

REEF 2050 INTEGRATED MONITORING AND REPORTING PROGRAM

Annual Business Plan 2023–24



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Comments and questions regarding this document are welcome and should be addressed to:



Australian Government

**Great Barrier Reef
Marine Park Authority**

**Great Barrier Reef Marine Park
Authority**
280 Flinders Street (PO Box 1379)
Townsville QLD 4810, Australia

Phone: (07) 4750 0700
Fax: (07) 4772 6093
Email: info@gbbrmpa.gov.au

www.gbbrmpa.gov.au

The Reef 2050 Integrated Monitoring and Reporting Program (RIMReP) acknowledges the remarkable world views, unique wisdom and enduring connections that have informed the guardianship of the Reef for millennia.

We pay our respects to the Traditional Owners as the first scientists of this land and sea, and value their traditional knowledge which continues to inform the current management and stewardship of the Reef for future generations.



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EXECUTIVE SUMMARY

A key component of the *Reef 2050 Long-Term Sustainability Plan* (Reef 2050 Plan) is the establishment of the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP or the Program).

This coordinated monitoring, modelling and reporting program for the Great Barrier Reef (the Reef) and its adjacent catchment will help track progress towards the Reef 2050 Plan's objectives and drive adaptive management of this world heritage property.

The Program has been progressing the implementation phase since 2020.

A dedicated group of partners coordinated by the Great Barrier Reef Marine Park Authority (Reef Authority) continue to work together to improve collection and sharing of information about the Reef and deliver practical tools to support decision-making.

Further engagement with governance bodies and Traditional Owners will progress in 2023–24.

This fourth Annual Business Plan (this plan) offers a snapshot of progress made in 2022–23 and outlines key activities for the year ahead.

The governance groups have prioritised activities for 2023–24 based on the Five-Year Business Strategy.

This plan presents a program of core activities, which will continue to move the Program forward. Activities may be added or adjusted as the year progresses to reflect emerging priorities and progress to date.

Priorities for the 2023–24 year

Project

1. Identifying RIMReP's future investment priorities and associated funding and investment opportunities for ongoing and sustainable operation.
2. Communication outreach to increase understanding and visibility of the Program, what it enables and its value.
3. Co-designed Traditional Owner communication products to showcase RIMReP and ongoing engagement with Traditional Owners and Indigenous groups interested in future RIMReP involvement and partnerships.
4. Continue design and build of a fit for purpose federated data management system to enable the integration, analysis, and presentation of data through the Reef Knowledge System (RKS).
5. Development of business requirements and visual concept for the design of the future online Reef 2050 Plan reporting platform.
6. Integration and release of new content on the RKS (dashboards, digital resources, and additional dataset links) and updated with research supported enhancements to improve user experience.
7. Determine the operational and resource requirements for delivery of a spatial decision support system tool, to be incorporated into the RKS.
8. Development of a framework for future monitoring, evaluation, reporting and improvement (MERI) activities, including a rapid point in time assessment.

Project Lead

RIMReP partnership

Reef Authority

Reef Authority

Integrated Marine Observing System (IMOS)

Reef Authority

Reef Authority

Reef Authority

Reef Authority



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BACKGROUND

This Annual Business Plan (the plan) details the priority projects for the 2023–24 period (1 July 2023 to 30 June 2024) to enable the delivery of activities required to progress RIMReP.

The plan sets out the estimated project budgets and performance indicators that have 'line of sight' to the RIMReP Business Strategy 2020–25. The Program's partners will deliver the Annual Business Plan together and maintain momentum to achieve the Program's vision.

The Program's vision is to develop a knowledge system that enables resilience-based management of the Great Barrier Reef and provides managers with a comprehensive understanding of how the Reef 2050 Plan is progressing.



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Reef 2050 Integrated Monitoring and Reporting Program

- RIMReP is a partnership involving Australian and Queensland government entities, science partners together with Traditional Owners.
- The partners include the Great Barrier Reef Marine Park Authority (Reef Authority), Department of Climate Change, Energy, the Environment and Water (DCCEEW), Australian Institute of Marine Science (AIMS), Integrated Marine Observing System (IMOS), Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Queensland Government. Four Traditional Owner members also form a key part to oversee the Program’s inclusion of governance processes.
- The Program covers the Great Barrier Reef World Heritage Area and is coordinated by the Reef Authority. The Program will provide a window into this complex and globally significant ecosystem and will provide a comprehensive and up-to- date ecological, social and cultural understanding of the Reef.
- The Program’s primary purpose is to drive resilience-based management and track progress against the objectives and goals outlined in the Reef 2050 Plan. Resilience-based management builds on foundational management programs. It places a strong emphasis on using the best available information and forecasting tools to adjust management actions to improve Reef health and recovery.
- A centrepiece of the Program is the interactive online RKS — the ‘first stop shop’ for up-to-date information about the Reef to guide effective management decisions in a rapidly changing world.
- The Program enables the five-yearly Outlook Report and the five-yearly review of the Reef 2050 Plan.
- The RKS is being continuously improved, and over time it will show monitoring and modelling data from a wide range of sources in useful and interactive ways.

Key outcomes of the Program:

1. More accessible, timely and interactive information about the Reef and the communities it supports.
2. Strong, collaborative partnership, supported by good governance.
3. Empowered Reef managers, Traditional Owners and stakeholders — better informed and responsive.
4. Systems and tools that are engaging, interactive and fit for purpose.
5. Reef 2050 reporting that is informative, robust and provides evidence-based insight into progress.
6. Greater collaboration and interoperability.
7. Information and monitoring that meets best practice standards, is integrated and evolves to meet emerging needs and technology advances.

ACHIEVEMENTS 2022–23

During 2022–23, the Program continued to make significant progress toward delivery.



On 16 May 2023, RIMReP held a combined face-to-face workshop with the current RIMReP Executive Group and Operations Group members in Townsville, which provided an opportunity to restate partner commitment to the Program and objectives of RIMReP as a collaboration with a view to the future.

