



Australian Government



AUSTRALIAN INSTITUTE  
OF MARINE SCIENCE

# Corporate Plan

2023 – 2024





# AIMS Corporate Plan 2023-24

The Australian Institute of Marine Science is Australia's tropical marine research agency. We provide world-class research that helps governments, industry and the community make informed decisions on the management of Australia's marine estate.

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*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.*

*We particularly recognise the Traditional Owners of the land on which our main laboratory and office bases are located: the Bindal and Wulgurukaba peoples in Townsville, the Larrakia people in Darwin, and the Noongar people in Perth. We also recognise and pay our respects to Aboriginal and Torres Strait Islanders who are Traditional Owners of the areas of our marine science operations across tropical northern Australia.*

# Opening message

On behalf of the Council of the Australian Institute of Marine Science, we are pleased to present the AIMS 2023-24 Corporate Plan, as required under paragraph 35(1)(b) of the Public Governance, Performance and Accountability Act 2013. This Plan is prepared for 2023-24 and covers the five years to 2027-28, as per s. 16E(1) of the PGPA Rule 2014 and the Corporate Plan for Commonwealth Entities: Resource Management Guide No. 132.

The ocean holds a special place in our national character. Eighty-five per cent of Australians live on or near the coast and Australia's First Nations people have a deep and continuing cultural connection to Sea Country. Managing a healthy tropical marine estate is not just protecting species and habitats, it's also maintaining nature's capacity to deliver goods, services, livelihoods as well as the community's social and cultural values. The Australian Institute of Marine Science (AIMS) provides trusted advice on the state of our unique tropical marine ecosystems. Our research allows all who value and derive benefit from our oceans to make evidence-based decisions.

Our marine estate is the third largest on Earth. With an exclusive economic zone of 10 million sq/km, it is home to some of the world's most diverse and iconic marine ecosystems and species. Australia's 'blue economy' is significant. The ninth edition of the Australian Institute of Marine Science Index of Marine Industry, published in 2023 valued the economic output of Australia's marine industries (or blue economy) at \$118.5 billion, supporting an estimated 462,000 jobs, despite the impact of the COVID-19 pandemic on industries such as tourism. This report clearly demonstrates the importance of Australia's marine estate, to the nation's current and future prosperity.

At our inception 50 years ago, Australia's marine environment was largely unknown to science. AIMS established monitoring and observing programs and began recording data. With sufficient information, our scientists determined the dynamics, trends and status of Australia's marine assets. We identified pressures and defined the impact of human activity on marine ecosystems. Now we are focused on solutions; directing our efforts to transform understanding into action and working with scientists, industry, and Traditional Owners to mitigate present and future threats. We aim to guide complex decision-making for effective mitigation and rehabilitation to improve the health of marine ecosystems and support Australia's marine industries.

Our research will continue to deliver the evidence needed to inform decisions, meet regulatory requirements and sustainably manage our marine estate for future generations. The AIMS Strategy 2030 outlines how our research and development supports Australia's blue economy and contributes to national prosperity, while improving tropical marine health. It seeks to contribute to protecting coral reefs from climate change, and through a "nature positive" approach contribute to the sustainable use of our oceans, conserving biodiversity, and restoring degraded marine ecosystems.

This corporate plan details how, over the next five years, we will deliver on our long-term Strategy targets. Particular areas of focus will be:

- Reef restoration and adaptation.
- Embedding new technologies and the latest data science into our core capabilities to transform the way we undertake marine science.
- Strengthening our Indigenous Partnerships Program to ensure free prior informed consent for projects that intersect with Sea Country, and empowering Traditional Owner aspirations through genuine co-design.

The success of this corporate plan relies on the passion, dedication, and collaboration of the people from AIMS. Working with our partners and stakeholders, we have the skills, resources, and expertise needed to deliver positive impact for the nation.

# Contents

Opening message ..... 3

Contents..... 4

Corporate structure ..... 5

Purpose ..... 5

Delivering impact..... 7

Operating environment ..... 8

Research environment..... 16

Research activities..... 19

Performance measurement..... 25

Corporate capability ..... 29

Risk management ..... 33

Infrastructure..... 37

Systems and processes ..... 39

# Corporate structure

The Australian Institute of Marine Science is a corporate Commonwealth entity established by the Australian Institute of Marine Science Act 1972 (AIMS Act).

AIMS is accountable to the Minister for the Environment and Water and is governed by a Council that reports to the Minister. The Council, which meets every second month, sets our strategic directions and oversees management of the Institute. The CEO is responsible for the day-to-day operations of the Institute.

AIMS' enabling legislation is the Australian Institute of Marine Science Act 1972 (AIMS Act) and the Public Governance, Performance and Accountability Act 2013 (PGPA Act).

## Purpose

AIMS' purpose is defined by its 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.

### Strategic objectives

AIMS strives to achieve three **key impacts** for the nation, measured by **two impact targets** (Table 1), as outlined in the AIMS Strategy 2030. Our research portfolio is encapsulated in **nine research outcomes** (Table 2), as outlined in the Portfolio Budget Statements 2023-24.

**Table 1: Our key impacts and targets**

Key Impacts	Impact Targets
Improve the health and resilience of marine and coastal ecosystems across northern Australia	At least \$200 million per annum in environmental, social and economic net benefits for tropical Australia  A net improvement in the health of marine ecosystems in 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	

**Table 2: Our desired research outcomes**

Research Outcomes		
Baseline, status and trend data that are the trusted information base for stakeholder decisions	More information for stakeholders produced through autonomous and automated technologies and processes	Science that underpins conservation and management of threatened and endangered marine species
Models of environmental condition and function that are used to manage tropical marine ecosystems	Improved health for tropical marine ecosystems via AIMS' solutions that mitigate local, regional and cumulative pressures	Coral reef condition forecasts based on knowledge of recovery, acclimatisation and adaptation
Restoration science and scalable technologies help coral reefs resist, adapt to, and recover from climate change impacts	Advanced data analysis workflows and knowledge delivery systems improve stakeholder use of AIMS information	Decision support tools that are used by stakeholders for management decisions and policies

## Values and behaviours

AIMS has a set of values for achieving our mission and improving our stakeholders' experience (see Figure 1). These values inspire our employees' best efforts and guide their actions. They reinforce our role as a provider of impartial, trusted and authoritative advice on the opportunities and challenges facing Australia's marine estate.

**Figure 1: Our values**



## AIMS Council

The Council (as at 31 August 2023) comprises Dr Beth Woods OAM (Chair), Dr Thomas Barlow, Professor Simon Biggs (JCU Representative), Mr Basil Ahyick (AIMS acting CEO), Dr Erika Techera and Ms Patricia Kelly PSM.

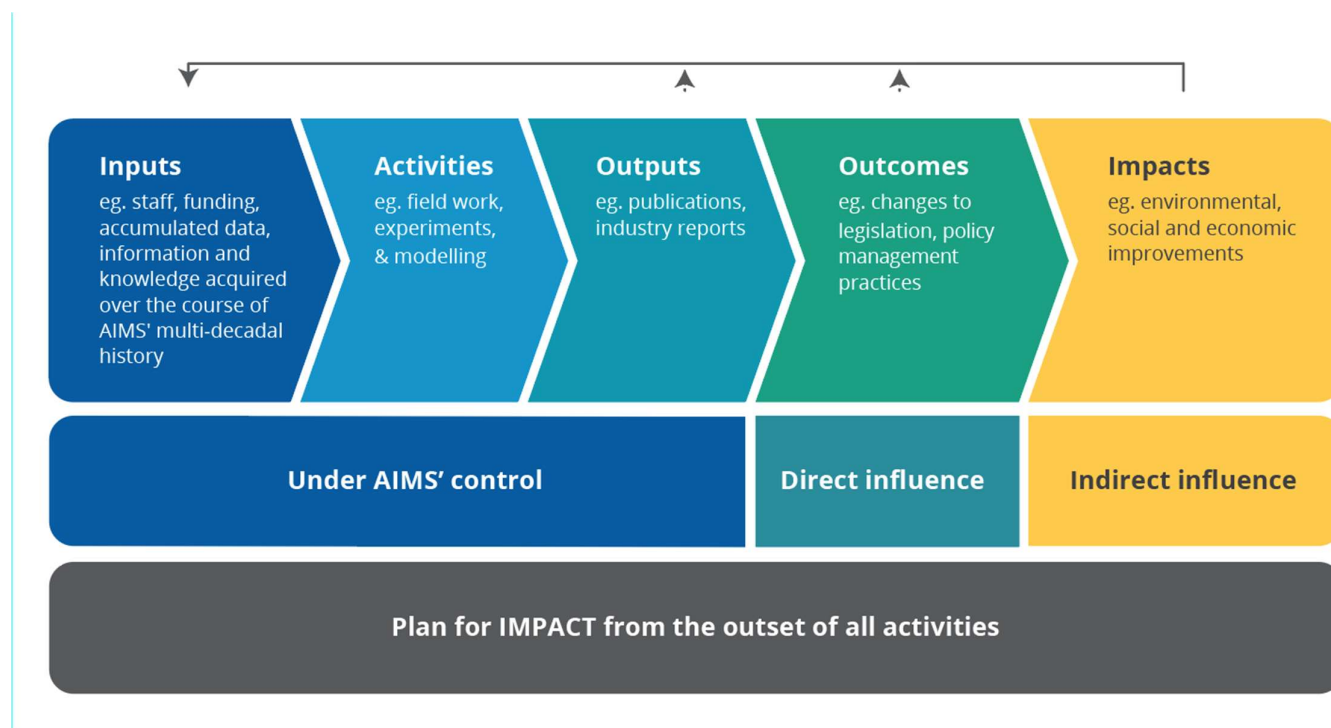
# Delivering impact

Everything that AIMS does is focused on improving outcomes and delivering benefits for government and the community. Measuring our impact is fundamental to this. Figure 2 shows how we apply our impact framework. Our measures align with our strategic objectives and, by extension, with our purpose – to contribute to the economic and environmental wellbeing of Australians by delivering the science and research needed to support the conservation and sustainable use of our tropical marine estate.

While the full impacts of our research become apparent only over time, we aim to ensure continuous positive impacts for people, industries and ecosystems. Understanding and measuring these benefits requires us to remain engaged with our partners long after our research outputs have been delivered. This, in turn, enables us to understand better the future needs of government, industry and the wider community. A recent study, undertaken on AIMS' behalf by The Centre for International Economics, estimates that AIMS delivers more than \$356 million of economic, environmental and social benefits to Australia each year.<sup>1</sup>

A key focus throughout the period of this Corporate Plan is maximizing the impact that our science underpins. This will require closer relationships with our stakeholders – the decision makers – to better understand their needs and challenges and to ensure that these are accounted for at the outset of every project we undertake.

**Figure 2: How we apply our impact framework**



<sup>1</sup> The Centre for International Economics (2021) *The impact of AIMS research: Marine science and the Blue Economy*, pp. 54

# Operating environment

The marine research environment is complex, globally connected and affected by climate change and emerging technologies.

## Legislation context

In addition to obligations under AIMS' enabling legislation, its operations are governed by a range of other Australian Government, state and territory legislation including:

- Health, safety and environment obligations under the Work Health and Safety Act 2011 (Cwlth).
- Environmental obligations under the Environmental Protection and Biodiversity Conservation Act 1999 (Cwlth), the Great Barrier Reef Marine Park Act 1975 (Cwlth) and the Fisheries Act 1994 (Qld).
- Information services obligations under the Archives Act 1983 (Cwlth) and the Freedom of Information Act 1982 (Cwlth).

Our primary obligations under the AIMS Act 1972 (Cwlth) are:

- To carry out research and development (R&D) in relation to marine science and marine technology.
- To encourage and facilitate the non-commercial and commercial application of the results arising from such activities.

We provide fundamental knowledge of the marine environment that enables regulators and marine industries to make informed decisions and meet their regulatory requirements.

## Contributing to government priorities

As the government's marine science organisation within the Climate Change, Energy, the Environment and Water portfolio, AIMS will continue to deliver its full range of obligations under its enabling legislation, while enhancing its engagement with (marine) environment policy and program delivery – key government priority areas where AIMS' knowledge is critical to success.

The knowledge, services and tools produced by the Australian Institute of Marine Science inform decisions of regional, State, Territory and Federal Government, including:

- Australian Maritime Safety Authority
- Department of Agriculture, Fisheries and Forestry
- Department of Climate Change, Energy, the Environment and Water
- Department of Defence
- Department of Foreign Affairs and Trade
- Department of Industry, Science, and Resources
- Great Barrier Reef Marine Park Authority
- National Indigenous Australians Agency
- National Offshore Petroleum Safety and Environmental Management Authority
- Northern Territory Government
- Queensland Department of Environment and Science
- Queensland Parks and Wildlife Service
- Torres Strait Regional Authority
- Western Australian Environmental Protection Authority.

In most cases, AIMS has been providing information and services to these stakeholders for many years and it is expected that this will continue. Relationships with the Department of Foreign Affairs and Trade, and the National Indigenous Australians Agency (NIAA), are more recent - and are expected to deepen further during this Plan. Engagement with NIAA focuses on research and monitoring partnership opportunities and related training and capacity building with Indigenous ranger groups across northern Australia. With a growing government focus on northern Australia, which intersects with our footprint and scientific focus, we expect to also develop a closer relationship with the Office of Northern Australia and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts.



