Reef Trust Partnership

Monitoring and Evaluation Plan

Australian Government

REEF TRUST

Great Barrier Reef Foundation

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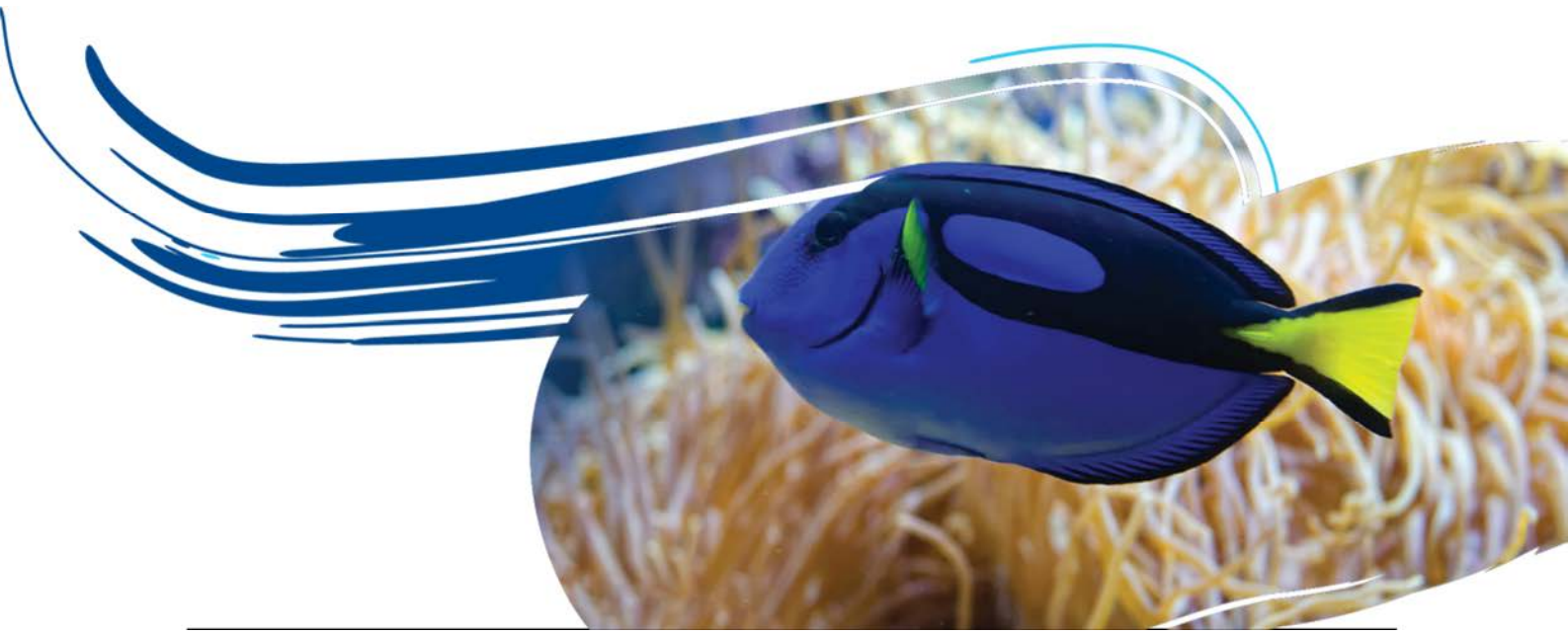


Acronyms

ANAO	Australian National Audit Office
COTS	Crown-of-thorns starfish
DIN	Dissolved inorganic nitrogen
DPSIR	Driver Pressure State Impact Response
DoEE	Australian Government Department of the Environment and Energy
DSS	Decision-Support System
GBRF	Great Barrier Reef Foundation
GOOS	Global Ocean Observing System
GBRMPA	Great Barrier Reef Marine Park Authority
IFF	Innovative Finance and Funding
IMOS	Integrated Marine Observing System
IMR	Integrated Monitoring and Reporting
IPM	Integrated Pest Management
KEQs	Key evaluation questions
LMACs	Local Marine Advisory Committees
M&E	Monitoring and Evaluation
MERIT	Monitoring, evaluation, reporting and improvement tool
MIPs	Major integrated projects
NESP	National Environmental Science Program
NRM	Natural Resource Management
OGBR	Office of the Great Barrier Reef
P2R	Paddock to Reef Integrated Monitoring Modelling and Reporting program
PMC	Partnership Management Committee
R&D	Research and Development
RIMReP	Reef 2050 Integrated Monitoring and Reporting Program
RRA	Reef restoration and adaptation
RRAP	Reef Restoration and Adaptation Program
RRAS	Reef Restoration and Adaptation Science
TOWG	Traditional Owner Working Group
WQIP	Reef 2050 Water Quality Improvement Plan