The workshop also focused on celebrating prior achievements, acknowledging current and future challenges and strategic planning in order for RIMReP to be sustained operationally in coming years, including approvals of the nine priority projects for RIMReP in 2023–24.

Members welcomed this collaboration opportunity and the workshop will be an ongoing activity to ensure the RIMReP partnership remains strong, committed and continues to work to a shared purpose.



RIMReP is committed to working in genuine partnership with Traditional Owners to advance their inherent rights, interests, and aspirations. To support this, one of this year's RIMReP projects aimed to raise awareness of RIMReP among Traditional Owner groups. To achieve this, a series of information forums were held throughout the Great Barrier Reef Region in Rockhampton, Townsville and Cairns.

A number of Traditional owner groups were in attendance, and were able to gain a good understanding about:

- RIMReP vision/outcomes
- RIMReP progress to date
- Traditional Owner component/future engagement opportunities with RIMReP.

This work is an early step in an ongoing engagement and collaboration journey. The Traditional Owner governance members of the RIMReP Operations Group and Executive Group are a core part of the project and have a critical role in designing and delivering the forums.



Twelve projects addressing priority monitoring gaps were funded in 2021 and 2022 by the Reef Trust Partnership (RTP), coordinated by the Great Barrier Reef Foundation (GBRF) (\$14.6 million). The projects cover the biophysical, cultural and socio-economic contexts of the Reef, including inshore dolphins, dugong, seabirds, island habitats, including invasive species and Reef fish. All projects are on track, with most having completed their initial fieldwork stages in 2022.

They are utilising a suite of cross-cutting innovative methodologies and engagement tools to transform Reef monitoring approaches. Examples range from using drones to measure a range of Reef indicators, machine learning to analyse the vast amount of generated data, a dedicated integration resource to facilitate Traditional Owner participation in monitoring activities (more than 70% of projects in the Critical Monitoring Program have direct Traditional Owner participation) and the piloting of a co-designed heritage monitoring framework approach called the 'Strong Peoples – Strong Country' with three Traditional Owner groups.



The RIMReP data management system (DMS) project is building the required infrastructure to harvest, process and distribute relevant data for the management of the Great Barrier Reef. This includes cloud-based services and the use of standards for data and metadata.

During 2022–23, the DMS project began working with three high-priority use cases as a proof of concept: the Reef Health Report, the Human Use Dashboard and the Reef Indicators project. The Reef Authority will be able to collect the necessary data for these three cases from one single site using a robust and well-documented service.

The interaction with data providers as fundamental stakeholders of the project is of utmost importance to better understand their data collections and data providers' needs. To facilitate this, the DMS team has been focused on engagement, including holding the first of several data providers' forums.

ACHIEVEMENTS 2022-23

(CONTINUED)



During 2022-23, the RKS, the website for RIMReP, was transferred to a new web platform, the same platform used for the Reef Authority's corporate website and many other government websites. A major benefit of this new platform is its robust content management system, which provides the ability to adjust and grow the RKS's content more easily over time.

Some improvements of the system were also undertaken:

- More intuitive menus providing easy access to data, information and visualisation tools for managers and the public.
- A dashboard catalogue, which is a place for visual tools (dashboards) that provide an at-a-glance view of a dataset or combine multiple datasets.
- A new product, the Great Barrier Reef Marine Monitoring Program (MMP) dashboard was launched as part of the RKS to ensure the annual inshore Reef monitoring results for water quality and coral and seagrass condition can be easily accessed by the public in a timely manner.



In 2022-23, a fit-for-purpose Spatial Decision Support System (SDSS) was scoped and designed including multi-criteria analysis capability that supports the delivery of the RIMReP vision.

The project delivered (1) an industry best practice report, (2) a technology assessment and (3) the final design specifications for a SDSS.

Initially focused towards internal use by the Reef Authority's Maritime Incident Response and Spatial Planning teams, the SDSS must be scalable in design to expand to other business areas and flexible in architecture to integrate with existing and future information systems.



FOCUS FOR 2023–24

- Program implementation is progressing during 2023–24 and continues to be designed around a delivery framework of seven program priorities (Figure 1 below). Driven by Management Needs, each priority contributes in turn to Effective Management Responses. Annual Business Plan projects are structured to deliver against different aspects of the framework.
- The focus of projects is to continue to fill critical knowledge gaps and improve the capacity of RIMReP to deliver progress reporting against the Reef 2050 Plan and support resilience- based management.
- In 2023–24, project activities will continue to focus on Management Needs, Access, Show and Continual Improvement, with the greatest effort directed toward continuing the scoping and implementation of a fit for purpose DMS, progressing the Reef 2050 Plan reporting framework, enhancing decision support capability, enhancing the RKS and Traditional Owner engagement.
- 2023–24, will also see progress in an active investment in continuous improvement to allow the Program to adapt to changes in the operating environment, user needs, emerging technologies and knowledge systems sources. Evaluation and reporting, and investigating sustainable funding and investment opportunities will be of particular priority.
- Twelve projects addressing priority monitoring gaps identified by RIMReP will continue in 2023 and will be monitored as part of business-as-usual activities of the Program. This important work is supported through funding from the RTP, and coordinated by the GBRF.
- Existing key monitoring activities that contribute to the Program will also continue, supported by Program partners.
- The governance groups continue to recognise the need to look for integration opportunities across other programs including the Reef Joint Field Management Program (RJFMP), Reef Restoration and Adaptation Program and Integrated Monitoring and Reporting (IMR).