## Marine science priorities

Science and research are central to driving innovation and technology development and for enhancing productivity and ensuring a strong future for Australian industry.

AIMS has a strategy in place to align with and support Australia's marine science priorities. Building on the recently refreshed AIMS Strategy 2030, this Corporate Plan ensures resources are allocated to research priorities in order to optimise performance.

AIMS consults on an ongoing basis with its key stakeholders in government, industry and the community. It also conducts regular surveys of the marine science and research needs of a broad range of Australian and international organisations. These inform ongoing review of Strategy 2030 and updates of our research priorities.

Several new major projects are envisaged during the period of this 5 year Plan, including ReefWorks, Blue Carbon, Traditional Owner collaborations, and international collaborations. These projects are an example of how we focus on, and adapt to, emerging national priorities and drive impact.

- ReefWorks is Australia's tropical marine technology test range, offering a national capability to safely test marine technologies, uncrewed systems and new sensors in the unique environmental conditions of northern Australia.
- Blue Carbon research will focus on establishing seaweeds as a blue carbon asset that requires conservation, restoration and management along our tropical coastlines, and assessing the potential for tropical seaweeds to support new scalable solutions for blue carbon sequestration across Australia and the Indo-Pacific region.
- Traditional Owner engagement to obtain free prior informed consent for projects will continue to develop relationships with Traditional Owner groups across northern Australia, and pursue partnership projects in areas of mutual interest that embed two-way knowledge-sharing about tropical marine environments. Focus will also continue on building AIMS' cultural competency and streamlining Indigenous Partnership procedures. Further program development will create innovative new research methods to bring western science together with traditional knowledge; and use partnership projects as a platform for delivery of meaningful training and capacity building in marine monitoring and research to Traditional Owners and Indigenous rangers.
- International collaborations include the Global Coral Reef Monitoring Network (GCRMN), the Pacific-focused ReefCloud, and the Coral Research and Development Platform (CORDAP), among others. These collaborations continue to cement AIMS as a global leader in coral reef science as well as provide opportunities to create socioeconomic and environmental impact beyond Australia.

The following table provides information on guidance documents and how we approach activities that deliver outcomes for government, industry and community.

**Table 3: Guidance documents for delivering outcomes to government, industry and community**

Guidance documents <sup>2</sup>	Requirement
Statement of Expectations	<p>As a publicly funded research agency, AIMS is required by its Act to respond to its Portfolio Minister.</p> <p><i>Our obligations are set out in a Statement of Expectations issued periodically by the Minister. The AIMS Council responded to the Minister with a Statement of Intent confirming AIMS' commitment to the Australian Government's policy agenda and the strong connections between this and the AIMS Strategy 2030.</i></p>
National science and research priorities	<p>The nine science and research priorities of the Australian Government are: (1) Food; (2) Soil and water (including marine); (3) Transport; (4) Cybersecurity; (5) Energy; (6) Resources; (7) Advanced manufacturing; (8) Environmental change; and (9) Health. The Australian government is currently updating the National Science and Research Priorities to be announced by end 2023, after an extensive consultation exercise in which AIMS is engaged.</p> <p><i>Our core capability and research programs contribute strongly to the soil and water, energy, and environmental change priorities and we anticipate a similar level of alignment with the new National Science and research Priorities.</i></p>

<sup>2</sup> As these guidance documents are updated by the Australian Government, AIMS will ensure its activities are aligned in order to deliver the best outcomes for government, industry and the community.

National science agenda and strategies	<p>We support the Australian Government’s National Innovation and Science Agenda, the National Science Statement and the Innovation and Science Australia strategy document – Australia 2030: Prosperity Through Innovation.</p> <p><i>We particularly focus on fostering a strong national science and research base as the foundation for a competitive Australia.</i></p>
National Marine Science Plan	<p>AIMS has been a leader and core member of the National Marine Science Committee since its inception and is a strong advocate of the National Plan.</p> <p><i>From individual member contributions emerges a common perspective with an explicit focus on the blue economy throughout the marine science system.</i></p>
Sustainable Development Goals (SDGs)	<p>We support the SDGs of the United Nations: (1) No poverty; (2) Zero hunger; (5) Gender equality; (8) Decent work and economic growth; (13) Climate action; and most notably (14) Life below water.</p> <p><i>Our partnerships deliver breakthrough scientific solutions to support the SDGs and help secure the future of fisheries, and protect ecosystems and wildlife.</i></p>

## The ongoing impacts and uncertainty created by COVID-19

Over the last three years, AIMS successfully managed the impacts of COVID-19 on our operations and staff, achieving strong external earnings growth and scientific delivery. In line with Government and community trends, and following a risk-based approach, AIMS has gradually relaxed our COVID-19 control protocols, and in 2023-24 and beyond, we expect that the ongoing risks to our operations will continue to diminish. Notwithstanding this, we continue to manage ongoing challenges arising from a tighter labour market, restricted availability of international talent and inflationary pressures.

## Key relationships with government

### Australian Government

In response to the Minister’s Statement of Expectations<sup>3</sup>, the Institute’s Statement of Intent expresses its commitment to the government’s legislated requirements, broad policy framework and key priorities. A revised statement of Ministerial expectations from the new Government will result in the Institute providing a revised Statement of Intent. AIMS fulfills its responsibilities through the delivery of world-class R&D in relation to marine science and marine technology and the provision of impartial and accurate advice to inform decision making.

### National Indigenous Australians Agency

NIAA works with the Minister for Indigenous Australians to implement policies particularly the Closing the Gap agenda, to improve the lives of First Nations Australians. Of special relevance to AIMS operations, NIAA administers the Working on Country program which provides operational funds for Indigenous Protected Areas and related ranger employment. NIAA has recently moved to establish a National Indigenous Ranger Sector Strategy which recognizes the numerous modes of funding and support for this sector (not just NIAA funding), and AIMS is represented on that working group. Indigenous partnership projects with AIMS often collaborate with the ranger sector, and the proposed training and capacity building is especially relevant to that workforce.

### Department of Foreign Affairs and Trade, and Department of Industry, Science, and Resources

AIMS works closely with the Department of Foreign Affairs and Trade, and the Department of Industry, Science, and Resources to help advance Australia’s trade and investment interests, particularly in marine science. We contribute research and advice on the blue economy, including coral reefs, fisheries and sustainable development. We support the strengthening of Australia’s bilateral relations and regional and international cooperation through our contribution to selected projects and the global exchange of information and knowledge. AIMS is also represented on DFAT’s First Nations Taskforce IDC established to support the inaugural Australian First Nations Ambassador.

<sup>3</sup> <https://www.aims.gov.au/docs/about/corporate/corporate-profile-governance/statement-of-expectations>

## **Great Barrier Reef Marine Park Authority, and Department of Climate Change, Energy, the Environment and Water**

AIMS provides significant support to the Great Barrier Reef Marine Park Authority and the Department of Climate Change, Energy, the Environment and Water, to assist with the implementation of the Reef 2050 Long Term Sustainability Plan (Reef 2050 Plan). This plan is Australia's overarching long-term strategy for protecting and managing the Reef to support its health and resilience in the future. AIMS is also a formal partner in the implementation and delivery of the Reef 2050 Integrated Monitoring and Reporting Program.

We monitor, research, report and provide advice on:

- condition of water quality and coral reefs in the inshore Great Barrier Reef (GBRMPA Marine Monitoring Program)
- tropical water quality and biodiversity within the National Environmental Science Program (NESP).

## **National Offshore Petroleum Safety and Environment Management Authority (NOPSEMA)**

NOPSEMA is Australia's offshore energy regulator with administrative remit in Commonwealth waters. AIMS engages and works collaboratively with industry and NOPSEMA to provide advice on environmental information needs, including the appropriate scale and scope of environmental baseline studies and impact assessment of petroleum exploration, operations and decommissioning activities. In 2021, NOPSEMA's functions have been extended to include the regulation of other large scale, technically complex offshore energy infrastructure activities, namely offshore renewable energy projects in Commonwealth waters covering offshore fixed and floating wind, wave and tidal power, and other technologies.

## **Parks Australia**

Parks Australia is the federal agency charged with managing Australia's national parks and conservation areas. AIMS and Parks Australia have an established collaborative partnership underpinned by common strategic goals and activities concerning conservation of biodiversity or cultural heritage, scientific and commercial endeavour in Commonwealth marine reserves. Projects undertaken in partnership include biological and bio-cultural surveys of values tied to Commonwealth marine parks in the north-west, north and Coral Sea marine park networks. AIMS and Parks Australia collaborate on projects involving Traditional Owner and industry sector participation and also partner in support of training and upgrade needs for the Australian Marine Science Atlas.

## **State and territory governments**

AIMS undertakes a broad range of monitoring, research and reporting and provides, for example, advice to state and territory governments addressing information needs for regional strategic planning (e.g. Reef 2050 Plan, Darwin Harbour Master Planning), quantifying potential impacts of the development and operations of specific ports and coast infrastructure and the impacts of contaminants introduced into marine systems through offshore and coastal industries and other sources adjacent to coastal ecosystems. Consistent with our focus on tropical waters, we work most closely with the governments of Queensland, Western Australia and the Northern Territory.

## Industry partnerships

AIMS works in partnership with several industries important to Australia's blue economy, including the natural resources sector, involving both offshore petroleum extraction and onshore mining activities with coastal and marine footprints. Increasingly, AIMS' partnerships with these sectors incorporate on ground community engagement and participation in AIMS' research activities, including with Traditional Owners. The commercial and recreational fishing and tourism sectors are collaborators or highly relevant stakeholders for the purpose of AIMS generating impactful science outcomes. This Corporate Plan shows how AIMS will work with its industry partners over the next five years to grow marine-based industries and maintain healthy coastal and ocean resources.

### Resources sector

The offshore oil and gas industry underpins about 80,000 direct and indirect jobs with hundreds of thousands of Australian jobs relying on the reliable, affordable and sustainable supply of oil and gas. AIMS provides essential research that allows this sustainable development of energy, minerals and other valuable resources in and under Australia's oceans. The offshore oil and gas sector is now both a major end user of our research and an important contributor to its strategic directions.

This is an evolving relationship in which AIMS has played a progressively value-adding role. We work with the sector to provide timely and relevant information on environmental status and risk, baseline habitat mapping, monitoring and research to underpin project proposals and environmental management plans required by regulators. Targeted studies investigate the impacts of known and emerging contaminants introduced into marine systems through shipping, extraction and processing facilities and other sources, impacts of seismic surveys on marine species and the provision of environmental information to inform decommissioning decisions. A strengthening of industry Environmental, Social and Governance (ESG) principles has also yielded greater partnering opportunities for major conservation and restoration science which is not directly linked to industry operations.

### Ports and maritime industries

Around 98 per cent of Australia's trade travels by sea and economic growth is the driving force for the port sector<sup>4</sup>. With the continued development of major ports across northern Australia, AIMS has become an important source of advice on sustainable port development and operations. AIMS works with the port operators, maritime industries and state and federal regulators to fill knowledge gaps related to potential impacts of port operations across Australia's tropical marine estate, and to assist with understanding and minimising potential environmental risk associated with operational and development activities, including dredging, reclamation and infrastructure works.

### Tourism, commercial and recreational fisheries

Historically reef tourism is a significant marine industry. It is estimated that tourism activity associated with the Great Barrier Reef generates \$5.7 billion per annum<sup>5</sup> and supports most of the 64,000 jobs depending on the reef. Considering this, AIMS' research is critical to supporting economic activity and jobs in the region. It provides opportunities for coastal communities to improve their livelihoods and protect their way of life.

Both tourism and commercial fishing were affected significantly during the COVID-19 pandemic. In 2017-18 tourism contributed \$30.7 billion to the Australian economy, Due to reduced economic activity from international marine tourism during the COVID-19 pandemic the international marine tourism sub-sector declined by 98% (by almost \$7 billion to \$129 million in 2020-21).

Domestic tourism was also affected by the pandemic, experiencing a decline of 13% yearly on average from \$26 billion in 2018-19 to \$19.9 billion in 2020-21. This was due to public health restrictions, state border closures and prolonged city-wide lockdowns in Melbourne and Sydney. The commercial fishing (wild capture fisheries) sub-sector experienced a decline in demand from key export markets during the COVID-19 recession.

AIMS is a key provider of research that contributes to the protection of the natural asset that is the Great Barrier - a key element of Australia's global brand – to help it survive the pressures of climate change and other environmental pressures. We conduct targeted projects focused on monitoring marine health, controlling the spread of the predatory crown-of-thorns starfish and providing strategic advice for managing the marine estate. Our research also supports viable tourism and fishing industries and will contribute to the recovery of these sectors as visitation and catch demands normalise post-pandemic.

Coral reef ecosystems support important commercial, recreational and subsistence fishery resources in northern Australia. Fishing also plays a central social and cultural role in many island and coastal communities, where it is often a critical source of food and income. AIMS compares fish diversity and abundance across tropical Australia, through the combination of its east coast surveys and its comprehensive assessment of coastal, nearshore, oceanic atolls and shoals from Ningaloo to Darwin. Our findings will help policy makers, regulators and fishers determine how much catch to take and how much to leave behind in order for the reefs to remain productive in the face of increasing stress from climate change and other pressures.