Preface

The Great Barrier Reef (the Reef) is the largest living structure on the planet and is so large it can be seen from space. It's home to the most extraordinary array of animals and birds, and is often referred to as the rainforest of the sea. Sir David Attenborough describes it as:

"one of the greatest, and most splendid natural treasures that the world possesses."

Today, however, the Reef is under threat from climate change and local stresses. We need the help of all Australians to protect and restore the Reef. Over the last two decades, the Great Barrier Reef Foundation (GBRF) has drawn together the many groups who are working to protect the Reef. There are hundreds of people and organisations working to achieve this including universities, research institutions, government agencies, scientists, Traditional Owners and community groups. The GBRF is the place where these myriad groups (large and small) come together to work on the highest priority projects which will have the greatest impact on protecting and restoring the Reef.

Our projects have had a measurable impact on the health of the Reef including monitoring reef health in near-real time (eReefs) to securing the future of green turtles on Raine Island (Raine Island Recovery Project), to developing the first portfolio of projects to address the resilience of reefs adapting to climate change. We also have a track record in innovation, developing solutions such as the RangerBot which detects and addresses threats to coral reefs.

Underpinning this partnership is a record government investment of $443.3 million to tackle critical issues of water quality and crown-of-thorns starfish control, harness the best science to restore reefs and support reef resilience and adaptation, enhance Reef health monitoring and reporting, and increase community engagement on the Reef.

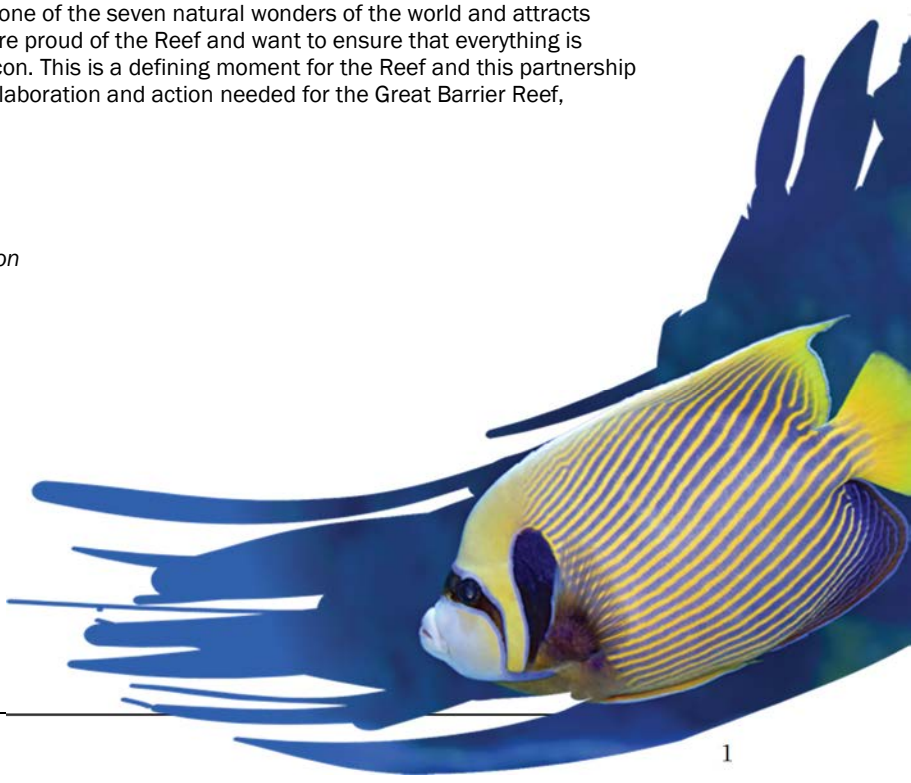
Through the Reef Trust Partnership, GBRF will lead the collaboration of science, business, government, industry, philanthropy and community to amplify the impact of this investment and the benefits it delivers for the Reef. Our guiding principles to deliver this partnership are transparency and accountability.