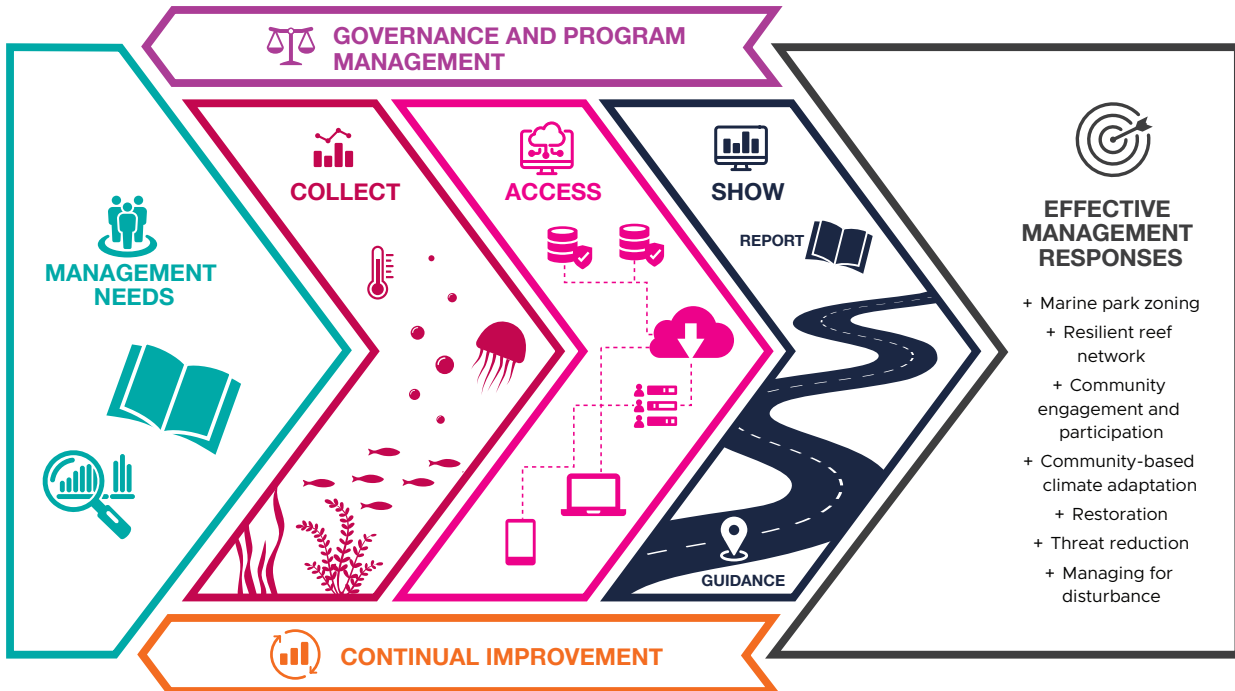


Figure 1: Program priorities

FOCUS FOR 2023–24

The portfolio of projects for the 2023–24 financial year builds on the achievements of the previous years and reflects a review (in April 2023) of progress to date and alignment to the five-year Program roadmap. Eight projects are planned for 2023–24.



Sustainable Funding Strategy for RIMReP
(2024–25 and beyond)



Communication and Outreach Priorities
Traditional Owner Communications and Engagement



Data Management System Implementation — Phase 2



Reef 2050 Plan reporting framework — design
Reef Knowledge System evolution
Development and delivery of spatial decision support tools



RIMReP Monitoring and Evaluation Framework

The following sections of this plan detail each of the eight projects and their alignment to the RIMReP framework.



GOVERNANCE AND PROGRAM MANAGEMENT

Effective, clear and transparent governance and program management is essential for the successful delivery of the Program and collaboration between partners.

A dedicated and experienced Program Management Office (PMO) will continue to be operated by the Reef Authority. As part of a business-as-usual activity for the Program, the PMO will coordinate the required governance mechanisms and provide program support to those responsible for shaping and delivering on this Plan and the five-year business strategy.

Governance and program management priority projects for 2023–24

PROJECT 1F – SUSTAINABLE FUNDING STRATEGY

PROJECT DEFINITION

Name	Sustainable Funding Strategy for RIMReP (2024–25 and beyond)		
Project code	1F	Project lead	RIMReP partnership
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$79,376 (incl. GST)	Funding source	Reef Authority
Description	Delivery of the Reef 2050 objectives required ongoing operations (and funding) and continuous improvement of RIMReP across key elements: <ol style="list-style-type: none">1. structural underpinning elements2. monitoring/knowledge gaps filled by IMR funded projects3. monitoring activities undertaken as core business by partner agencies and other entities4. monitoring activities undertaken by partner agencies or other entities but not supported by sustained core organisational funding. <p>This project will explore and prioritise ongoing and future investment in each of these four elements that are required to sustain RIMReP.</p>		

PROJECT OUTPUTS

Options paper	Delivering an options paper that identifies RIMReP's future investment priorities and associated sustainable funding and investment opportunities for ongoing and sustainable operation.
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GOVERNANCE AND PROGRAM MANAGEMENT

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Although there is not a dedicated project focused on the Collect program priority area this financial year, partner agencies continue to deliver their core monitoring programs, which are fundamental to RIMReP.

PROGRAM MANAGEMENT OFFICE

A dedicated and experienced PMO, operated by the Reef Authority, will coordinate the required governance mechanisms and provide program support.

The PMO supports the operational delivery of the Program's Annual Business Plan and reports to the Executive Group.

The PMO mission is to:

- establish an effective approach to program and project management.
- develop a strong and adopted project management culture.
- work to ensure administration of projects does not materially impact on delivery.

KEY OUTPUTS:

- PMO practice across the program.
- 2024–2025 Annual Business Plan.

GOVERNANCE ARRANGEMENTS

Strong and collaborative partnerships, providing a coordinated platform for achievement and effective management of risk, is critical to the success of the Program.

The purpose of the Program governance structure is to:

- govern the relationship, roles and responsibilities of all parties.
- support the effective delivery of the Program, including implementation transition.

The Program's governance structure comprises the Executive Group and Operations Group, with governance meetings held regularly to help guide oversight and implementation of the Program.

In 2022–23, partner agencies entered into a non-binding agreement via a collaboration statement that formalised the governance and management framework under which they will co-operate and collaborate to achieve the purpose and aims of the Program.

KEY OUTPUTS:

- Continued operation of Executive and Operations governance groups.