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<sup>4</sup> <https://www.portsaustralia.com.au/value-of-ports/economy>



## Traditional Owner partnerships

Traditional Owner engagement to obtain free prior informed consent for projects has established contact and dialogue with 50 Traditional Owner groups across northern Australia. In many cases, the resulting relationships have led to partnership projects that embed two-way knowledge-sharing about tropical marine environments. Future development of the program will focus on building AIMS cultural competency and streamlining application of the Indigenous Partnerships Procedures across AIMS; creating innovative research methods to bring western science together with traditional knowledge; and using partnership projects as a platform for delivery of meaningful training and capacity building in marine monitoring and research to Traditional Owners and Indigenous rangers.

AIMS is working to build stronger partnerships with Traditional Owner and First Nations groups across northern Australia to achieve a strong and productive shared future in marine science and knowledge exchange. The goal is to work with the sea country interests of Traditional Owners, by developing a better understanding of each other and our marine environments.

AIMS, through its collaboration with Traditional Owners over many years, recognises that greater research impact and value can be created, and new insights gained, if our science is interwoven with the knowledge, perspectives, capacity and capability of the Traditional Owners of sea country. These projects also support the aspirations of Traditional Owners for greater capacity and empowerment in sea country monitoring, research and decision making, and science partnerships.

Our commitment and approach to engagement is outlined in the AIMS Strategy 2030 and in the AIMS Indigenous Partnerships Policy and Plan. Recognising the enduring spiritual and cultural connections to, and inherent responsibilities for their land and sea country, AIMS has positioned Traditional Owners as decision makers regarding which activities can be conducted in their sea Country. AIMS is committed to seeking free prior and informed consent (FPIC) for all projects that have a strong intersection with sea country or Traditional Owner interests.

The Indigenous Partnerships Plan has established a four-tiered framework to define the appropriate level of Traditional Owner engagement for projects, by characterising all of AIMS' research projects into the appropriate tier. Tier allocation as either bronze, silver, gold or platinum depends first on the strength of the intersection between the project and Traditional Owner interests and their sea country, and second, on the level of Indigenous leadership of the project (see Figure 3). Over the life of this Corporate Plan, we will implement fully the Indigenous Partnerships Plan, further strengthen our relationships with Traditional Owners and increase the proportion of higher-tier projects in our portfolio.

Current gold tier projects include the Woppaburra Coral Project within the Australian Coral Reef Resilience Initiative, two demonstration projects for the Northern Australian Marine Monitoring Alliance (with Bardi Jawi and Torres Strait communities), and a current platinum tier project is a collaboration with the Dhimurru Aboriginal Corporation (as lead agency). AIMS assisted Dhimurru in the development of their successful \$450,000 *Our Marine Park Grant* (OMPG) to explore their IPA and the Wessel Marine Park, and AIMS is now subcontracted by Dhimurru to provide marine survey method training to the corporation's Rangers.

Partnership projects often involve the sharing of AIMS methods and procedures with First Nations collaborators. During this corporate plan, we will further develop the Indigenous Partnerships Plan to explore ways that the training and capacity building that occurs within projects can be formally accredited within the Vocational Education and Training (VET) sector through the development of adapted training materials aligned with existing units of competency in certificate courses. We will collaborate with the VET sector, and explore education pathways for our First Nations collaborators that may lead from VET to University training.

Figure 3: Levels of Traditional Owner engagement for projects



## Not-for-profit sector partnerships

AIMS works with the not-for-profit sector, including national and international philanthropic organisations such as Australia’s Minderoo Foundation, the Great Barrier Reef Foundation and Vulcan Inc. The GBRF aims to bring together business, science, government and philanthropy for the benefit of the reef. AIMS works in close association with the GBRF in a number of fora and advisory bodies and has a representative on the GBRF’s International Science Advisory Panel.

AIMS has worked with the Minderoo Foundation since 2020 in support of a shared vision to ensure that Western Australia continues to be a hub for world-class marine conservation research. This includes support for growing marine research infrastructure and science in the Exmouth and Ningaloo area. The Minderoo Exmouth Research Laboratory has been designed with AIMS’ large-scale aquaria facility know-how and now supports coral reef resilience research projects related to the Ningaloo World Heritage Area.

Seattle-based Vulcan Inc. is the engine behind philanthropist and Microsoft co-founder Paul G. Allen’s network of organisations and initiatives working to catalyse scientific and technological breakthroughs. AIMS’ contribution to the Global FinPrint project and our pioneering work on human-assisted evolution of corals are examples of shared initiatives. The latter has attracted renewed funding to further pursue research in the fields of assisted evolution and natural adaptation of corals.

## Supporting the blue economy

**Originally commissioned by AIMS in 2008 with the economic analyses developed by Deloitte Access Economics, the AIMS Index of Marine Industry<sup>5</sup> assesses the contribution of Australia’s marine industry to the nation’s economic bottom line. It estimates the total output of Australia’s blue economy to be \$118.5 billion in 2020-21.**

The industries making up this sector include water-based transport, domestic and international tourism, marinas and boating infrastructure, boatbuilding and repair, ship building and repair, marine equipment retailing, oil exploration, oil production, liquefied petroleum gas (LPG) production, natural gas production, marine-based aquaculture, commercial fishing, and recreational fishing. In this edition of the Index, four new sub-sectors were added including water transport support services, defence, sewerage and drainage services, and non-fishing recreational activities.

We have a responsibility to assist the sustainable development of this highly valuable sector. A recent report by The Centre for International Economics (CIE) estimates that AIMS’ scientific outputs underpinned more than \$222 million dollars of direct market benefits and a further \$134 million in non-market value in 2019-20. AIMS provides research services focused on supporting the sustainable development of Australia’s marine estate by industry, while ensuring the protection of high-value marine and coastal ecosystems through effective environmental management.

<sup>5</sup> <https://www.aims.gov.au/aims-index-of-marine-industry>

In line with the National Marine Science Plan<sup>6</sup>, AIMS and its collaborators continue to focus on seeking solutions to three of the seven 'grand challenges' identified in the Plan:

- Biodiversity, conservation and ecosystem health.
- Urban coastal environments.
- Climate variability and change.

AIMS is increasing its resourcing and effort directed to Resource Allocation, another of the pillars within Australia's National Marine Science Plan.

### **Biodiversity conservation and ecosystem health**

Human activities and climate change threaten marine diversity, the natural functioning of marine ecosystems and their sustainable use by present and future generations. Marine diversity is challenged by multiple pressures that are rarely appreciated until their cumulative impact becomes evident. Understanding the cumulative impacts of these multiple stressors on warming marine ecosystems is drawn from AIMS' long term and large-scale monitoring of the Reef for more than 35 years. This knowledge has become increasingly important for the development of effective responses to conserve biodiversity and ecosystem health. Long-term ecological research and monitoring is also required to inform marine managers on the status and trends of key assets and values in ecosystems under management.

### **Urban coastal environments**

More than 85 per cent of Australians live within 50 kilometres of the coast. As the location of most of our transport, commercial, residential and defence infrastructure, this urban coastal environment is critical to Australia's strategic and economic security and fulfils important cultural, recreational and aesthetic needs. In addition, it has intrinsic biological diversity values and provides essential ecosystem functions such as primary productivity, nutrient cycling and water filtration. In a sustained period of pronounced economic development with a focus on resource extraction and infrastructure development – much of it centred on coastal hubs – the challenge for coastal managers and policy makers is to balance these multiple competing uses and their impacts. AIMS' scientific knowledge is fundamental to informing actions required to protect and conserve the marine estate.

### **Climate variability and change**

Climate variability and change affects all aspects of society and both the marine and terrestrial environment. Heat, water, carbon and nutrients are the fundamental elements of the climate system, and the ocean is the dominant reservoir for all four constituents. To understand the climate system and its impact on society and the natural environment, we must be able to observe and model its oceanic branch including the storage and transport of heat, fresh water, nutrients and carbon in the ocean, and their exchange to the atmosphere and marine and terrestrial ecosystems, at global, regional and local scales. AIMS is the managing entity and a major research provider for the Reef Restoration and Adaptation Program (RRAP), which brings together Australia's leading experts to create an innovative suite of safe, acceptable interventions to help the Great Barrier Reef resist, adapt to and recover from the impacts of climate change.

### **Resource Allocation**

Nowhere in Australia's marine estate is there a location that does not have multiple stakeholders. Sustainable use of these locations requires reduced uncertainty about future trajectories and what natural and anthropogenic processes affect those trajectories. Making a decision on whether to take action or not, and what those actions might be and how best to use available resources, is becoming more critical for managing Australia's marine and coastal ecosystems and requires AIMS' knowledge and expertise delivered in a form that can be readily adopted by stakeholders.

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<sup>6</sup> <http://www.marinescience.net.au/national-marine-science-plan/>

# Research environment

## Reef Trust partnership

The 2023-24 year is the last year of funding flowing from the \$443.3 million Federal Government partnership with the Great Barrier Reef Foundation – the Reef Trust Partnership (partnership). AIMS has been a leading R&D provider within this program in three areas; the \$100 million Reef Restoration and Adaptation Program, \$40 million investment into the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP) and \$9.8 million for R&D into new at-scale methods of controlling the CoTS.

RTP investment has been the largest source of third-party R&D investment into AIMS over the last three years, and at this time it is not certain if efforts to gain further funding will be successful. AIMS has commenced a program to diversify its revenue sources related to critical assisted adaptation and aquaculture R&D to minimise the impact if a second tranche of investment cannot be secured.

## Geographic scope

AIMS operates primarily across the tropical north of Australia, from the North West Cape in Western Australia to Gladstone in Queensland. This geographic specialisation is a result of focusing efforts on key tropical marine issues and opportunities.

We recognise the competitive advantage gained from the geographic location of our various centres – our Townsville headquarters is adjacent to the Great Barrier Reef; Perth is the corporate hub for marine-based industries that operate on the Western Australian coast and Timor Sea; and Darwin is close to neighbouring countries and development activities in the Arafura and Timor seas. It is also the centre for many Traditional Owner agencies and organisations operating across northern Australia.

In addition, AIMS extends its geographic reach internationally through long-established agreements and mature partnership and collaborative arrangements with other international marine science institutes, universities, research organisations and government agencies. These strategic relationships enable AIMS to augment its own capability to address national priorities and enhance Australia's contribution to tackling global challenges. In recent years, AIMS has built on strong relationships with the former Commonwealth Departments of Industry, Science, Energy and Resources, Agriculture, Water and the Environment and, in particular, Foreign Affairs and Trade, to deliver through international frameworks. These frameworks include the International Coral Reef Initiative, the Global Coral Reef Monitoring Network and the Commonwealth Blue Charter, coral reef monitoring, management, conservation and restoration solutions that are mutually beneficial for both Australia and Australia's international partners. Furthermore, AIMS' active engagement provides opportunities to grow external investment in research that addresses priority marine issues that affect both Australia and our international neighbours and partners. This is done within a framework that recognises the complex geopolitical environment within which Australia operates, ensuring our science is not compromised and is always beneficial.

## Scientific scope

Supporting our stakeholders' needs is a primary focus of AIMS. Our expertise in molecular and microbiology, mathematical modelling, ocean monitoring (from microbes to regional ecosystems), marine noise, and decision support capability align with these evolving needs – from the ocean to the laboratory, from data analysis and models, to the ultimate development of products for direct use by end users. Examples of our expertise in field and experimental research include:



