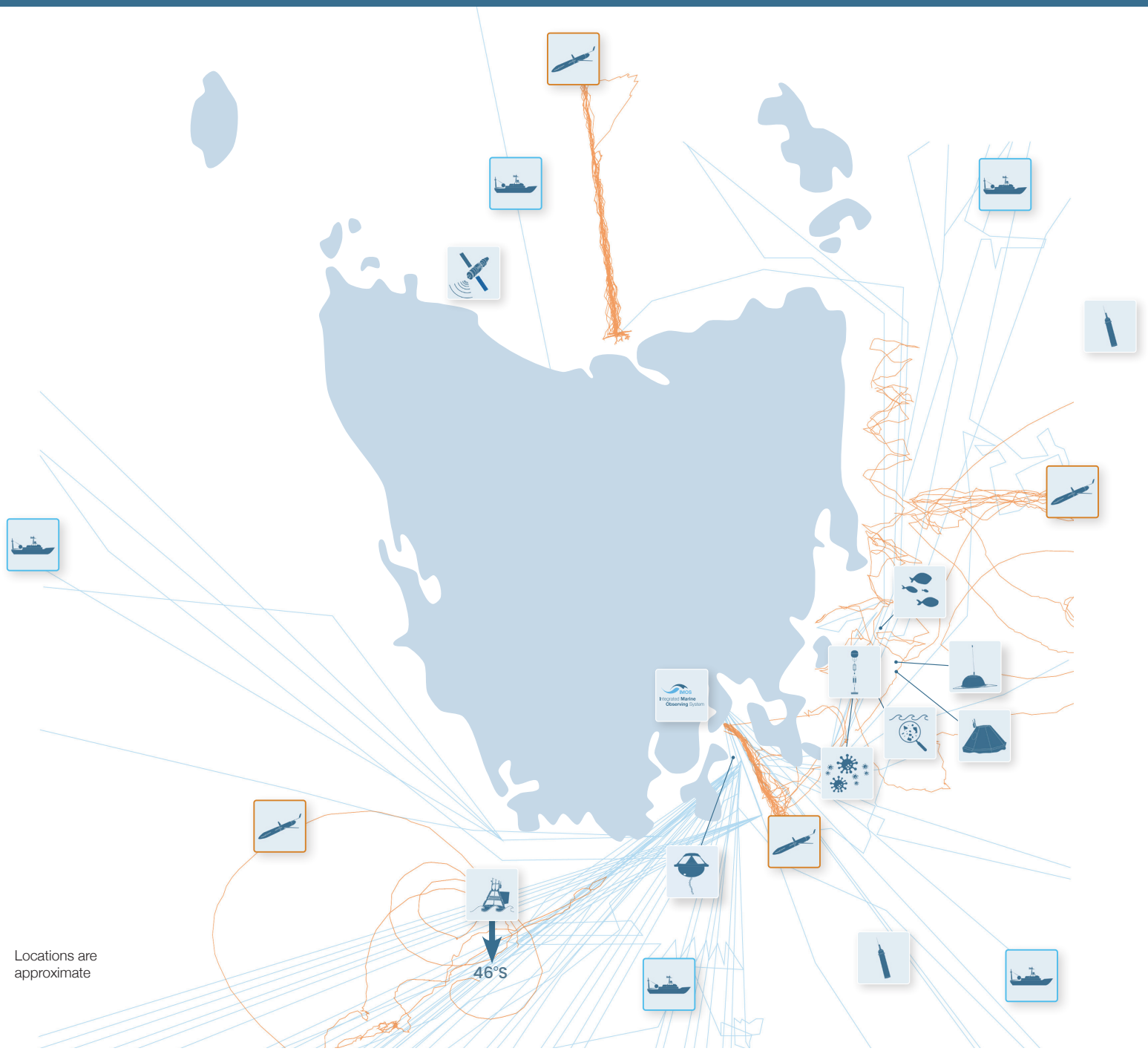
IMOS
in Tasmania

IMOS
Integrated **Marine Observing** System



IMOS sustained ocean observing infrastructure in Tasmania

- **Ships of Opportunity** — Voyage observations
- **Ocean Gliders**
- **National Mooring Network**
- **Marine Microplastics**
- **Coastal Wave Buoys**
- **Deep Water Mooring**
- **Animal Tracking**
- **Biomolecular Observing**
- **Argo Floats**
- **Satellite Remote Sensing**
- **Wave Buoys**