The GBRF recognises Aboriginal and Torres Strait Islander peoples are the Traditional Owners of the Great Barrier Reef. We are committed to meaningful collaboration and engagement with Reef Traditional Owners throughout the delivery of the Reef Trust Partnership, including the co-design of policies, programs and investments.

The Great Barrier Reef is globally recognised as one of the seven natural wonders of the world and attracts over two million visitors each year. Australians are proud of the Reef and want to ensure that everything is being done to protect and restore our national icon. This is a defining moment for the Reef and this partnership is an unprecedented opportunity to drive the collaboration and action needed for the Great Barrier Reef, now and for the future.

Anna Marsden

Managing Director, Great Barrier Reef Foundation



1 Executive summary

The Reef Trust Partnership (the Partnership) is a $443.3 million six-year Grant between the Australian Government and the Great Barrier Reef Foundation (GBRF) to build on and support delivery of the Reef 2050 Plan. The overall objective of the Partnership is to *achieve a significant, measurable improvement in the health of the Great Barrier Reef World Heritage Area* via three specific outcome areas:

- Improved management of the Great Barrier Reef and relevant activities in the adjacent catchments;
- Protection of attributes that contribute to the outstanding universal value of the Great Barrier Reef, including species, habitats and Indigenous values; and
- Management of key threats to the Great Barrier Reef, including poor water quality and crown-of-thorns starfish outbreaks.

The Monitoring and Evaluation Plan sets out how the performance of the Partnership will be measured over five years to 2023-2024 and provides a robust methodology for credibly demonstrating both the outcomes and broader impact of the Partnership, across all six inter-related Partnership Components:

- Component 1: Administrative activities
- Component 2: Water quality activities
- Component 3: Crown-of-thorns starfish control activities (COTS Control)
- Component 4: Reef restoration and adaptation science activities (RRAS)
- Component 5: Indigenous and community Reef protection activities
- Component 6: Integrated monitoring and reporting activities (IMR).

The Plan is an essential instrument to demonstrate accountability and ensure key challenges are addressed and sustained benefits are delivered to the Reef, in accordance with the Reef 2050 Plan. It will inform learning and improvement across the Partnership, including the prioritisation of investment, and be critical for testing the Partnership assumptions and process steps which underpin the delivery of change.

Core to the Monitoring and Evaluation Plan are component-specific program logic models that articulate how change is expected to occur and seven key evaluation questions (KEQs) that form the basis for all Partnership M&E data collection and reporting. These questions focus on both the outcomes of the Partnership and its specific components, and the principles and approaches to achieve these outcomes:

1. How effective has the Partnership been in achieving its intended outcomes?
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?
3. What unintended outcomes (positive and negative) have occurred?
4. To what extent is the Partnership being implemented in accordance with the Grant Agreement?
5. How well has the Partnership implemented adaptive management processes to improve the effectiveness of the Partnership?
6. To what extent were Traditional Owners' ways of knowing and doing adopted in Partnership processes?
7. To what extent have the principles of the Partnership been adhered to?

To answer these questions, the Partnership will largely draw on monitoring and evaluation data collected through the six components, via implementation of component-specific M&E plans. Projects delivered within the components will have their own detailed M&E plans to ensure the M&E information required for each component is being collected at the project level as well. The approach to evaluating outcomes and impact at the component and Partnership levels uses contribution analysis to establish the contribution of the Partnership to Reef 2050 Plan outcomes, while also considering the role played by other factors. End of Partnership outcomes across the Components are provided in the diagram overleaf.

Partnership performance will be evaluated annually using synthesised component monitoring and evaluation data, complemented with data collected at the Partnership level. Biannually, performance will be assessed by an external expert panel, bringing independence to the annual internal evaluation process and providing a sharper focus for the Partnership.

This Monitoring and Evaluation Plan represents a very significant body of work and wouldn't have been possible without the contribution of many individuals who have openly shared their knowledge and lessons learnt. It is also a living document that will need to be continually refined and adapted over time. GBRF looks forward to working with the collective Reef community as we move into the full implementation phase of the Partnership.