Long-term ocean  
monitoring



Risk assessments  
of pollution

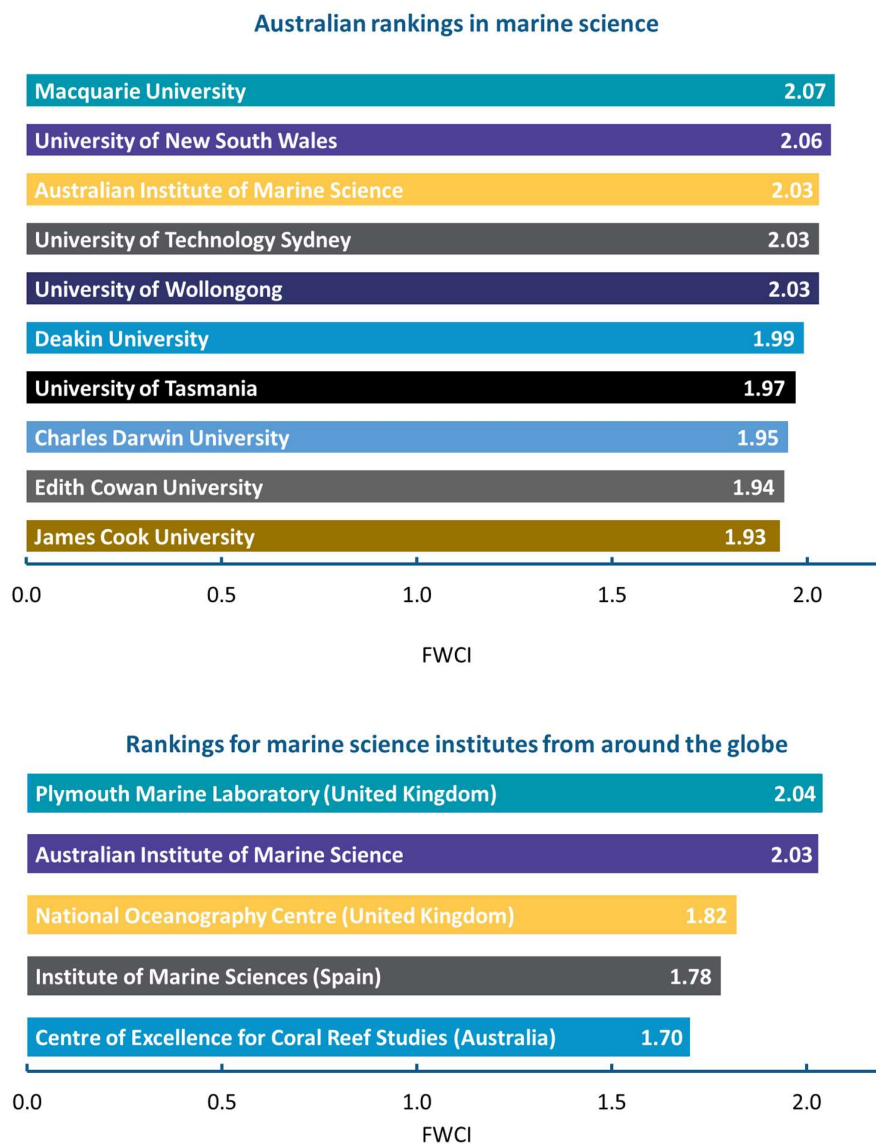


Predictions of  
ecosystem function



AIMS' success is demonstrated by our consistently high position in relevant rankings based on science publication metrics. In 2023-24, AIMS will transition publication performance tracking from the singular parameter of category normalized citation impact in the field of marine and freshwater biology provided by Clarivate Analytics to the similar field weighted citation index (FWCI) provided by Elsevier's SciVal database. This will also focus on Elsevier's attribution of publications to marine science only (capturing disciplines beyond biology and excluding freshwater biology) and extending into policy, economics and other social sciences. This FWCI metric will be integrated into a multi-parameter index incorporating international collaboration and publications in highest ranked journals. AIMS' performance under the FWCI is high when compared to major marine science providers within Australia and global peers that are specialist marine science organisations (Figure 4). We are committed to excellence in science and will strive to maintain this ranking throughout the Corporate Plan period.

**Figure 4: Top organisations with 250 or more publications between 2019-2021 in the field of marine science ranked by field-weighted citation impact (SciVal May 2023) compared to Australian marine science providers (upper panel, top 10 out of 32) and specialist marine science institutes from around the world (lower panel, top five out of 56)**



## Collaboration

The opportunities and challenges facing our marine systems are so complex that no single research organisation can provide all the scientific capability and capacity required to address them. AIMS plays a leadership role where it can and brings partners into projects and programs as required. In other contexts, we provide specialised capability for projects led by others.

Organisations and centres that have complementary capability in tropical marine science with whom we collaborate include:

- Australian Nuclear Science and Technology Organisation (ANSTO)
- CSIRO
- Geoscience Australia

- Universities (including James Cook University, Australian National University, the University of Melbourne, Curtin University, Charles Darwin University, The University of Western Australia, The University of Queensland, Queensland University of Technology, The University of Tasmania and Griffith University)
- State-based agencies (e.g. departments of environment, primary industries and fisheries, and natural resource management agencies).

Over the next five years, our key national research partners are expected to continue to include Charles Darwin University, CSIRO, Curtin University, James Cook University, Queensland University of Technology, The University of Queensland, The University of Western Australia, and University of Tasmania.

Internationally, AIMS has formal research agreements with several universities and research institutes including the National Oceanic and Atmospheric Administration (US), the University of South Pacific (Fiji) and the Palau International Coral Reef Center.

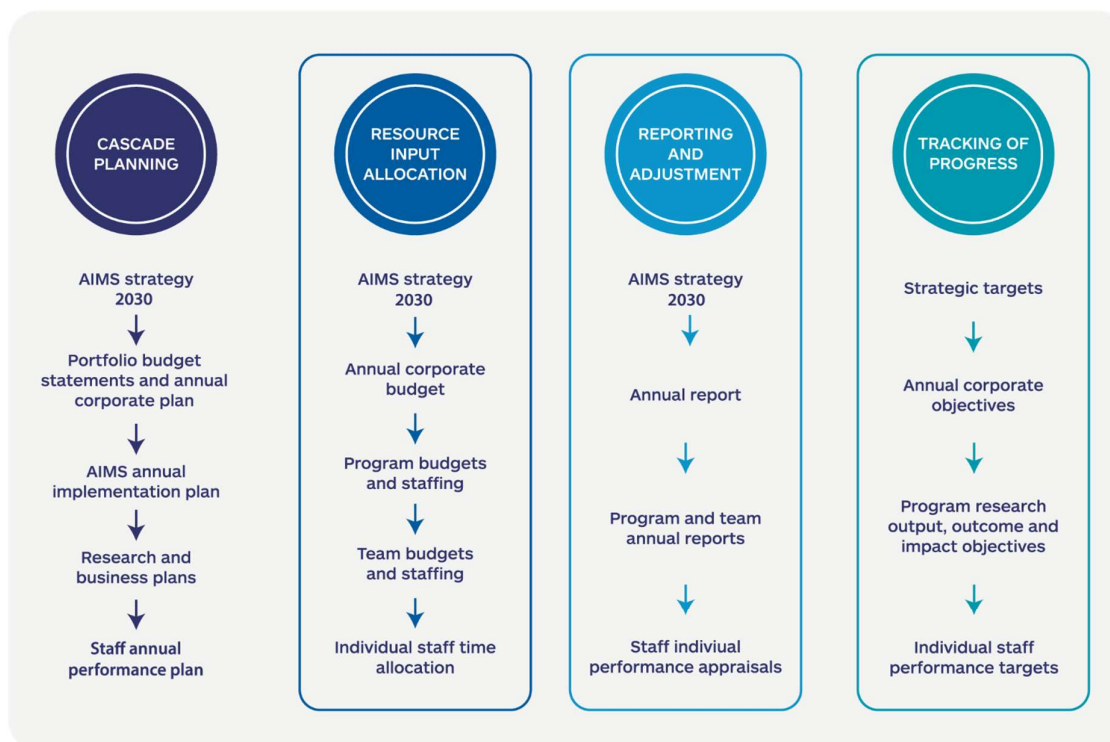
A key aspect of our international partnering is its expression of Australia's strategic interests in marine science and technology. This underpins our ever-growing relationship with the Department of Foreign Affairs and Trade. Initially built around our joint support of the International Coral Reef Initiative, which Australia jointly chaired with Monaco until mid-2021, it has expanded to encompass development and transfer of user-friendly tools for our Pacific neighbours to manage their marine territories more easily. This benefits our neighbours and ourselves, as our coral reefs are globally connected.

## Implementing strategy

We are a strategy-led organisation. The AIMS Strategy 2030 sets out the future direction of our research and advice to government, industry and the community and articulates the long-term vision as to how AIMS will fulfil its remit under the guiding legislative and financial frameworks. The high-level directions and objectives set out in the Strategy link directly to the Institute's Corporate Plan and the over-arching budget statements, cascade down into detailed implementation plans and form the basis for our research and investment decisions (see Figure 5).

The AIMS Strategy 2030 is reviewed every three years to ensure it is up to date and relevant, and progress towards targets and key performance indicators are reported yearly in AIMS' annual reports. Following the appointment of a new Government in 2022, our Strategy 2025 was reviewed and updated to reflect new Government priorities and emerging science challenges. The next review is planned for 2025, which falls within the scope of this Plan, and will provide a further opportunity to take account of changes in operating context and government policies.

**Figure 5: How the elements of our research interrelate**



# Research activities

To continue to achieve the impact targets identified in the AIMS Strategy 2030, AIMS will focus on delivering the following nine research outcomes over the five-year period encompassed by the 2022-23 AIMS Corporate Plan. Delivery of longer-term research outcomes will be achieved through the implementation of a number of shorter-term activities described in Table 4.

**Table 4: Timeframe for continuation of Research Activities under each Research Outcomes with circle symbols indicating projected end date for each activity, 2023-24 to 2027-28**

Five Year Research Outcomes	Key Activities	2023-24	2024-25	2025-26	2026-27	2027-28
Baseline, status and trend data that are the trusted information base for stakeholder decisions	<p>Continue delivering long-term coral reef and physico-chemical monitoring programs.</p> <p>Maintain AIMS' role as the major Integrated Marine Observing System (IMOS) operational partner for northern Australia and the Great Barrier Reef</p> <p>Deliver specific monitoring and baseline assessments in response to external demand including work with Australian Government, state agency and other research partners to implement the Reef Integrated Monitoring and Reporting Program (RIMReP)</p> <p>Improve the efficiency and capability for marine observing and assessment methods through technology, including continuous development of reporting indices and operationalising an innovative cloud-based analyses tool</p>					
More information for stakeholders produced through autonomous and automated technologies and processes	<p>Complete high impact projects already underway (e.g. agile underwater vehicle development, autonomous image analysis)</p> <p>Advance development, testing and adoption of automated data and image analysis pathways to enhance operational efficiencies</p>					
Science that underpins conservation and management of threatened and endangered marine species	<p>Determine the status, movement and habitat use of key megafauna species, and how they are influenced by coastal development and industry activities, to inform their conservation and management</p> <p>Explore movement and population connectivity of threatened species in northern Australia</p> <p>Develop cumulative threat maps for threatened and exploited species in the tropics</p>					
Models of environmental condition and function that are used to manage tropical marine ecosystems	<p>Maintain and improve models describing the functioning of coastal areas to support ecosystem-scale management decisions</p> <p>Develop and deliver specific models and regional assessments, in response to industry and stakeholder client needs</p> <p>Develop, validate and apply predictive benthic habitat models based on geomorphological, biophysical and environmental attributes for priority regions across northern Australia</p>					

Five Year Research Outcomes	Key Activity	2023-24	2024-25	2025-26	2026-27	2027-28
Improved health for tropical marine ecosystems via AIMS' solutions that mitigate local, regional and cumulative pressures	Improve understanding of coastal and ocean acidification in the GBR and its impacts on benthic communities					
	Understand the potential causes of crown-of-thorns starfish (CoTS) population outbreaks to inform actions and strategies to manage and mitigate current and future outbreaks					
	Develop sampling and analysis protocols for microplastics in marine environments, and produce a contamination baseline for northern Australia					
	Understand sensitivity of tropical marine organisms to priority contaminants, including importance of factors relevant to the tropical environment (e.g. temperature, light)					
Coral reef condition forecasts based on knowledge of recovery, acclimatisation and adaptation	Understand drivers and limitations of coral reef recovery, coral growth and reef accretion rates					
	Optimise coral propagation, settlement and post-settlement survival in the National Sea Simulator to support coral reef recovery and restoration R&D					
	Understand risks and scope for enhancing coral tolerances to support coral reef recovery and restoration by developing approaches such as hybridisation, selective breeding, assisted gene flow and gene editing technologies					
Restoration science and scalable technologies that help coral reefs resist, adapt to, and recover from climate change impacts	Deliver the Reef Restoration and Adaptation Program with partners, which will develop and test an innovative suite of interventions to help the Great Barrier Reef resist, adapt to, and recover from climate change impacts					
Advanced data analysis workflows and knowledge delivery systems that improve stakeholder use of AIMS information	Modernise data systems into a coherent research data platform					
	Maintain a nationally recognised repository of research data					
	Expand online delivery of environmental information					
	Integrate the eAtlas <sup>7</sup> into national data portals					
Decision support tools that are used by stakeholders for management decisions and policies	Advance decision support capability within the Reef Integrated Monitoring and Reporting Program (RIMReP), the Reef Restoration and Adaptation Program (RRAP), and other initiatives					
	Map Traditional Owner sea country in tropical Australia					

<sup>7</sup> <https://eatlas.org.au/content/about-e-atlas>



## Intervening to help build reef resilience

In the past, our research and monitoring has focused on understanding and measuring natural recovery and adaptation. However, more recently it has been recognised that active interventions need to be considered as additional management strategies. Active intervention on the reef will help it adapt, recover and survive warming ocean conditions. Such intervention targets the retention of the reef's key ecological, economic and social values. This work, together with national and global efforts to reduce greenhouse gas emissions and other management strategies to ease pressure on the Reef, aims at building its resilience and capacity to adapt to the escalating effects of climate change.

The Great Barrier Reef is indisputably one of the world's most important natural assets. Climate change is recognized as the greatest threat to coral reef ecosystems around the world<sup>8</sup> including Australia's iconic reefs such as the Great Barrier Reef, especially due to globally increasing impacts from marine heatwaves<sup>9,10</sup>. We work with others to protect and restore the reef, which is under severe pressure from climate change and other stressors. Cumulative impacts include rising sea temperatures, ocean acidification, pollution, declining water quality and outbreaks of the destructive crown-of-thorns starfish (CoTS).

Between 2017 and 2019 AIMS led a study to assess the need, the feasibility of developing and benefits of deploying additional new reef interventions to help maintain and build reefs' resistance to climate change. It concluded that interventions would likely be needed, were possible and could provide positive net benefits, but that all of the interventions would require R&D to develop. In 2020 an R&D program called the Reef Restoration and Adaptation Program (RRAP) was established with \$100 million of government investment over four years, supplemented by third party investments and in-kind support by core R&D providers.