Australia's Integrated Marine Observing System (IMOS) operates a variety of observing equipment across Australia's coastal and open oceans. IMOS is designed to be a fully integrated, national system, collecting data at ocean-basin and regional scales, measuring physical, chemical and biological variables.

All data collected by IMOS is openly and freely available through the IMOS Australian Ocean Data Network (AODN) portal, to support scientists, industries, government and First Nations communities.

Tasmania's marine environment supports significant marine industries, especially fisheries and aquaculture, and is undergoing rapid change due to climate change. These impacts are particularly clear on Tasmania's east coast, which is strongly influenced by the East Australia Current carrying warm waters southward.

This warming has resulted in range expansion of species, impacting biodiversity and fisheries, and has precipitated a decline of temperate kelp forests.

IMOS' sustained ocean observing infrastructure in Tasmania

Ships of Opportunity
A combination of commercial, fishing and research vessels collecting a wide range of oceanographic measurements.

Animal Tracking
Uses acoustic telemetry to monitor the movements of tagged animals to support research and the management of marine biodiversity.

National Mooring Network
A collection of moorings that monitor oceanographic conditions in shelf waters and boundary currents in Australia's coastal waters.

Ocean Gliders
Deployments along the coast monitor subsurface properties of shelf and boundary currents.

Coastal Wave Buoys
Moored wave buoys delivers near real-time wave and surface temperature observations.

Marine Microplastics
Microplastics samples are collected to identify sources and impacts of contamination.

Satellite Remote Sensing
Provides calibrated satellite-derived ocean data, including sea surface temperature, ocean colour, and surface waves.

Argo Floats
Autonomous profiling instruments collecting real-time subsurface ocean temperature and salinity data.

Biomolecular Observing
Water samples are collected at National Reference Stations to analyse environmental DNA to track trends in marine biodiversity.

Deep Water Mooring
The IMOS Southern Ocean Time Series Observatory monitors long term trends in weather and climate in the Southern Ocean.

Wave Buoys
Measure the state of the ocean surface, primarily wave height and direction.

The Tasmanian marine science community has used IMOS observations to produce:

282	Journal Articles
88	Reports
90	Projects
39	Data Products
74	Postgraduate Projects

Tasmanian institutional users of IMOS observations:

13	Government Departments & Research Agencies
11	Research Collaboration & Non-government
15	Industry & Services
1	University

The IMOS Office

The IMOS Office coordinates IMOS Facilities across the country and operates online infrastructure for marine and climate data resources. The University of Tasmania is the Lead Agent for IMOS, with the IMOS Office sited in the Institute for Marine and Antarctic Studies (IMAS) building on the Hobart waterfront.

Partnerships

CSIRO's proximity to the IMOS Office and its key role in the partnership enriches collaboration across Tasmania's marine research sector. Together with the University of Tasmania, IMAS and the Australian Antarctic Division, these partnerships strengthen national ocean observing capability and support marine and climate science research. Other partners include State Government, TT-Line Company and Salmon Tasmania.

Access data

portal.aodn.org.au

More information

imos.org.au/nodes

NCRIS National Research Infrastructure for Australia
An Australian Government Initiative

Australia's Integrated Marine Observing System (IMOS) is enabled by the National Collaborative Research Infrastructure Strategy (NCRIS). It is operated by a consortium of institutions as an unincorporated joint venture, with the University of Tasmania as Lead Agent.

IMOS acknowledges the Traditional Custodians and Elders of the land and sea on which we work and observe, and recognise them as Australia's first marine scientists and carers of sea Country. We pay our respects to Aboriginal and Torres Strait Islander peoples past and present.