MANAGEMENT NEEDS

Management needs are the fundamental driver of the Program, informing all program priorities. Priorities stem from legislative obligations, the Reef 2050 Plan and significant work over many years with experts to identify critical information gaps and management effectiveness improvements.

Primary Program management needs supported include:

- reporting progress against the Reef 2050 Plan (and future Outlook Reports).
- identification and prioritisation of key science and knowledge gaps.
- enabling early detection of trends and changes in the Reef's environment, informing the assessment of threats and risks, to drive resilience-based management.

Management needs priority projects for 2023–24



PROJECT 2F — COMMUNICATION AND OUTREACH PRIORITIES

PROJECT DEFINITION

Name	Communication and Outreach Priorities		
Project code	2F	Project lead	Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$102,528 (incl. GST)	Funding source	Reef Authority
Description	The project will deliver priority communication outreach deliverables to increase understanding and visibility of the Program, what it enables and its value. The primary audiences will include science and management partners, Traditional Owners and key data providers.		

PROJECT OUTPUTS

RIMReP communiques	Articulating the RIMReP narrative, where it is up to, the plan for 2023–24 and what people can access and use now. Plan for two communiques per year.
Communication planning	Bringing together the RIMReP Executive Group members and Operations Group members at the start of the project year to discuss the broader community engagement approach for RIMReP and future branding.
Partnership forum	Bringing together the RIMReP Executive Group members and Operations Group members once a year to celebrate prior achievements, acknowledge challenges and undertake strategic planning for RIMReP.
Promotional events	Arming RIMReP partners with useful communication collateral (slides, infographics, talking points) to expand the promotion of RIMReP at meetings and events (e.g. conferences, workshops).
Social media outreach	Promoting linkages to RIMReP through a 'Powered by RIMReP' campaign as external products come online.
New branding	Design of new branding for RIMReP for use across all RIMReP partners.
Insights report	Showcasing highlights/key achievements from projects undertaken under the 2022–23 Annual Business Plan and outlining the high-level priorities for 2023–24.



MANAGEMENT NEEDS

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Primary Program management needs supported include:

- reporting progress against the Reef 2050 Plan (and future Outlook Reports).
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PROJECT 2G – TRADITIONAL OWNER COMMUNICATIONS AND ENGAGEMENT

PROJECT DEFINITION

Name	Traditional Owner Communications and Engagement		
Project code	2G	Project lead	Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$296,883 (incl. GST)	Funding source	Reef Authority
Description	<p>The project will develop and implement a RIMReP Traditional Owner Communications and Engagement Plan for 2023–24. The focus for 2023–24 will be continuing to raise the profile of RIMReP and commencing preliminary consultation with the Traditional Owners and Indigenous groups interested in future engagement with RIMReP and specifically those with Indigenous data sets and exploring opportunities for data sharing through the RKS.</p> <p>The project will also allow for oversight of Traditional Owner engagement activities across the broader Program.</p>		

PROJECT OUTPUTS

Partnership	Continue regular communication and engagement with the RIMReP Traditional Owner Governance Members to provide advice on Traditional Owner involvement, perspectives and on how to incorporate Traditional Owner knowledge into RIMReP and ensure effective integration of programs.
Communication and outreach	Implement a RIMReP Traditional Owner Communications and Engagement Plan for 2023–24. Co-design co-develop and co-deliver communication products and engagement opportunities to raise the profile of RIMReP, showcase the RKS and identify Traditional Owners and Indigenous groups interested in future RIMReP engagement and partnerships.



COLLECT INFORMATION

Management actions and reporting are reliant on robust data from critical monitoring programs, emerging science and knowledge.

The 'collect' aspect of RIMReP will continue to support Reef managers in their planning and day-to-day decision-making, underpinning reporting and provision of Reef information to the public.

Maintaining existing long-term monitoring programs and developing and supporting new monitoring activities and technologies is critical for the delivery of improved information.

Collect priority project for 2023–24

Although there is not a dedicated project focused on the 'collect' program priority area this financial year, partner agencies continue to deliver their core monitoring programs, which are fundamental to RIMReP.



PARTNER – CORE MONITORING PROGRAMS

Maintaining core, long-term monitoring programs and identifying emerging gaps that underpin the Reef 2050 Plan is critical to the success of the Program. RIMReP partners will focus on sharing information and knowledge and drive interoperability across monitoring programs to support decision-making and reporting to deliver real outcomes for the Reef. This will require an adaptive approach and identification of emerging knowledge gaps and technologies.

Currently, 12 monitoring and modelling programs operating in Australian waters (and the adjacent catchment) are fundamental to RIMReP. As new needs are identified, priorities may change, and as new data streams become available these will be updated. Linkages and alignment to the Paddock to Reef Program will continue to be explored over the next five years.

Examples of the current monitoring programs continuing to be delivered by partner agencies during 2023–24 include:

- **MMP:** Surveying and reporting on the health of inshore coral, seagrass and water quality every year, since 2005.
- **Long-term Monitoring Program – Australian Institute of Marine Science (LTMP):**
The most comprehensive record of reef condition through time, surveying the Reef, since 1983.
- **Social and Economic Long-term Monitoring Program (SELTMP):** Understanding the human dimension of the Reef.
- **Autonomous ocean gliders – IMOS:** Autonomous underwater vehicles for ocean data collection.

Further information regarding each program can be obtained through the continuing page on the **RKS**.

(<https://reefknowledgesystem.gbrmpa.gov.au/programs-and-reporting/core-monitoring-programs>)

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MONITORING GAPS – PHASE 2 PROJECTS

The first phase of RIMReP systematically identified critical monitoring activities needed to support an integrated program. Through Phase 2 of the RTP IMR Program, funding was available to make a significant contribution to address these priority gaps. A total of \$14.6 million for 12 projects was approved.

The following table provides an overview of the full list of the IMR partnership activities (including the 12 critical monitoring projects) and their related RIMReP knowledge gap.