The reef restoration and adaptation program is developing new interventions that cover the spectrum of protection (retaining the corals we have), adaptation (helping corals to adapt and reducing the need for ongoing interventions) and restoration (restoring smaller high value, but degraded areas). Key to the program is an extensive engagement and partnering program with stakeholders and Traditional Owners. Agreement will be required to deploy these new interventions and new industries established. Full details can be found at [www.GBRRestoration.org](http://www.GBRRestoration.org).

AIMS is the managing entity for the program, and has led the processes of R&D design, contracting and oversighting delivery. The program is now entering its final year and AIMS focus is now three-fold:

- i. Completing the current R&D program and making the outcomes available for use, nationally and internationally
- ii. Commencing a program of deployments at scale over the 2025 to 2030 period. These deployments will take the knowledge and systems developed, and working with stakeholders and traditional owners commence a program of pilot deployments at scale. These will target impact (ecological, social, cultural and economic) but will operate as large trials to enable improved understanding of benefits and risk, and knowledge to feed back into ongoing development activities.
- iii. Securing a second tranche of R&D investment. A second tranche of R&D is required to continue the excellent progress made to date and make more of the new intervention options being developed available for deployment should they be needed. At commencement we understood that a 10 to 20yr R&D program would be required, and so this need is not unexpected.

As a result of this extensive effort, AIMS is strategically well positioned to help deliver the new government's commitment to invest almost \$1.2 billion in reef preservation and restoration by 2030, including \$194.5 million for reef protection programs and advanced research into thermal tolerant corals.

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<sup>8</sup> Arias et al. 2021. Technical Summary. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte et al. (eds.)]. Cambridge University Press. In Press.

<sup>9</sup> Oliver, E. C. J., M. T. Burrows, M. G. Donat, A. Sen Gupta, L. V. Alexander, S. E. Perkins-Kirkpatrick, J. A. Benthuyssen, A. J. Hobday, N. J. Holbrook, P. J. Moore, M. S. Thomsen, T. Wernberg, and D. A. Smale. 2019. *Projected Marine Heatwaves in the 21st Century and the Potential for Ecological Impact. Frontiers in Marine Science*

<sup>10</sup> Great Barrier Reef Marine Park Authority 2019, *Great Barrier Reef Outlook Report 2019*, GBRMPA, Townsville (<https://elibrary.qbrmpa.gov.au/jspui/handle/11017/3474>)

## Digital and Data Science

Digital and data science capabilities are core to the knowledge, services and tools that AIMS produces. AIMS continues to innovate within its digital landscape, spearheading the development of new digital tools to support the global community in improving reef monitoring and reporting, such as ReefCloud AI and ReefScan.

AIMS' new Digital Plan advances the integration of digital and data science capabilities into our research, support services, and technology development. This further embeds digital and data science as core enablers of AIMS Strategy 2030.

With the Digital Plan, AIMS will increase access to essential insights, services, resources and support, thus providing a seamless digital experience for AIMS researchers, stakeholders, and partners to foster innovation, operational excellence and impact.

## Technology transformation

Critical functions such as environmental monitoring require continuous advances in technology if costs are to be kept manageable and stakeholder expectations in relation to data-led insights are to be met. These expectations are increasing rapidly, driven by requirements that include field work in locations that are unsuited for divers, a desire from Traditional Owner and citizen-science groups to deliver high quality data, and access to near-real time data.

In parallel we are experiencing a rapid increase in the volume of data and analysis required. There is an increasing need to actively manage natural assets such as reef adaptation and restoration interventions, where for example compared to assessing the current state of a reef you need one to two orders of magnitude more information on a reef to guide intervention actions on that reef. This can only be achieved by increased partnering with those operating in the marine environment and automated technologies provide an avenue for this to occur. By packaging up what is typically completed by an expert diver and ecologist into automated systems, it opens the door for trained but not expert marine scientists to be part of solving this challenge.

In response we established the AIMS Technology Transformation Program to test ideas, design whole of pipeline technology solutions and move these into operational use. We have established partnerships with developers and with other reef parities, several of which are investing into our development program, an example being the Joint Field Management Program (JFMP) which undertakes operational and management activities on the GBR. It has invested in the AIMS development program in return for access to the technology as it becomes operational.

The program continues to make significant progress with the ReefScan family of monitoring solutions designed and now being delivered. In parallel a new cloud-based data science platform is being made operational to streamline workflows and enable the use of artificial intelligence based automated data analysis.

A number of the systems in development are fully autonomous, requiring certification for trusted operational use. Currently this is not possible and so AIMS has formed a partnership with the Queensland Government, the Australian Maritime Safety Authority (AMSA), the Department of Defence and several other organisations to create a marine autonomous systems development, testing and certification range at our Townsville site. Called ReefWorks, it is enabling development programs to progress and ultimately will be a pathway to operational certification. It includes Australia's only autonomous marine systems "testing sandbox" where developers can test systems without the need to complex permits and other approvals. Importantly, it is filling a critical gap in the Australian innovation sector. There is a strong demand to develop sovereign technology and currently the Defence Department, large and small industry do not have a means to test and certify these systems.

Full details can be found at [Technological Solutions | AIMS](#)

## Driving towards impact

Decision making in marine science can be complex and seemingly intractable, principally due to the inherent existence of trade-offs between sociopolitical, environmental and economic factors. Guided by our overarching Strategy 2030, we focus on delivering impact by ensuring that:

- Project development is informed by engagement with users and stakeholders. This helps to maximise the likelihood that the resulting science will be taken up and deliver beneficial economic, environmental and social impact.
- Project results fill knowledge gaps that are actionable by stakeholders.
- Projects are discrete in time and scope and progress can be measured.
- A programmatic approach is taken where the suite of projects combine to achieve larger scientific outcomes with some projects directly feeding into others.

- Capability is leveraged by collaborating where appropriate. Opportunities for collaboration and longer-term strategic alignment are preferred.
- Projects with potential to deliver tangible benefits to indigenous peoples are identified and developed in partnership with Sea Country traditional owners.

## Excellence and assurance

Science and research, including marine science and research, plays a fundamental role in Australia's economy and society. Our data is useful not only to scientists, but provides the scientific knowledge for government, industry and the community to make decisions that contribute to better environmental, social and economic outcomes. We are very conscious of our international reputation for scientific excellence and for ensuring consistent, outstanding returns on investment. Peer review gives confidence that our research is valid, significant and original.

Accordingly, we measure our impact both by the quality of our work and by the effective use of our data, information and expertise by end users. These wider effects drive the targets set out in the AIMS Strategy 2030.

Rigorous quality assurance and quality control procedures ensure we deliver high-quality and timely research. Our research is peer reviewed at multiple stages through the research pipeline using internal and external reviewers.

The AIMS Quality Management Policy, approved by the AIMS Council, establishes clear standards and expectations for the delivery of quality scientific research and services in line with the Australian Code for the Responsible Conduct of Research 2018. The AIMS Responsible Conduct of Research Framework, which sets out AIMS' expectations for the conduct of all persons engaged in research under the auspices of the Institute, articulates - in conjunction with AIMS strategy 2030 – the broad principles that characterise an ambitious, honest, ethical and conscientious research culture and establishes a framework that provides a foundation for high quality research, credibility and community trust in our research outputs.

During 2023-24, AIMS will continue the review of its quality systems as part of our commitment to continuous improvement to ensure that we remain one of the best and most trusted marine research organisations in the world.

Our multi-layer quality control systems approach includes the AIMS Framework for Responsible Conduct of Research, internal and external peer review of publications and reports, rigorous data collection procedures, quality assurance and data curation. In 2019, we introduced team-based peer reviews of our research. The concept is based on the US military red-on-blue exercises and involves setting up two teams that challenge each other on a particular research issue (e.g. water quality on the Great Barrier Reef). One team puts together a case based on the currently available evidence, while the other team tries to find flaws and weaknesses in the arguments. This process drives continuous improvement, highlights and eliminates any subconscious bias, and helps to identify critical questions that remain unanswered and require additional research. We will build on the success of this process by formalising it within our quality management system.

An essential part of AIMS' performance evaluation is the external expert review process, conducted approximately every five years. In 2022-23, an expert panel of scientists of international renown and diverse technical backgrounds assessed how effectively AIMS is performing as Australia's premier tropical marine science agency by examining our research portfolio, resources, capability and expertise. The review included:

- An evaluation of AIMS' performance against the objectives of Strategy 2025 (now being updated to Strategy 2030)
- An assessment of the quality and impact of our science against international benchmarks, and
- An evaluation of how well AIMS is currently positioned to achieve our strategic vision for the future.

After the panel visited AIMS in August 2022, they prepared a comprehensive assessment indicating that AIMS is a high-performing institute delivering globally relevant science and also some recommendations that might further escalate AIMS' performance. AIMS prepared a plan to implement actions, many of which have already been initiated or completed, with actions to continue throughout 2023-24.

We are committed to the principle of open access in our research publications as the best means to support maximum uptake and application that benefits as wide a user base as possible. All research conducted by AIMS using public funding is made publicly available, although AIMS retains the right to use intellectual property generated through its commercial research partnerships for research purposes and to publish and represent publicly all research findings.

During 2023-24, AIMS will transition to using a multi-parameter performance metric that is more specific to marine science than our previous approach and incorporates key measures of research standing (international collaboration, publication in highest quality journals, excellent citation rates). This measure shows AIMS is within the top three marine science organisations within Australia and specialist marine science institutes globally. More broadly, AIMS is also in the top 10 international marine science providers. AIMS will maintain its top three position and will push to become a top five organization among international marine

science providers. During 2021-2022, AIMS instituted a panel of Science Innovation Leaders comprising some of our most senior and experienced scientists. This panel will lead an escalated focus on innovation which will also contribute to maintaining our standing as a marine science institute because the global pursuit of solutions is intensifying.

## Engagement and communication

Engagement and communication are key aspects of AIMS external-facing posture. They help to promote the value, relevance and impact of our research; support AIMS scientific integrity by providing clear and accessible information on research methods and data acquisition; and foster collaboration and trust among stakeholders and the public.

We communicate the role AIMS plays in all the communities in which we operate. This involves publishing detailed information on our website, leveraging exposure from social media channels, engaging with stakeholders, and using media outlets to foster community understanding of marine issues.

Communication is essential for AIMS to build and maintain its reputation and brand. AIMS has been an objective and impartial contributor to public discussion on the effect of climatic and environmental disturbances on our oceans. Through the communication of our research achievements, AIMS has maintained its position as a leader in marine science, building a positive image of our efforts to provide the science required to support the use, management and protection of Australia's oceans. This year we independently verified our reputation through a national awareness survey which scored AIMS with an excellent reputation. This and other measures will be used to further build and improve AIMS' reputation and how AIMS communication is perceived.

Further afield, we engage with government and industry stakeholders, demonstrate our impact and value, and promote our expertise in reef science. As part of our stakeholder engagement we seek to deliver more effective and impactful research, through understanding better the needs, concerns, and perspectives of the communities which we support so that we can provide solutions for our stakeholders. In 2023-24 we will invite stakeholders across the sectors of government, industry, philanthropy, research and education to participate in a Net Promoter Score (NPS) survey. The NPS is a competitive benchmark metric which AIMS uses to invite feedback and evaluation from external stakeholders to help us track and maintain the strength of our relationships.

In 2023-24 we will continue to communicate AIMS' purpose and value to the nation to build public awareness and interest in AIMS. We will increase our ability to do this through enhancing our communication systems to present our public image, promote our research and strengthen our reputation. These enhancements include: continuing with web content development using analytics and user feedback to determine areas of improvement; commissioning an image management system to give staff and our partners greater access to AIMS imagery; and establishing a digital monitoring capability that uses AI tools to monitor the global information space to help us monitor conversations taking place around our brand, and understand information discussed on topics of interest and issues of contention.

To maximise return on investment, we make our research results widely available. All our research has clearly defined impact pathways for delivery to end users, including data provision, published findings, knowledge synthesis reports, data visualisation, risk assessment, decision support tools and direct engagement.