END OF PROGRAM OUTCOMES

Water Quality

- Maintenance of water quality in less disturbed catchments
- An enduring reduction in the long-term end-of-catchment pollutant loads
- Innovative solutions for systems change in water quality improvement are available
- Increase in Traditional Owner-led water quality improvement projects

Crown-of-Thorns Starfish (COTS) Control

- Reduced coral mortality from COTS outbreaks at key reefs
- New methods to manage COTS at scale have been identified
- Expanded delivery partners involved in COTS management (Traditional Owner enterprises)
- Strategy for long-term funding is available for influencing/ advocacy

Reef Restoration and Adaptation Science

- New pathways implemented for Traditional Owner education, employment and enterprises across RRAS research and delivery activities
- A toolbox of restoration and adaptation techniques ready for investment in their implementation at a range of scales
- Australia is recognised internationally as leading coral reef restoration science

Traditional Owner Reef Protection

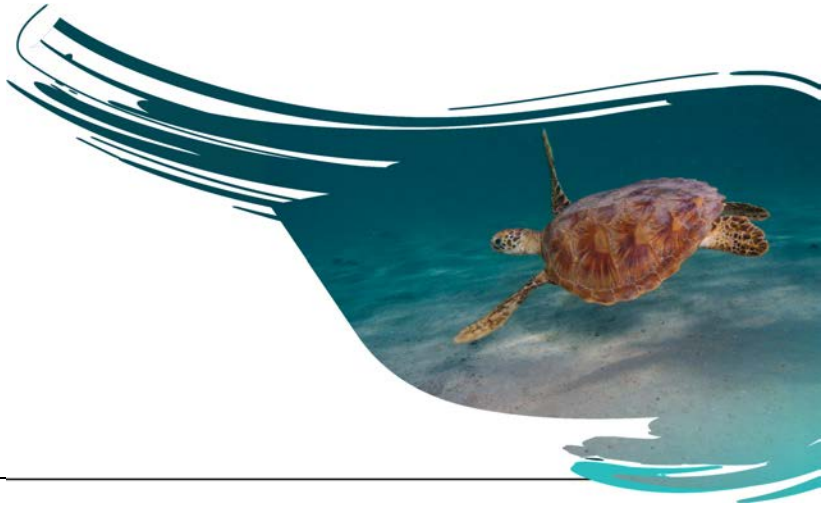
- Traditional Owner co-design action framework is implemented across the Partnership to help build capability
- Benefits to Traditional Owners engaged in sea country management improve
- Traditional Owner participation in governance arrangements for reef protection and management is improved
- The first stage of a Great Barrier Reef Traditional Owner Futures Fund is in place and operating effectively
- Traditional Owners on-country activities contribute to Reef bio-cultural health
- Improved cultural awareness within Partnership projects and partners

Community Reef Protection

- Dynamic suite of tools for enduring funding and partnerships for community action are available
- Community action is more recognised, valued and celebrated for the range of benefits provided to support Reef resilience
- Community action is delivering more effective outcomes for the Reef and community (including Partnership outcomes)
- More targeted local action that aligns with strategic needs
- Shared knowledge and decision making enhances governance and delivery models

Integrated Monitoring and Reporting

- Critical RIMReP data needs/gaps have been prioritised by the IMR Component and are met
- An integrated, tactical, strategic decision-support system is operational



2 Approach to monitoring and evaluation

2.1 M&E Plan development process

The Partnership Monitoring and Evaluation Plan has been developed via a three-stage process, in accordance with the Partnership Grant Agreement. Stage 1, completed in November 2018, resulted in the development of a draft M&E framework, and is referred to as Monitoring and Evaluation Plan (Stage 1). In December 2018 the Reef Trust Partnership Investment Strategy was produced, providing a high-level roadmap for how the Partnership will deliver on each of the priority components included in the Grant Agreement, and outlining component-level investment strategies. The Investment Strategy provided the detail required to further develop the M&E framework.

The Monitoring and Evaluation Plan (Stage 2) was completed in March 2019 and incorporated the further planning for the Partnership undertaken since November 2018, as well as consultation with key component stakeholders on M&E requirements. Program logics were developed for Partnership components, clarifying the expected cause and effect relationships between component activities and their outcomes and identifying key evaluation questions (KEQs).