Table 1: RTP IMR partnership activities

PROJECT	PROJECT END	KNOWLEDGE GAP	STATUS
RIMReP DMS	30 June 2024	Fit-for-purpose DMS to support RIMReP reporting activities, management systems and decision support tools.	In user testing phase.
Condition and recovery capacity of the Reef	30 September 2023*	Establish indicators and an analysis framework that allow Reef managers to consistently measure and assess the condition and recovery capacity of coral reef habitat.	Finalising reporting.
Inshore dolphin monitoring	30 June 2024	To provide critical baseline information on distribution, threats, population demography and dynamics of inshore dolphin species, particularly the vulnerable listed Australian snubfin and Australian humpback dolphins.	Extensive engagement with Traditional Owners resulted in FPIC from 12 Traditional Owner groups. Preparations are underway in consultation with Traditional Owners in preparation for surveys of the northern Great Barrier Reef in October 2023.
Sea cucumber monitoring	30 June 2024	To provide critical baseline information on distribution, population demography and dynamics of sea cucumber species, including the CITES-listed black teatfish and white teatfish, to inform stock assessments and sustainable use.	Image analysis and datasets being finalised from first fieldwork event. Second GBR-wide survey will be undertaken in Nov 2023.
Dugong monitoring	30 June 2024	To provide baseline information on distribution, threats, population demography and dynamics of dugongs.	Southern Great Barrier Reef survey completed and image analysis underway. Planning and consultation with Traditional Owners is underway for the northern Great Barrier Reef survey scheduled for October 2023.
Reef fish monitoring	30 June 2024	Establish an integrated Reef fish monitoring program for species of recreational, commercial, biocultural and ecological significance (includes sharks and rays). This project breaks down into four sequential activities: <ol style="list-style-type: none"> 1. Development of indicators 2. Sampling design for integrated fish monitoring 3. Underwater visual census of inshore and reef associated fishes 4. Baited Remote Underwater Video Stations (BRUVS) monitoring in offshore areas 	First rounds of fieldwork completed for inshore fringing, reef nursery seascape including co-design with Wulgurukaba, Manbarra and Giringun Traditional Owners, and deep-water inter-reef monitoring. Image/data analysis underway. Planning for next round of fieldwork for the above habitats in back half of 2023.



COLLECT INFORMATION

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The Collect aspect of RIMReP will continue to support Reef managers in their planning and day-to-day decision-making, underpinning reporting and provision of Reef information to the public.

Maintaining existing long-term monitoring programs and developing and supporting new monitoring activities and technologies is critical for the delivery of improved information.

PROJECT	PROJECT END	KNOWLEDGE GAP	STATUS
Biosecurity monitoring tools	31 May 2024	Development of monitoring tools to enable early detection of pest flora and fauna incursions on islands, and pest presence on vessels.	eDNA and CritterPic© monitoring has been completed. AI training and integration underway.
Island habitat monitoring	31 May 2024	To provide critical baseline information on the condition and trend of key values associated with island habitats throughout the Great Barrier Reef World Heritage Area.	Initial field work completed, Cay Classification Framework draft complete. Regional ecosystem mapping and fieldwork to be undertaken in back half of 2023.
Seabird monitoring	31 May 2024	To provide critical baseline information on distribution, threats, population demography and dynamics of seabirds.	Field work for the 2022 and 2023 breeding season completed. Data collation and processing in progress, including AI training. Fieldwork planning for season 2 (early 2024) underway. Engagement with Reef Traditional Owners will be underway
Sustainable use and benefits	30 June 2024	To provide critical baseline information to monitor: <ul style="list-style-type: none"> impacts of human use on social and ecological Reef values vulnerability of Reef-dependent and associated industries and users to changes in Reef health social and economic benefits reef users derive from the Reef environmental and cultural benefits with contributions from the Traditional Owners. 	Development of a geodatabase of human use and social and ecological Reef values for the two case study areas is nearing completion. Engagement with Reef Traditional Owners is underway. Monitoring program design is also underway.
Monitoring our system of governance for implementing the Reef 2050 Plan	31 May 2024	To provide critical monitoring for: <ul style="list-style-type: none"> policy and program coherence; policy and program impact and outcomes community involvement and satisfaction in Reef management availability and use of integrated knowledge sets. 	Initial deliverables completed, including a conceptual preliminary government monitoring framework. Monitoring plan and framework finalisation in progress.
Stewardship for the Reef	30 June 2024	To provide critical baseline information to monitor: <ul style="list-style-type: none"> actions (direct and indirect) Reef users are taking to reduce negative impacts on Reef values stewardship activity outcomes for Reef health community engagement in Reef health initiatives. 	Initial deliverables completed, including a conceptual Stewardship framework and Monitoring and Evaluation tools for community groups to pilot. User need analysis underway. Development of prototype visualisation platform underway, as well as theory of change documentation.



COLLECT INFORMATION

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Maintaining existing long-term monitoring programs and developing and supporting new monitoring activities and technologies is critical for the delivery of improved information.

PROJECT	PROJECT END	KNOWLEDGE GAP	STATUS
SELTMP	30 June 2024	Large-scale, time-series data about Reef users, communities, and industries, enabling new insights into their dependencies and relationship with the Reef, and how this is changing over time.	First round of core and support modules completed, second round underway.
Implementing the Strong Peoples Strong Country framework	30 June 2024	Piloting of the Strong People Strong Country framework in all aspects of monitoring, including indicator selection, data capture, data sharing protocols and co-interpretation of data.	Pilots underway with three Traditional Owner groups. A further 2 Traditional Owner groups will be added in the pilots.
eReefs Phase 5	30 June 2024	Providing a suite of environmental modelling and remote sensing products to provide a picture of what is currently happening on the Reef and what has happened in the past.	Core models maintained with Phase 5 model expansions and user access improvements underway. Phase 6 planning underway with CSIRO leading design of proposed delivery and governance model.
Fitzroy Marine Monitoring Program	30 June 2024	Reactivation of the Fitzroy Marine Monitoring Program site to assess the temporal and spatial trend in inshore marine water quality and link pollutant concentrations to end-of-catchment loads.	Sampling and reporting completed as planned with strong engagement with Traditional Owner Groups. Planning for next fieldwork stage (late 2023) underway.
Water Quality Crown-of-thorns starfish (COTS) Pilot	31 July 2023	Exploring the utility of opportunistic water quality sampling conducted by crown-of-thorns starfish control vessels.	Project in final stages of reporting.