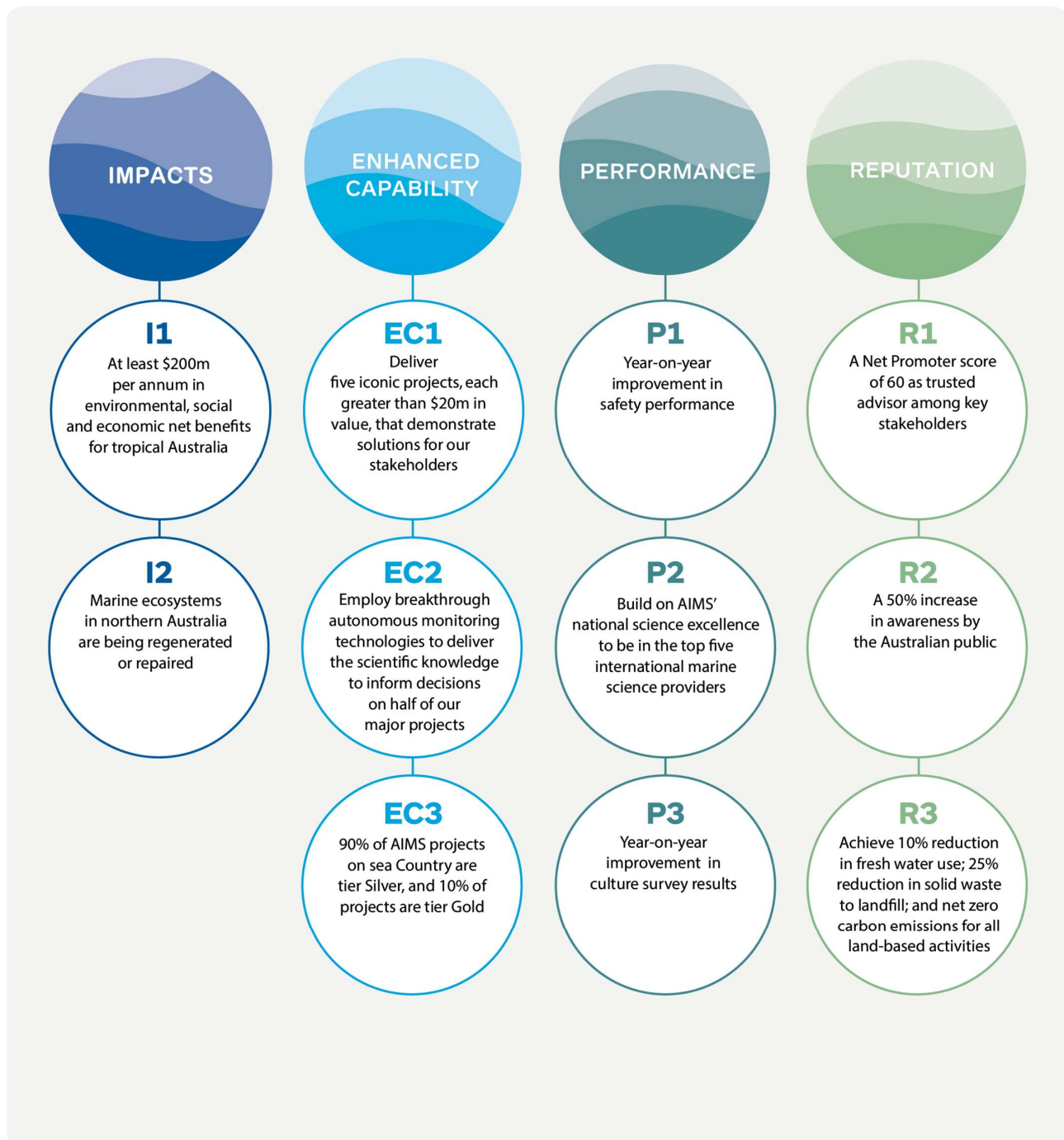
While we work on ways to increase our visibility, we will continue to maintain our role as an independent trusted adviser, providing expert advice to government, industry and the community through formal and informal mechanisms, including participation on expert panels, advisory committees, boards, national and international delegations, and the media.

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# Performance measurement

The high-level directions and objectives set out in the AIMS Strategy 2030 cascade down into detailed implementation plans, as outlined in the Portfolio Budget Statements and Corporate Plan. These form the basis for our research and investment decisions. The AIMS Strategy 2030 has 11 strategic targets to be achieved by 2030 (see Figure 6).

Figure 6: AIMS Strategy 2030





To ensure our progress against these long-term goals, this Corporate Plan contains eight key performance criteria (see Table 5) against which we measure our performance on an annual basis. A combination of quantitative and qualitative indicators that draw on internal and external metrics of activity and success allow us to provide an objective and meaningful assessment of whether we are meeting our performance criteria. As noted on page 19, a 3-year review of our Strategy 2025 (in 2023) allowed us to update some of our key performance indicators to reflect a combination of external environment changes and our achievement successes. Where it made sense to do so, we have strengthened or refined our KPI targets.

**Table 5: Key Performance Indicators**

Performance Criteria	Portfolio Budget Statement (PBS) performance targets	Key Performance Indicators	2023-24	2024-25	2025-26	2026-27	2027-28
AIMS research creates a positive triple bottom line contribution (impact value) to Australia	Minimum two case studies	≥ 2 new triple bottom line case studies published per year (pa)	≥2 new triple bottom line case studies published per year				
		Demonstrated total impact value	≥\$200M per annum total impact value				
Deliver strategic and applied research and monitoring that addresses national research priorities and stakeholder needs	Achieve revenue budget from stakeholder commissioned research	Achieve revenue budget from stakeholder commissioned research	Achieve revenue budget from stakeholder commissioned research				
Maintain or increase current standings for scientific excellence, innovation and impact	Maintain acknowledged domestic and global high standing in relevant fields of research, and confidence of key stakeholders in research outputs	Maintain top 3 ranking in marine science in Australia and top 10 globally and pursuing a top 5 global ranking *	Maintain top 3 ranking in marine science in Australia and top 10 globally			Maintain top 3 ranking in marine science in Australia and top 5 globally	
		Maintain high stakeholder confidence in AIMS' scientific outputs gauged using a net promoter score	NPS ≥55	NPS ≥55	NPS ≥60	NPS ≥60	NPS ≥60
Deliver research advice and scientific products that are critical for stakeholders to assess the impacts of natural and human pressures on sensitive marine ecosystems	Maintain or increase the number of peer reviewed publications and other knowledge products, and make datasets or data products publicly available	Maintain annual journal publication rates ≥200 per annum **	≥200 journal articles and technical reports	≥210 journal articles and technical reports	≥210 journal articles and technical reports	≥220 journal articles and technical reports	Maintain annual journal publication rates ≥220 per annum
		100 per cent of datasets held by AIMS are accessible to the public within one year of collection, subject to any confidentiality restrictions	100%				

Performance Criteria	Portfolio Budget Statement (PBS) performance targets	Key Performance Indicators	2023-24	2024-25	2025-26	2026-27	2027-28
Increase research capability, capacity, impact and science diplomacy through participation in formal national and international collaborations, joint ventures, partnerships and strategic alliances	Maintain or increase the number and scale of domestic and international research partnerships, collaborations, joint ventures and strategic alliances	Maintain proportion of published papers and reports that include collaborators (≥ 80 per cent)	≥80% of published papers and reports include collaborators				
	Specialist advice and expertise provided by AIMS is used by relevant advisory panels and committees	≥ 2 new case studies published per year	≥2 new case studies published per year that demonstrate the value of AIMS' contributions for advisory panels and committees				
Improve research outcomes and impact through increasing Traditional Owner partnership in the planning and delivery of coastal research and development	Year on year increase in % by value of projects with Indigenous partnership in the planning and delivery phases	≥ 1 new case study published per year	At least one case study per year that demonstrates how partnership with Traditional Owner communities improves outcomes for the community and delivers value for AIMS' science.				
Reduce AIMS' environmental footprint	20 per cent reduction in AIMS' carbon emissions compared with 2017-18	Carbon emission reduction ≥ 20 per cent compared with 2017-18	≥25% reduction	≥30% reduction	≥35% reduction	≥40% reduction	≥40% reduction
	15 per cent reduction in AIMS' waste to landfill compared with 2018-19	Solid waste to landfill from normal operations reduced by 15 per cent compared with 2018-19	≥20% reduction	≥25% reduction	≥25% reduction	≥25% reduction	≥25% reduction
Optimise use of research infrastructure assets	Maintain or increase use of research infrastructure	≥ 90 per cent use of major research assets	≥90%				

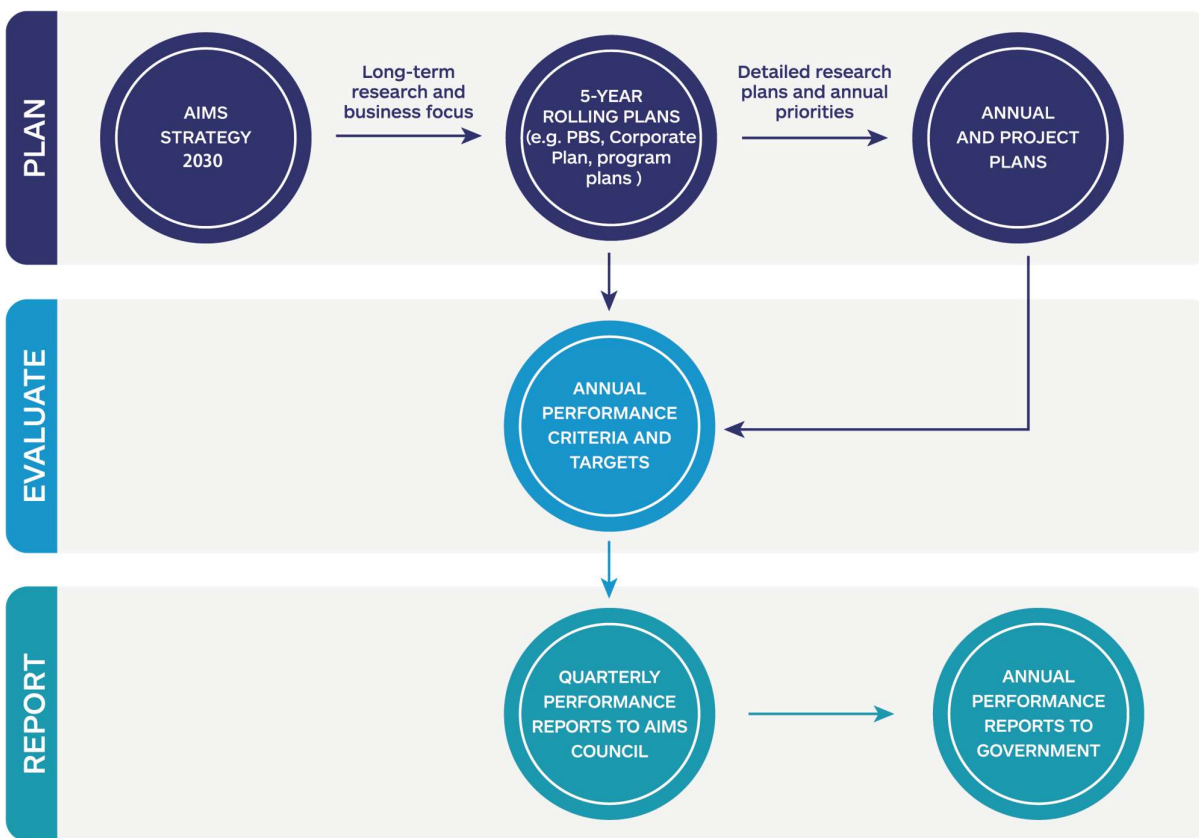
\* Improved methodology for benchmarking will commence from 2023-24.

\*\* Improved measure from 2023-24 to specify scientific paper productivity.

The AIMS Annual Report 2022-23 will provide a comprehensive assessment of our performance for the financial year. Overall performance and performance against research goals will be reported in detail. This report will be available on the AIMS website<sup>11</sup> in late October 2023.

The links between our planning process and performance are shown in Figure 7.

**Figure 7: AIMS planning, evaluation and reporting process**



<sup>11</sup> <http://www.aims.gov.au/>

# Corporate capability

## Health, safety and the environment

Safety is one of AIMS' core values, defining the principle of caring for ourselves and others in all that we do. Our highest priority is the health and wellbeing of our staff, collaborators, volunteers, and visitors.

We operate in challenging environments and undertake activities where active care is required to manage the health and safety of our workers and reduce our impact on the environment. AIMS responds to this challenge with an organisation-wide approach to risk management and a relentless focus on developing our safety culture and systems. AIMS has a comprehensive health and safety and environmental management system that is audited every two years against the requirements of ISO 45001 Occupational Health and Safety Management Systems and AS/NZS ISO 14001 Environmental Management Systems.

AIMS Strategy 2030 commits us to year-on-year improvement in safety performance. We recognise that safety management and staff wellbeing are intrinsically linked with delivering quality science, which drives AIMS to commit to achieving year-on-year improvement in safety performance. Over the last 3 years, AIMS has reduced the number of recordable injuries<sup>12</sup> sustained annually, while undergoing record growth (38%), and has performed better than target in 2 of the 3 years. Injury Severity Rate<sup>13</sup> has steadily decreased, achieving a 29% improvement in performance over this period. By the end of this Corporate Plan period, we plan to achieve a total recordable injury frequency rate (TRIFR<sup>14</sup>) of 8 or below, and an ISR of 58 or below. These targets are ambitious in the context of a growing organisation.

## Financial

### Core funding

Core funding for AIMS is provided through Australian Government annual appropriations. These are identified in the 2023-24 Portfolio Budget Statements<sup>15</sup>, Budget Related Paper no. 1.3, Climate Change, Energy, The Environment and Water Portfolio, pp. 87-109 (PBS).

In April 2023 the Commonwealth announced as part of the Budget, the \$163.4 million *Securing the Future of Marine Science in Australia* additional funding package for AIMS to meet financial sustainability over the forward years of this Plan. This includes \$128.5 million of operating funding and \$34.9 million of capital funding. In addition, the Commonwealth committed to ongoing annual additional core funding of \$43.5 million beyond this Plan.

### External revenue

External revenue comes from industry, philanthropy and a range of state and Australian Government departments, authorities and agencies (Figure 8). This external revenue stream provides essential support to maintain AIMS' current capability and augment its science excellence and deliver impactful outcomes. Based on PBS data over the forward years of this Plan, external revenue will contribute in the range of 24%-33% per cent of our operational budget. This overall reduction since our last Corporate Plan reflects the additional core funding being provided by the Commonwealth.