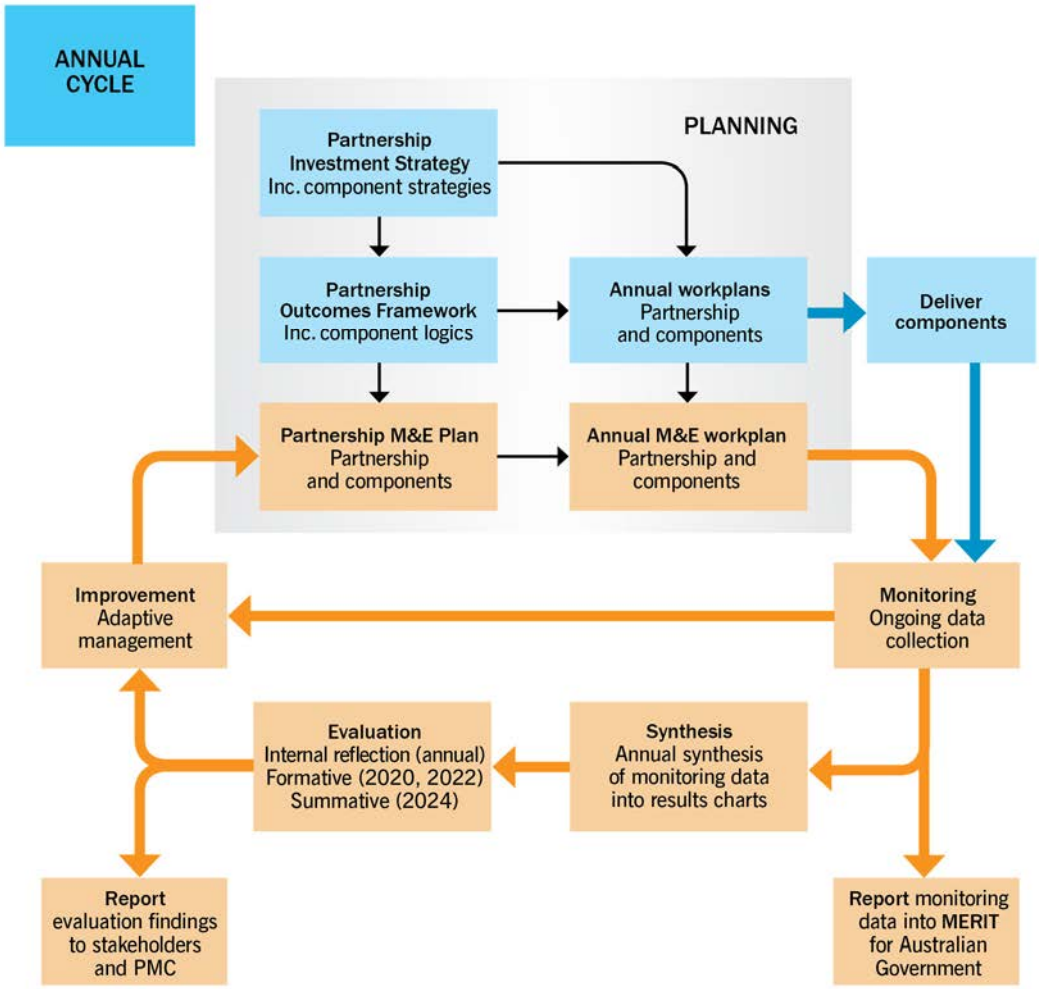
This Final Monitoring and Evaluation Plan (Stage 3) supersedes the Stage1 and Stage 2 documents. It is informed by the Partnership Annual Work Plan (the first of which is to be published in July 2019) and describes Partnership and component-level performance expectations, the latter within specific 'component-level' M&E plans. Specific data collection requirements and evaluation processes are also described within this Plan.

This M&E Plan is structured around several guiding constructs, including KEQs and the use of program logic models. Each of the core elements of the M&E Plan, summarised in section 2.3, have been informed by extensive consultation with GBRF staff responsible for the implementation of the Partnership and its components, as well as the funder (Australian Department of the Environment and Energy) and other key stakeholders. Wherever possible, alignment has been sought with the Reef 2050 Plan review and program logic development process. The M&E Plan is a living document which will be updated on an annual basis, reflecting progress with the delivery of the Partnership investments and annual cycle of Annual Work Plan development.