The Program partners will continue to work with the GBRF to monitor and receive updates regarding progress of these critical monitoring gaps projects and how the critical data will be delivered in time for the Outlook Report 2024. Further details can be found on the [GBRF website](https://www.barrierreef.org/what-we-do/reef-trust-partnership/integrated-monitoring-and-reporting).

(<https://www.barrierreef.org/what-we-do/reef-trust-partnership/integrated-monitoring-and-reporting>)



ACCESS INFORMATION

Given the challenges facing the Reef, we need to be more informed, responsive and able to make considered and efficient decisions to support resilience-based management. This requires improved systems that make data and information easier to locate and more accessible, interoperable and usable for decision-makers.

Access priority projects for 2023–24



PROJECT 4C – DATA MANAGEMENT SYSTEM

PROJECT DEFINITION

Name	Data Management System Implementation – Phase 2		
Project code	4C	Project lead	IMOS
Planned start	1 July 2022	Planned finish	30 June 2024
Budget estimate	\$3,992,654 (incl. GST) Estimate only ¹	Funding source	RTP/partner agencies
Description	<p>A key component of the Reef 2050 Plan is the establishment of RIMReP. A fit for purpose DMS is a critical piece of infrastructure to underpin the successful delivery of RIMReP and related reporting activities, management systems and decision support tools.</p> <p>The project will deliver a data-agnostic, scalable (future-proof) system for data and metadata relevant to the Reef, with services to allow the integration with the RIMReP Management Information System and Decision Support System (DSS), including the discovery of the existing data.</p>		

PROJECT OUTPUT

Planning	Delivering a detailed project delivery and support plan.
Build	Building and implementing a fit for purpose DMS (January 2022 to June 2023), with upgrades and increased data integration over 2023–24.
Support	Providing operational support and enhancements to the DMS through to June 2024.

¹ This is a two year project. \$2,067,403 (GST inclusive) estimated for 2023–24 expenditure.



SHOW – GUIDE AND REPORT

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The 'show' priority includes continuous improvements to the RKS, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.

Show priority projects for 2023–24



PROJECT 5D – REEF 2050 PLAN REPORTING FRAMEWORK DESIGN

PROJECT DEFINITION

Name	Design of the Reef 2050 reporting framework		
Project code	5D	Project lead	The Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$184,587 (incl. GST)	Funding source	Reef Authority
Description	This project will be the first phase of defining the scope, user needs and overarching design of the future reporting platform for the Reef 2050 Plan. An online progress report that provides an indication of whether the Reef 2050 Plan is tracking towards its objective and targets is needed.		

PROJECT OUTPUTS

User research	Completed user research summary capturing Reef 2050 joint team requirements.
Business requirements	Developing business requirements for the design of an online Reef 2050 reporting platform.
Design concept	Basic visual concept and wireframes for the design of an online Reef 2050 reporting platform.



SHOW – GUIDE AND REPORT

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The 'show' priority includes continuous improvements to the RKS, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.



PROJECT 5H – REEF KNOWLEDGE SYSTEM EVOLUTION

PROJECT DEFINITION

Name	Reef Knowledge System Evolution		
Project code	5H	Project Lead	The Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$195,733 (incl. GST)	Funding source	The Reef Authority
Description	This project will be the first phase of defining the scope, user needs and overarching design of the future reporting platform for the Reef 2050 Plan. An online progress report that provides an indication of whether the Reef 2050 Plan is tracking towards its objective and targets is needed.		

PROJECT OUTPUTS

User research	Completed user research summary capturing reef manager experiences and opinions of the RKS.
Content	Integration and release of new content, including dashboards, digital resources, and additional dataset links (includes some work carried forward from 2022–23).
Enhancements	RKS updated with research supported enhancements to improve user experience.



SHOW – GUIDE AND REPORT

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The 'show' priority includes continuous improvements to the RKS, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.



PROJECT 5I – DEVELOPMENT AND DELIVERY OF A SPATIAL DECISION SUPPORT TOOL

PROJECT DEFINITION

Name	Development and Delivery of a Spatial Decision Support Tool		
Project code	5I	Project Lead	The Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$370,178 (incl. GST)	Funding source	The Reef Authority
Description	This project will build on the findings and recommendations of the SDSS's scoping assessment completed in 2022–23 and will develop a proof of concept and deliver a prototype of a functional, fit-for purpose and scalable spatial decision support tool for one test use case.		

PROJECT OUTPUTS

Proof of concept	Develop a proof of concept for spatial decision support tool.
Prototype	Deliver a prototype of a functional, fit-for purpose and scalable spatial decision support tool for one test use case.



CONTINUAL IMPROVEMENT

This priority relates to continual improvement processes that will ensure RIMReP responds to changes to the operating environment and emerging available technologies. Across the life of the Program, continuous improvement should increase the efficiency and effectiveness of Reef management decisions and Reef 2050 Plan progress reporting.

Operating environment, user needs, emerging technologies and knowledge systems sources. This will be achieved through annual monitoring against performance indicators, built-in effectiveness reviews of systems and outputs (e.g. decision support tools) and ensuring monitoring information tangibly links to an end purpose.