External revenue will continue to remain at record levels over the forward years, despite this relative reduction in relation to our operational budget. The exception to this occurs in 2023-24 where a reduction in overall external revenue occurs due to AIMS receiving Reef Restoration and Adaptation funding directly as appropriation instead of external revenue from the Great Barrier Reef Foundation.

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<sup>12</sup> A recordable injury is any work-related injury or illness that requires medical treatment, or results in restricted duties or lost time.

<sup>13</sup> Injury severity rate is the number of lost days or days of restricted duties per million hours worked.

<sup>14</sup> TRIFR equals the number of recordable injuries per million worked hours, where recordable injuries include medical treatment cases, restricted work cases and lost time injuries.

<sup>15</sup> [https://www.dccew.gov.au/about/reporting/budget#toc\\_0](https://www.dccew.gov.au/about/reporting/budget#toc_0)

**Figure 8: Sources of external revenue**



AIMS business development activities in recent years have focused increasingly on developing large-scale, long-term partnerships. Further bolstered by increased stakeholder management efforts, and a continued focus on quality and delivery, AIMS' external revenue pipeline of opportunities is healthy, comprising a large complement of strategic programs of work. The full net external revenue budget for 2022-23 has been identified with ~90% of opportunities contracted or in advanced stages of development. Approximately, 90% of the 2023-24 net external budget has been identified.

While the pipeline of external work is healthy, delivery of project milestones remains a risk due to potential operational impacts associated with COVID-19. Milestone delays affect our ability to recognise external revenue, which would place some of the external revenue budget at risk. This risk, as we live with COVID-19, is minimal with the mitigating controls but continues as a possibility.

AIMS will maintain existing capabilities with the sustainability funding received and also maintain the amount of net external revenue it earns in the next five years. Appropriations funding provides approximately 70 per cent of our base costs of operations. External revenue supports the level and capability of science that we provide to support Australia's marine estate. A significant decrease in external revenue over the longer term could require AIMS to reduce its research infrastructure, breadth of scientific disciplines or number of staff. Any such move will reduce our effectiveness and the economic, environmental and social benefits for the nation that are underpinned by our science and research. The ongoing sustainability funding increase to appropriation which was approved in Budget 2023-24, provides relief to external revenue pressures.

AIMS extends the breadth and impact of its research through co-investment with stakeholders. These collaborative arrangements are typically mandated for government-funded programs, including the National Environmental Science Program (NESP) and the Integrated Marine Observing System (IMOS). We take care to ensure the arrangements, whether through commercial contracts or co-funding, align with national science priorities and result in transfers and benefits back to the nation. A step-change in data-gathering and processing capability will make direct access to data products by all potential users a practical possibility.

Our long-term approach to delivering improved research outcomes through external funding includes the following criteria:

- The research must contribute to future impact (i.e. net economic, environmental or social benefit for Australia).
- The research must advance strategic government objectives as reflected in the AIMS Strategy 2030, in addition to meeting customer needs.
- The quality of research is appropriate to achieve robust outcomes.
- AIMS retains intellectual property access.
- AIMS is not inappropriately restrained from presenting the findings to government or correcting any misrepresentation of its findings.

We charge commercial rates and decline co-investment opportunities when the research is for the direct commercial gain of an organisation or company.



## Operating result forecast

AIMS is forecasting an operating surplus in 2023-24 as a result of additional funding being received for the expansion of the National Sea Simulator and operating losses in 2024-25 to 2026-27 years of the Corporate Plan. The reason for these losses is continuation of funding for depreciation expenses being less than the expected depreciation expense.

## Capital investment

All major assets of AIMS are subject to a capital replacement program to ensure lowest life-cycle cost, maximum return on investment and tight alignment with our current and future research needs. The program comprises:

- Routine replacements (e.g. motor vehicles, computers and scientific equipment).
- Ongoing facility maintenance and refurbishment.
- Technological development associated with new autonomous monitoring equipment.
- Upgrades to the enterprise resource planning (ERP) system.

A number of significant opportunities to refresh and renew AIMS' aging infrastructure are either underway or planned. Work is also currently being undertaken to develop the case for potential future project funding options.

- The *RV Cape Ferguson* (commissioned in 2000) is at end-of-life and needs replacement. This ageing vessel maintains >250 days at sea per year supporting field-based research, but continues to incur increasing maintenance needs and higher costs of operation overall. In March 2022, the federal budget included \$5.3 million to design a new state-of-the-art marine research vessel to replace the *RV Cape Ferguson*. The vessel design project is progressing with input from leading Australian and International research vessel designers and leveraging the vast and unique experience of AIMS field-going staff. The new vessel design will be suitable for construction in Australia, will include highly efficient, low-emissions propulsion systems suitable for our area of operation, and will have the ability to fully integrate next-generation onboard system and technology platforms – features that will amplify the outputs of our scientific field programs and contribute to Australia's global leadership in marine science. The vessel design project will support a detailed vessel construction business case by late 2023, with replacement of the *RV Cape Ferguson* by 2027, subject to construction phase funding.
- The October 2020 federal budget included funding from the National Research Infrastructure Investment Plan for expansion of the SeaSim and to establish merit-based access for external researchers through the establishment of the SeaSim National Facility. Construction is underway, with anticipated utilisation of new experimental spaces by October 2023, and full completion in the first half of 2024.
- Our original headquarter buildings and marine facilities near Townsville are approaching 50 years of age and require significant ongoing investment in both critical maintenance and facility upgrades to support AIMS' science activities and aspirations. There are sections of buildings at our Townsville site that cannot be fully utilised due to ageing structures and mechanical plant, leading to potential safety issues if not managed. Some of our laboratory and office spaces retain their original 1970s design elements, and require urgent upgrade to modern standards. During the period of the Corporate Plan, we will undertake detailed master-planning of our Townsville site and commence facility refurbishment and site resilience upgrades to power infrastructure to prepare for future science and infrastructure capability and capacity needs.
- Our marine facilities and wharf are some of the oldest structures on our Townsville site and require significant remediation and upgrading to ensure ongoing operation and to cater for AIMS future capability needs. The March 2022 federal budget included \$26.5 million for remediation and upgrade of the AIMS Wharf, including expansion of the existing infrastructure to support larger sized, modern research vessels and the requirements of the ReefWorks maritime technology testing range. Design work and engineering investigations are progressing, with early works anticipated to be undertaken in parallel with the SeaSim construction project to leverage cost and logistic synergies. This is an extremely complex project, and will continue into 2024-25.

## People

We take pride in the professionalism, capability and productivity of our people. AIMS employs approximately 374 science and support staff and another 60 in outsourced functions. Our scientists are on the ground and in the water, mapping, monitoring and collecting information on Australia's marine estate. They are in our labs, analysing data, modelling and pushing the boundaries of tropical marine science. Many of our scientists are international leaders in their field.

We also maintain a strong educational program, particularly through postdoctoral fellowships co-funded with university and industry partners (between 20-25 at any one time) and PhD scholars (about 60) jointly funded and supervised in partnership with some of Australia's leading universities. AIMS also partners with universities to support Masters by research and other higher education work experience programs, complemented by our first ever Graduate Program which employed 13 Bachelor degree graduates covering both science and corporate functions. Core scientific expertise is supported by operational expertise. While focused on the delivery of scientific outcomes, we aim to raise foundation skills such as leadership, project management, stakeholder engagement and research communication.

The *Securing the Future of Marine Science in Australia* additional funding announced by the Commonwealth in April 2023 will add an additional 100 staff over the plan period and make ongoing, the funding of 66 staff that were part of the short-term funding allocated in the mid-year economic and fiscal outlook for fiscal 2022. This will grow capability in three key areas: Science Technology Development, Science Technology Deployment and Traditional Owner partnerships. The resourcing also includes staffing to enable AIMS to meet current workload demands at a sustainable level.

Our workforce initiatives support the wider Australian Public Service undertakings on diversity and gender equity and Indigenous employment. AIMS has an Equity, Diversity and Gender (EDGE) Working Group to integrate gender equity and diversity within AIMS culture. 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 STEM disciplines. The key element is the Action Plan that AIMS staff and leadership have committed to complete over the four years of SAGE accreditation, coordinated by the EDGE Working group and the People and Culture Team. The four key themes of the AIMS Action Plan are:

- Equity considerations in AIMS policy
- Workforce gender balance
- Diversity culture
- Training and communication.

## Research partnerships

AIMS partners to increase the capability and capacity to solve the scientific challenges we need to overcome and involves stakeholders and users in the design and conduct of the science, ultimately increasing its adoption and eventual impact. We engage with both national and global marine science capability, using joint ventures and strategic alliances to increase the scope and scale of collaborative research projects.

We adopt a collaborative approach to R&D at the national level, engaging early with well-respected partners capable of delivering science at the required scale and relevance. These include partnerships and programs like the Western Australian Marine Science Institution, the National Environmental Science Program, the Integrated Marine Observing System, and the Indian Ocean Marine Research Centre. Three initiatives with universities located in the cities where we locate our scientists and facilities, AIMS@JCU, AIMS@UWA and a new AIMS@CDU, focus on early career researchers (ECR's) to produce the next generation of marine scientists.

We also have memorandums of understanding with James Cook University, Queensland University of Technology, Monash University and a number of international institutes, including the National Oceanic and Atmospheric Administration (US), the University of South Pacific (Fiji) and the Palau International Coral Reef Center. Such partnerships promote effective and adaptable solutions to improve the protection of coral reefs and other reef-dependent biodiversity which underpin substantial socioeconomic benefits.

In 2023-24, AIMS will continue to expand initiatives under its Indigenous Partnerships Plan to respect Traditional Owners as decision makers in their sea Country, and further build capacity to co-design partnership projects that deliver to mutual benefit. We will strengthen the potential for Indigenous capability and capacity building within partnership projects, to support the sustainable management of land and sea Country for future generations.

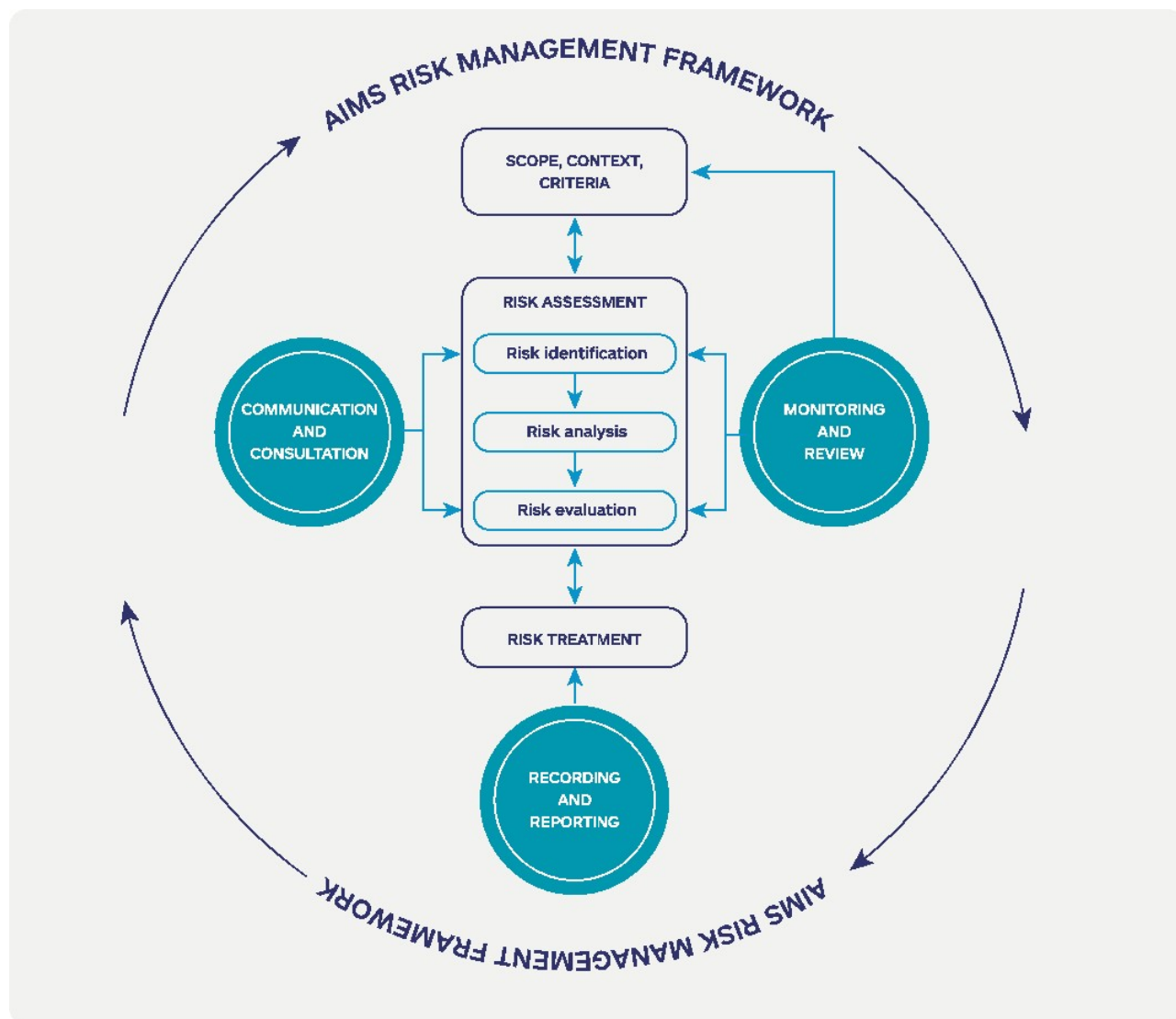
Australia is a founding signatory of the International Coral Reef Initiative (ICRI). ICRI's operational network (the Global Coral Reef Monitoring Network) comprises a mechanism to advance its objectives. AIMS has been the global coordinator of the network for several years and will continue to do so in 2023-24.