2.2 Approach to monitoring and evaluation

Figure 1 shows how monitoring and evaluation is planned and delivered across the annual cycle of the Partnership. The Partnership Investment Strategy, Partnership Outcomes Framework and Partnership M&E Plan are the starting point 'umbrella' documents for the duration of the Partnership and provide an enduring basis for annual work plans and associated M&E plans. Activity under the Partnership is implemented according to the annual work plans and at the same time, monitoring and evaluation activity in implemented according to the annual M&E work plans. Ongoing data collection (monitoring) is used in two ways: a) to report progress to the Australian Government via the monitoring, evaluation, reporting and improvement tool (MERIT) system; and b) for ongoing 'just in time' adaptive management of the components. Monitoring data is also synthesised annually to provide the data required for three forms of evaluation: a) annual internal reflection; b) formative evaluation in 2020 and 2022; and c) summative evaluation at the end of the Partnership funding period in 2024. Evaluation findings are then used for reporting and adaptive management, that feeds into the next annual cycle of planning and implementation, of both component activity and component M&E.

Figure 1. M&E annual cycle of the Partnership



Key evaluation questions have been developed to focus monitoring and evaluation on the areas of the Partnership that the primary audience for M&E is most interested in, which includes the outcomes of the Partnership and its specific components (the 'what'), as well as the principles and approaches to achieve these outcomes (the 'how').

The M&E approach is based on non-experimental methods for evaluating outcomes and impact, using contribution analysis to establish the contribution of the Partnership to Reef 2050 outcomes while also considering the role played by other factors. This includes:

- causal (program logic) models at the component level, describing how the Partnership is likely to produce intended changes, and articulation of key causal assumptions;
- collection of data against the models; and
- examination of both whether the evidence is consistent with what would have been expected if the Partnership was producing the changes, and whether other factors have also contributed to, or indeed provide an alternative explanation for, the identified changes[1].

Program logic has been utilised to clarify the expected cause and effect relationships between component activities and their intermediate and **end of Partnership outcomes**[2]. This forms the basis for targeted data collection to support assessment of, and reporting on, component and Partnership effectiveness and impact. The use of program logic has also

1 Rogers, P; Hawkins, A; McDonald, B; Macfarlan, A; and Milne, C (2015) Choosing appropriate designs and methods for impact evaluation.
2 The program logic models do not consider or represent the relative importance of activities and outcomes. As such they do not supersede the Partnership investment planning process and associated prioritisation of activities over the term of the Partnership. While there is strong alignment between the program logic models and the Partnership Annual Work Plan, the latter will deal with the sequencing and prioritisation of effort and investment.

clarified the 'line of accountability', distinguishing what the Partnership can reasonably be held accountable for achieving by 2024 and the **broader goals** the Partnership is contributing towards.

The key causal assumptions underpinning the component logic models have also been made explicit and an assessment made of the evidence for/against each assumption, the confidence in the assumption, and the risk each assumption poses to the achievement of outcomes. The component M&E plans include a focus on monitoring and/or evaluating weak causal assumptions[3], as this is an essential part of the evidence of Partnership performance.

Component-level M&E plans outline the monitoring questions and/or indicators to guide data collection against prioritised outcomes of the component logics and thereby generate evidence of progress towards end of Partnership outcomes. As the projects that comprise the components are awarded, more detailed M&E planning will be undertaken to ensure the M&E information required for each component is being collected at the project level as well.

Indicators are deliberately pitched at the intermediate outcomes level, acting as lead indicators for the longer-term end of Partnership outcomes, and are independently verifiable. Progress will be reported within the Australian Government's MERIT system.

Collectively, these good practice M&E planning approaches – the use of program logic to articulate how change is expected to occur, the explicit articulation of assumptions, a focus on monitoring and/or evaluating weaker causal assumptions, and the use of performance measures pitched at the intermediate outcomes level – are the building blocks for demonstrating Partnership outcomes and impact via non-experimental methods, including Partnership contribution to Reef 2050 Plan outcomes.

Tracking and reporting progress

Component monitoring data will be used to track progress and ensure the components are on track to achieving expected outcomes. Where appropriate, component-level monitoring data will be captured and synthesised into results charts, structured against the component program logics. The results chart will provide the evidence base for component progress towards expected outcomes and be utilised in six-monthly whole of Partnership reflections meetings to support Partnership-level decision making and inform six-monthly progress reporting.

