens the sustainability of marine ecosystems, the livelihood and wellbeing of people as well as the food supply and economic future of Australia and our region.
- A globally sustainable world requires a rapid transition to net zero carbon emissions and regeneration of our environment and resources.
- Antarctica controls the global climate and is key to future sea level rise. There is critical uncertainty about the rate of accelerating Antarctic ice loss, and its impacts on temperate marine and polar ecosystems.
- Future-proofing sustainable seafood production from both wild fisheries and aquaculture in the face of climate change and growing demand requires the development of innovative, science-based solutions. This will ensure long-term food security and quality, drive economic prosperity, and maximise benefits to communities, while minimising environmental impacts and safeguarding the health of marine ecosystems.

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Our Context

The Tasmanian marine estate is a global hotspot for ocean warming. It is large enough to be very significant and small enough to be able to pilot interventions at scale. It also represents a single jurisdiction to support integrated ocean management.

Hobart is home to Australia's Antarctic workforce and one of only five Antarctic Gateway cities. This unique setting plays a critical role in facilitating scientific research and collaboration across multiple national and international organisations and in raising public awareness of the Southern Ocean and Antarctic region. It is also an important geo-strategic and economic driver for Tasmania and Australia more broadly.

Our research is globally leading. We bring unique features to working on these challenges in the marine and Antarctic context:

- Deep partnership with Government, particularly through the Sustainable Marine Resources Collaboration Agreement (SMRCA).
- Strong connections with industry.
- Trusted relationships with community including a shared focus on outreach and ocean literacy.
- National and international research collaboration.
- Evidence-based contributions to national and international policy.

Hobart is one of only 5 Antarctic gateway cities.

► Recording flathead data on the water (Photo: Adam Gibson).

▼ The team removes a seismometer from the ice (Photo: Sarah Thompson).







▲ The Denman Marine voyage took 60 scientists to the Denman Glacier region for 2 months in 2025 (Photo Pete Harmsen)

Strategic Intent

- Our Antarctic and Southern Ocean research quantifies and predicts the impacts of climate change on the ocean, ice and atmosphere as well as key dependent species and ecosystems. We focus on climate change because it is the critical issue impacting global sustainability and is the world's greatest challenge that amplifies all other stresses on our planet.
- We engage with policy makers to highlight an acceleration in the rate of climate change, its devastating impacts on the marine environment, and the urgent need to cut our nation's carbon emissions.
- Our temperate marine research is focused on understanding the environmental, ecological and social impacts of climate change and ensuring Tasmania is a role model for the sustainable management, regeneration, and conservation of marine resources.
- We elevate Tasmania's blue economy through innovations in sustainable marine resource development that considers the total production circle.

- We improve ocean literacy, educating the community to understand the threats facing our oceans and polar regions, and empowering them towards solutions.
- We seek to attract and enable the most capable students, irrespective of their circumstances.
- We develop industry and community training and capability to support the delivery of our vision.

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Our Approach

- Adopt a 'one health' approach that recognises people, animals and the environment are interconnected, and ensures that resources are shared and access is equitable.
- Follow an integrated and transdisciplinary approach that incorporates observations, process studies, use of big data, and state-of-the-art computer models.
- Facilitate local adaption to climate change through a regenerative approach.
- Draw on Aboriginal and Torres Strait Islander knowledge to help us create sustainable ecosystems.
- Educate and train the next generation to support marine and coastal industries, governments, international climate risk assessments, and progress towards a sustainable planet.
- Support scientific evidence-based decision making and a well-informed community.
- Pilot innovative scalable interventions at local, national and international levels to foster sustainable ecosystems and social systems.

Our Capabilities

- Science, education and training to improve our understanding of the role of Antarctica and the Southern Ocean in the global climate system, including implications for marine ecosystems – required for these regions which are critical to the health of our planet, and because changes have significant global consequences.
- Science, education and training to advance the sustainable development of marine resources – required to drive economic prosperity, support resilient food systems, meet growing global demand, and support cultural and recreational pursuits.
- Regeneration science – required to redress the declining health of temperate marine ecosystems due to climate change, habitat degradation and other stressors.
- Big data, sensors, artificial intelligence and next generation modelling capabilities – required to ensure data and information becomes knowledge that informs decision making.
- Governance, socio-ecology and economics – required for creating jurisdictional plans for Antarctica, the Southern Ocean and Tasmanian waters.
- Strategic partnerships, co-delivery models and science translation and communication – required to deliver impact for people, planet and prosperity.

Support scientific evidence-based decision making and a well-informed community.

- Exploring the anatomy of a prawn. (Photo: Adam Gibson).
- Back cover: A Conductivity, Temperature and Depth (CTD) sensor is used to collect data about physical properties of the ocean (Photo: Sebastiaan Swart).



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