The GCRMN is a worldwide group of coral reef scientists, managers and organisations that monitor the health of the world's coral reefs. The release of the GCRMN Status of Coral Reefs of the World report in 2021 was a key milestone of reinvigorating the network. The GCRMN will now focus its attention to capacity building, data management solutions, inclusion of socioeconomic monitoring and maintaining momentum for coordinated global monitoring efforts.

# Risk management

To fulfil our purpose and achieve our strategic targets, we need to engage with risk, manage uncertainty and exploit opportunity. Our comprehensive corporate risk management system includes processes to identify and assess new risks, together with the refinement of existing control measures. It is based on an organisational risk management framework and an associated corporate risk register and control framework. This risk framework (shown in Figure 9) aligns with ISO 31000 Risk Management and complies with the Australian Government's risk management policy.

Figure 9: AIMS Risk Management System



The control framework, which includes the AIMS Audit Committee and AIMS Remuneration and Nominations Committee (both subcommittees of the AIMS Council), helps AIMS discharge its responsibilities under the *Australian Institute of Marine Science Act 1972* and the *Public Governance, Performance and Accountability Act 2013* in respect of financial reporting, performance reporting, risk oversight and management, internal control and compliance with relevant laws and policies.

The control framework is designed to ensure the following outcomes:

- **Strategies and goals** - our strategic targets are aligned with national priorities and the needs of stakeholders.
- **Plans** - our plans offer viable solutions for achieving goals and objectives.
- **Resources** - our financial and non-financial resources are sufficient to complete the research and other activities required to achieve our goals.
- **Delivery** - our systems and processes deliver research and other activities within our annual plans in a safe and efficient manner.
- **Communication** - our research outcomes are communicated in a manner that maximises user uptake and value.
- **Values** - all our activities are undertaken in a manner consistent with our organisational values.

## Risk culture

Organisations with a strong risk culture are more resilient, make better and more timely business decisions and are better equipped to enhance and protect their reputation. Over the last several years, AIMS has deliberately matured its risk culture from both a top-down and bottom-up approach.

At the corporate level, AIMS has mature risk systems that include a risk policy and risk appetite statements that are approved by the AIMS Council, a risk management framework and a comprehensive corporate risk register. Risk is integrated into all reporting to the AIMS Council and within the AIMS Leadership Team.

AIMS also has a proven track record of risk management with respect to workplace health and safety. Our risk profile includes remote field work, diving, laboratories, hazardous chemicals and biohazards. Our staff have embraced our operational risk management processes to ensure that the risks associated with their work are managed to be as low as reasonably practicable.

During the Plan period, our key area of focus will be continuing to develop the risk culture with respect to delivering our project portfolio. The AIMS Project Management Framework includes approval workflows and support tools to help assess and manage project risks and opportunities. This is further supported by the AIMS Project Risk Procedure, which assists project leaders to manage all foreseeable risks (both opportunities and threats) in a manner that is proactive, effective, and appropriate, to maximise the likelihood of the project achieving its objectives, while maintaining risk exposure at an acceptable level. The framework and procedures are an important step in formalizing our approach to project risk management. The next significant step is to drive the maturity of our risk management culture in this important area of our business. This will be achieved through direct coaching and support from the Project Management Office, and formalised performance review and feedback by the AIMS Leadership Team.

## Risk summary

AIMS' risk profile over the period of this Plan will be characterised by a period of rapid change in our operating environment. As climate change continues to advance over the coming decade, including the likelihood of further bleaching events on Australia's coral reefs, we anticipate our services will continue to be in increasing demand and require a step up in operating tempo.

The risks associated with COVID-19 continue to diminish, however, multiple risk areas remain (workplace health and safety, strategic targets and outcomes, plans, resources, delivery and communication). Like all other risks, the risks associated with COVID-19 are being managed - and will continue to be managed - within the AIMS Risk Management Framework.

Table 6 summarises the risks associated with each outcome and proposed controls. AIMS reviews its corporate risk register every three months to ensure that risks and controls remain current. For the life of this Corporate Plan, a continuous improvement approach will be applied to ensure that all risks continue to be as low as reasonably practicable.

**Table 6: Outcomes and controls associated with each risk**

Risk area	Description	Controls
Workplace health and safety	Ensure the health and wellbeing of our staff, collaborators, volunteers and visitors. We operate in challenging environments and undertake activities where active care is required to manage the safety of our people.	AIMS has a comprehensive safety management system to ensure that hazards are identified, and risks are assessed in line with the AIMS' Risk Management Framework and established operational risk management procedures. This allows effective management of the complexities of our research work and supporting functions. AIMS fosters a reporting and learning culture, working to ensure that all personnel feel obligated to delay or stop work where an unacceptable risk is identified and to report hazards and incidents. AIMS holds that 'good science must be safe science' and that safety is a shared value embedded in everything we do.
Strategic targets and outcomes	Ensuring that research is aligned with national priorities and stakeholder needs and targeting the highest priority areas.	Targets are defined in AIMS Strategy 2030, the Portfolio Budget Statements and the Corporate Plan. In developing these plans, AIMS completed a comprehensive assessment of current and future stakeholder needs. These were integrated with the knowledge of our peers as to current and emerging environmental threats, challenges and opportunities to develop a set of organisational goals and objectives.
Plans	Ensuring that all aspects required to achieve our strategic targets are considered and detailed in an appropriate set of plans. This includes research planning (which research projects are required to create the knowledge to achieve the research impacts and outcomes), capability planning, delivery and communication planning.	AIMS has a comprehensive and adaptive process to develop research programs aligned with information needs. At the highest level, targets are set within our Strategic Plan. These targets cascade down, through the Portfolio Budget Statements and Corporate Plan, to five-year and annual research plans. Internal assessment, approval and tracking processes then ensure that only research aligned with these plans is undertaken. Capability and communication plans support the research plans. These plans are articulated to key stakeholders via the Portfolio Budget Statements and the Corporate Plan.



Risk area	Description	Controls
Resources	Understanding that the research outcomes articulated in this Plan rely on our maintaining capabilities underpinned by achieving revenue targets. This requires government funding at current forecast levels, achieving budgeted external revenue, and the ability to manage multi-year external revenue variability.	<p>AIMS has developed a strong business development framework to maximise the likelihood of achieving external revenue targets, along with a quantitative risk-based methodology to assess potential external revenue volatility. It uses this assessment to design and implement management strategies where feasible.</p> <p>Additionally, if AIMS is to respond to emerging pressures and opportunities as detailed in this Corporate Plan, then capability growth will be required.</p>
Delivery	Delivering agreed plans in order to safely meet our targets, including research projects and the associated operational and corporate functions.	<p>AIMS has experienced research, operational and corporate staff and well-established fit-for-purpose systems and processes. The actions detailed within the plans are within AIMS' demonstrated capabilities. AIMS has a comprehensive and high-performing safety management system and a strong organisational safety culture.</p>
Communication	Ensuring research outputs and advice are in a form relevant and useable by stakeholders, readily available and clearly communicated.	<p>AIMS has a whole-of-business communication plan, which aligns with and supports the AIMS Strategy 2030. The plan adopts a four-component approach:</p> <ul style="list-style-type: none"> <li>• Build the capacity of staff to communicate our new strategic intent, and to project and align with our brand.</li> <li>• Promote the value that AIMS provides, through proactive and coordinated marketing and communications.</li> <li>• Measure the effectiveness of communication, consistent with our impact framework, to ensure our communications support organisational objectives.</li> <li>• Protect AIMS from reputational risk.</li> </ul> <p>The Communication Plan includes several action items to be developed during the life of this Corporate Plan.</p>
Principles and values	Adherence to our values.	<p>AIMS' reputation is built on a set of values. Over time, these values have become embedded in the fabric of the organisation. They are continually discussed and incorporated into systems and process where appropriate, as AIMS works to express these values in all our actions.</p>

# Infrastructure

**AIMS operates out of four locations across Australia with two major research vessels and several significant research facilities, including the world-class National Sea Simulator (SeaSim). This enables us to deploy our marine research capability across northern Australia and in selected international engagements.**

AIMS' headquarters is at Cape Ferguson, about 50 kilometres from Townsville in Queensland. Our Darwin office is located at the Arafura Timor Research Facility (ATRF) adjacent to the Charles Darwin University campus. AIMS in Perth is co-located within the Indian Ocean Marine Research Centre (IOMRC) at The University of Western Australia's Crawley campus. A small liaison office in Canberra facilitates, enables and promotes interaction with the Department of Climate Change, Energy, the Environment and Water, and other government departments and agencies.

A specialised research fleet, unique aquaria, sophisticated laboratories, operational workshops, extensive collections, analytical technology and an array of marine observing equipment enable our scientists to examine subjects ranging from microbiology through to broad-scale ecology and coastal oceanography, both in the laboratory and in the field. Below is a summary of our national research infrastructure:

## The SeaSim

The SeaSim is a world-class aquarium for tropical marine organisms where scientists can conduct cutting-edge research not previously possible. With a reliable, consistent supply of sea water, the SeaSim provides fine control over many environmental variables including light, temperature, acidity/CO<sub>2</sub>, salinity, sedimentation and contaminants.

In 2018, the government released a \$1.9 billion National Research Infrastructure Investment Plan, which included SeaSim funding for expansion of the large tank experimental areas, capital life cycle replacements and merit based open access to 35% of the facility under a national facility model. The 2020-21 Budget included \$36.3 million over three years from 2020–21 for the early implementation of the Sea Simulator project to support the Great Barrier Reef Restoration and Adaption Program (RRAP).

There are two major components to the project:

- Expansion of the existing SeaSim facility to almost double its existing experimental capacity; and
- Adopting a National Facility model to provide merit-based access for the best national and international researchers to undertake their work in the SeaSim. This model makes available a proportion of the experimental space within the Expanded SeaSim Facility, equivalent to 35% of the existing SeaSim.

Construction of the expanded SeaSim is progressing rapidly, with new experimental spaces anticipated to be occupied in the latter half of 2023 to support critical research undertaken during annual coral spawning events. Full completion will occur in the first half of 2024.

2023-24 will also see the first experimental work undertaken in the SeaSim under the National Facility operating model.

## The AIMS research fleet

Two large purpose-built ships (the research vessel *RV Cape Ferguson* and the *RV Solander*) and several smaller vessels provide unique capacity for researchers to access and conduct research in the diverse tropical marine habitats across Australia's northern coastline. Our large vessels are equipped with specialist oceanographic equipment, onboard laboratories, and support for flow-through aquaria and other experimental equipment. Inflatable tenders and onboard dive support enables diving operations from these vessels. This combination of capabilities, unrivalled in the Australian Research fleet, facilitates our scientists and collaborators to safely and effectively conduct research at sea, in some of our country's most remote tropical regions.

A project to design the next generation of coastal research vessel for Australia, as a replacement for the *RV Cape Ferguson* has commenced (see earlier section), and we have commenced planning to upgrade our small to mid-sized vessel fleet, including vessels in Townsville and Darwin.

Other key scientific infrastructure includes:



### **Research Laboratories**

more than a dozen laboratories across Australia including analytical, x-ray, molecular/genetics, and quarantine facilities.



### **Engineering workshops**

constructing specialised equipment such as underwater sensors, data loggers, sediment traps, weather towers, coral corers and many other devices



### **Field-deployed observing and remote-sensing equipment**

including weather stations and autonomous oceanographic instrument moorings



### **Coral core collection**

Australia's largest and most significant coral core collection

AIMS will continue to focus on ways to maintain and, where necessary, replace ageing infrastructure to ensure safe, fit-for-purpose platforms for conducting marine science.

As well as maximising value derived from our diverse research infrastructure for ourselves, we will ensure its high use by external collaborators in industry, universities and other research institutions.

# Systems and processes

Our physical capabilities are supported by an array of corporate and operational systems and processes. Over the last two years, AIMS implemented a new project management framework and supporting systems, which include Microsoft Project Online and TechnologyOne CiAnywhere. In 2023-24, we will implement a data warehouse to provide the overall platform for the implementation and integration of our business decision support systems. A program of continuous improvement and integration will also commence across our underlying business information and corporate systems including those for contracting and business development, cementing our position as a professional partner and employer of choice.

## Intellectual assets

AIMS possesses unique collections, observations and measurements containing decades' worth of information on Australia's tropical marine ecosystems, extending from the Great Barrier Reef to north-western Australia. This collection includes the assets described in Figure 10.

These assets are unparalleled. The continuity of long-term and broad-scale geographic collections and information enables critical long-term analysis of natural and human-induced trends in ecosystem change. Over the life of this Corporate Plan, we will leverage and develop these intellectual assets to support our research activities and plans.





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