Continual improvement priority projects for 2023–24



PROJECT 6A — RIMREP MONITORING AND EVALAUTION FRAMEWORK

PROJECT DEFINITION

Name	RIMReP Monitoring and Evaluation Framework		
Project code	6A	Project lead	Reef Authority
Planned start	1 July 2023	Planned finish	30 June 2024
Budget estimate	\$167,553 (incl. GST)	Funding source	Reef Authority
Description	This project will establish a monitoring, evaluation, reporting and improvement (MERI) framework for RIMReP and identify financial and human resources to supports its implementation. This monitoring and evaluation activity will underpin the continual improvement objective and component of the RIMReP framework and provide a point-in-time rapid assessment of impacts and adaptive learning.		

PROJECT OUTPUTS

MERI Framework	Framework for future MERI activities of RIMReP.
Assessment	Rapid point in time assessment report of RIMReP.



GLOSSARY

Acronyms

Term	Definition
AIMS	Australian Institute of Marine Science
BRUVS	Baited Remote Underwater Video Series
CMS	Content management system
COTS	Crown-of-thorns starfish
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DES	Queensland Government Department of Environment and Science
DMS	Data management system
DSS	Decision support system
GBRF	Great Barrier Reef Foundation
GBRMPA	Great Barrier Reef Marine Park Authority
RKS	Reef Knowledge System
IMOS	Integrated Marine Observing System
IMR	Integrated monitoring and reporting
LTMP	Long Term Monitoring Program — Australian Institute of Marine Science
MERI	Monitoring, evaluation, reporting and improvement
MMP	Great Barrier Reef Marine Monitoring Program
PMO	Program management office
QPWS	Queensland Parks and Wildlife Service
RIMReP	Reef 2050 Integrated Monitoring and Reporting Program
RJFMP	Reef Joint Field Management Program
RKS	Reef Knowledge System
RTP	Reef Trust Partnership
SELTMP	Social and Economic Long-term Monitoring Program
SDSS	Spatial Decision Support System

Definitions

Term	Definition
Internal (use)	Primarily Reef Authority staff, but may also include use by other government partners including QPWS, Australian and Queensland government entities
Program	Reef 2050 Integrated Monitoring and Reporting Program
Reef Authority	Great Barrier Reef Marine Park Authority
Reef Partnership	Collective RIMReP Executive Group and Operations Group Members

APPENDIX 1 – BUDGET ESTIMATES

The majority of funding for the 2023–24 Annual Business Plan activities will be sourced from the Reef Authority’s internal budget and externally through the RTP (IMR component) administered by the GBRF. In addition, partners will contribute in-kind resources through dedicated staff time and equipment/technology to assist with Program delivery.

2023–24 budget estimates

The 2023–24 Program budget of \$3,699,756³ includes funding by the Reef Authority of \$1,943,429 and a contribution from the RTP of \$1,348,204⁴ toward delivery of the 2023–24 project portfolio. All figures are inclusive of GST.

ANNUAL BUSINESS PLAN 2023–24

#	Project	Budget	Funding source
GOVERNANCE AND PROGRAM MANAGEMENT			
-	PMO	\$235,517	RIMReP partners ⁵
1F	Sustainable funding strategy	\$79,376	RIMReP partners
Sub-total		\$314,893	
MANAGEMENT NEEDS			
2F	Communication and Outreach Priorities	\$102,528	RIMReP partners
2G	Traditional Owner Communications and Engagement	\$296,883	Reef Authority
Sub-total		\$399,410	
COLLECT			
Nil			
Sub-total		\$0	
ACCESS			
4C	Data Management System Implementation – Phase 2 ⁶	\$2,067,403 ⁷	RIMReP partners and RTP ⁸
Sub-total		\$2,067,403	
SHOW – GUIDE AND REPORT			
5D	Design of the Reef 2050 Plan reporting framework ⁹	\$184,587	Reef Authority
5H	RKS evolution	\$195,733	Reef Authority
5I	Development and delivery of spatial decision support tool	\$370,178	Reef Authority
Sub-total		\$750,497	
CONTINUAL IMPROVEMENT			
6A	RIMReP monitoring and evaluation framework	\$167,553	RIMReP partners
Sub-total		\$167,553	
TOTAL		\$3,699,756	

³ Continuation of existing monitoring activities is not included in these budget estimates.

⁴ RTP allocation based on original project figures and is subject to change due to slippage of the project from 2022-23. Final figure to be confirmed.

⁵ RIMReP partners denotes Reef Authority funding with costed ‘in kind’ contributions from partner agencies.

⁶ This two year project is a continuation from the 2022-23 Annual Business Plan.

⁷ \$3,992,654 (GST inclusive) initially allocated to the two-year project for the period to 30 June 2024. \$2,067,403 (GST inclusive) estimated at this stage for 2023–24 expenditure, noting there may be slippage from 2022-23 due to delay in some project milestones (TBC).

⁸ RTP denotes funding from the RTP, coordinated by the GBRF.

⁹ Project carried over from 2022–23 Annual Business Plan.

APPENDIX 2 – PERFORMANCE INDICATORS

Table 2: Performance indicators for RIMReP
ANNUAL BUSINESS PLAN 2023–24

OUTPUTS	PERFORMANCE INDICATORS	PROJECT
Governance and program management		
Implementation of PMO practice across the program.	<ul style="list-style-type: none"> Implementation of project reporting framework for the Program, reporting on outcomes and performance measures. 	PMO operations
2024-2025 Annual Business Plan	<ul style="list-style-type: none"> Publication of the 2023–24 Annual Business Plan. 	PMO operations – business planning
Continued operation of Executive and Operations governance groups	<ul style="list-style-type: none"> Governance boards meet regularly with documented proceedings, delivering a reduction in program risk. 	PMO operations – governance
Options paper identifying RIMReP’s future investment priorities and the associated sustainable funding and investment opportunities for ongoing and sustainable operation.	<ul style="list-style-type: none"> Sufficient information available across the four identified program elements to advise RIMReP partners and potential funding investors of the funding requirements and relative priorities to sustain RIMReP operation beyond June 2024 and ensure delivery of the Reef 2050 objectives. 	Sustainable funding and investment opportunities
Management needs		
Program communication and outreach activities implemented.	<ul style="list-style-type: none"> Identified and delivered priority communication products and outreach (communiques, insights reports, partnerships forums and presentations). Widespread use of a common narrative that yields a broad understanding of the Program. New RIMReP branding approved. 	Communication and Outreach Priorities
Traditional Owner Partnership – Continue regular communication and engagement with the RIMReP Traditional Owner governance members to provide advice on Traditional Owner involvement, perspectives and on how to incorporate Traditional Owner knowledge into RIMReP and ensure effective integration of programs.	<ul style="list-style-type: none"> Hold regular (quarterly) workshops with RIMReP Traditional Owner Governance members to seek advice on Traditional Owner involvement and engagement. 	Traditional Owner Communication and Engagement

FIVE YEAR BUSINESS STRATEGY

OUTCOMES

5 Year Business Strategy delivers clear direction, for an efficient, fiscally responsible, managed risk successful Program.

PERFORMANCE INDICATORS

- Delivery of all Program outcomes and performance measures.
- The Program partnership remains strong and committed and continues to work to a shared purpose.
- Sustainable funding and commitment across the partnership to support ongoing maintenance and relevance.

The Program has empowered Reef managers, Traditional Owners and other stakeholders with information and tools that measurably provide for improved Reef management and reporting, in priority order and to the approved scope.

- Measurable efficiencies in Reef management operations.
- Improved decision making guided by more integrated information and support tools.
- The Program has met management priorities and needs.
- Adoption of the RKS by internal users, measured by analytics and survey.
- Widespread awareness of the Program, its capabilities and limitations.
- Ongoing delivery of updated and improved Reef information.
- Alignment with RTP projects with reduced 'confusion and improved visibility.'

APPENDIX 2 – PERFORMANCE INDICATORS

ANNUAL BUSINESS PLAN 2023–24

OUTPUTS	PERFORMANCE INDICATORS	PROJECT
Management Needs (Continued)		
Traditional Owner Communication and Outreach - Implement a RIMReP Traditional Owner Communications and Engagement Plan for 2023-24. Co-design co-develop and co-deliver communication products and engagement opportunities to raise the profile of RIMReP, RKS Reef Knowledge System and identify Traditional Owners and Indigenous groups interested in future RIMReP engagement and partnerships.	<ul style="list-style-type: none"> Co-designed Traditional Owner communication products to showcase RIMReP. Engagement undertaken to identify Traditional Owners and Indigenous groups interested in future RIMReP engagement and partnerships. 	Traditional Owner Communication and Engagement

Collect

Nil

Access

Build and implement a fit for purpose DMS (January 2022 to June 2023, with upgrades and increased data integration over 2023–24).	<ul style="list-style-type: none"> Information technology backend infrastructure is set at 100%. All high and medium priority datasets have been harvested with their corresponding metadata records. Required data sharing agreements for ingested high and medium priority datasets signed. At least three data providers forums, governance workshops and three metadata and data training workshops completed. At least two Reef Authority use cases have been serviced. 	4C: DMS
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FIVE YEAR BUSINESS STRATEGY

OUTCOMES

PERFORMANCE INDICATORS

Required data, available and supportable for 'show,' 'guide' and 'report.'

- High quality data defined, collected and accessible.
- Priority gaps monitoring operational and accessible to the program.
- Ongoing monitoring service and support capability defined, in place and funded.
- All data sharing agreements in place (as required).

An operational 'fit for purpose' DMS servicing Program requirements that is sustainable over time.

- Delivery of all Program outcomes and performance measures.
- The Program partnership remains strong, committed and continues to work to a shared purpose.
- Sustainable funding and commitment across the partnership to support ongoing maintenance and relevance.

APPENDIX 2 — PERFORMANCE INDICATORS

ANNUAL BUSINESS PLAN 2023–24

OUTPUTS	PERFORMANCE INDICATORS	PROJECT
Show — guide and report		
Integration and release of new content on the RKS (dashboards, digital resources, and additional dataset links) and updated with research supported enhancements to improve user experience (SHOW).	<ul style="list-style-type: none"> Measurable web analytics that shows usage as a gateway portal. User survey information reflecting user experience and a feedback loop for further development. Defined and met service levels and supportable maintenance costs, with easy update capability for content managers. 	Reef Knowledge System evolution
Proof of concept and prototype for a RIMReP spatial decision support tool (GUIDE).	<ul style="list-style-type: none"> Establishment of a Spatial Decision Support Systems Working Group Delivery of proof of concept for spatial decision support tool Delivery of prototype of a spatial decision support tool 	Development and delivery of a spatial decision support tool.
Business requirements and visual concept for the design of an online Reef 2050 reporting platform (REPORT).	<ul style="list-style-type: none"> User research for reporting concepts. Design of reporting concepts based on user research. 	Reef 2050 reporting framework
Continual improvement		
Framework for future MERI activities, including a rapid point in time assessment.	<ul style="list-style-type: none"> A MERI framework approved for RIMReP. A rapid point in time assessment of RIMReP completed. 	Monitoring and Evaluation Framework

FIVE YEAR BUSINESS STRATEGY

OUTCOMES

PERFORMANCE INDICATORS

People using the RKS and related tools find them relevant, engaging, interactive and easy-to-use.

- Measurable web analytics that demonstrates a high-level of adoption and usage as a gateway portal.
- User survey information reflecting user satisfaction and a feedback loop for further development.
- Defined and met service levels and supportable maintenance costs, with easy update capability for content managers.

Reef managers are better informed by robust information, are more responsive and able to make considered, effective and efficient decisions.

- Measurable use of decision support tools in operational Reef management.
- Management decisions more swiftly informed with greater access to information to inform decisions.

Reef 2050 reporting is informative, robust and provides an objective picture of the values and their trend. Reporting is influential in driving adaptive management and investment.

- Measurable efficiency gain in delivery of Reef 2050 Plan progress and other reports.
- Feedback from key Reef 2050 stakeholders is positive.
- Defined usage of reporting information in management decisions and other information queries