The Partnership approach to collect monitoring data of the 2018-2019 investments (Partnership existing projects) is explained in Appendix 4.

Evaluation

Evaluation will occur at two levels (component and Partnership levels) in the following ways:

- Annual internal evaluation – the use of component monitoring data to make evaluative judgments of the individual components and the Partnership as a whole. It includes a more substantial analysis of performance than that of the six-monthly cycle, producing findings against the KEQs. It includes an annual workshop comprising the GBRF Partnership team to collectively make sense of the data, discuss and agree findings, and develop recommendations for the next annual cycle of delivery.
- Bi-annual evaluation – as per the annual internal evaluation but including an expert panel to bring independence to the preparation of findings and development of recommendations. This will occur every two years for the duration of the Grant Agreement in:
    - June 2020
    - June 2022
    - June 2024.

Principles for Partnership M&E

The following principles underpin the approach to Partnership M&E:

- **Aspirational.** An aspirational vision for the M&E of the Partnership will be considered and incorporated where possible, including that the M&E Plan:
    - provides a foundation that allows a new benchmark for monitoring, evaluation and learning in the Reef/marine ecosystem – an opportunity to be progressive rather than meet minimum requirements
    - provides a scalable model for interdisciplinary monitoring in the Reef space
    - considers potential for post-funding M&E and embedding what has worked in Partnership M&E into other existing systems, e.g. the Paddock to Reef Integrated Monitoring Modelling and Reporting program (P2R), and the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP).
- **Culturally appropriate.** Traditional Owners are embedded in M&E, ensuring the planning, collection, analysis and use of M&E information is culturally appropriate. More specifically, the principles underpinning broader Traditional Owner aspirations for the Reef apply:
    - Empowerment – enhance, not replace, fit-for-purpose Traditional Owner structures (rights-based)
    - The Traditional Owner way

3 Weak causal assumptions are those for which there is little confidence in the assumption, due to there being little existing evidence for the assumption, or evidence against the assumption.

  - Sharing communication and celebration between and amongst Traditional Owners
  - Mandate and effective Indigenous advocacy
  - Inscription not prescription – genuine co-governance at all scales
  - Overarching and legitimised – learn and leverage from existing structures
  - All Traditional Owners have equal voice at the scales that are important to them
  - Traditional Owner rights are inherent, not permitted.
- **Incorporates lessons from Natural Resource Management (NRM) investment evaluation.** Lessons from evaluating NRM investments in general and Reef investments in particular, including Australian National Audit Office (ANAO) audits of Reef Trust design and implementation, will be incorporated.

  This includes providing information on the extent to which objectives and outcomes are on track to being achieved, rather than predominantly activity information.
- **Does not duplicate/is consistent with existing M&E systems.** The M&E will complement existing monitoring systems for Reef health or Reef management effectiveness and feed into them where appropriate.
- **Is robust and reliable.** Uses robust, fit-for-purpose methods, provides a clear rationale for the choice of data (qualitative and quantitative) used, and produces quality evidence.
- **A culture of M&E.** Supports a culture of monitoring and evaluation being 'part of what we do' within the Partnership.

For further details on how the Partnership M&E Plan has incorporated lessons from NRM investment evaluation (ANAO expectations specifically) and is designed to be consistent with existing M&E systems as well as other relevant programs and frameworks, see Appendix 3.

2.3 Elements of the M&E Plan

Figure 2 provides a schematic of the structure of the M&E Plan and includes a set of simple questions, used throughout the M&E Plan, to help orient the reader to the different sections of the Plan.

Section 3 provides a description of Partnership outcomes and the integration between components. This describes *what the Partnership is aiming to achieve and how*, including Partnership contribution to the Grant Agreement outcomes and Reef 2050 Plan outcomes. This section also outlines the principles guiding Partnership delivery and the core assumptions underpinning the Partnership.

Section 4 provides the purpose and scope of Partnership M&E, explaining why we want M&E. It includes the primary audience for Partnership M&E, and the areas prioritised for evaluation focus based on audience needs.

Section 5 introduces the key evaluation questions (KEQs) that the Partnership M&E Plan will address, outlining what we want to know about the Partnership.

Section 6 describes the approach to assessing Partnership performance, in the form of performance expectations, which outline what we are expecting to achieve.

Section 7 outlines the monitoring data collection requirements, providing an overview of what data will be collected to address the KEQs.

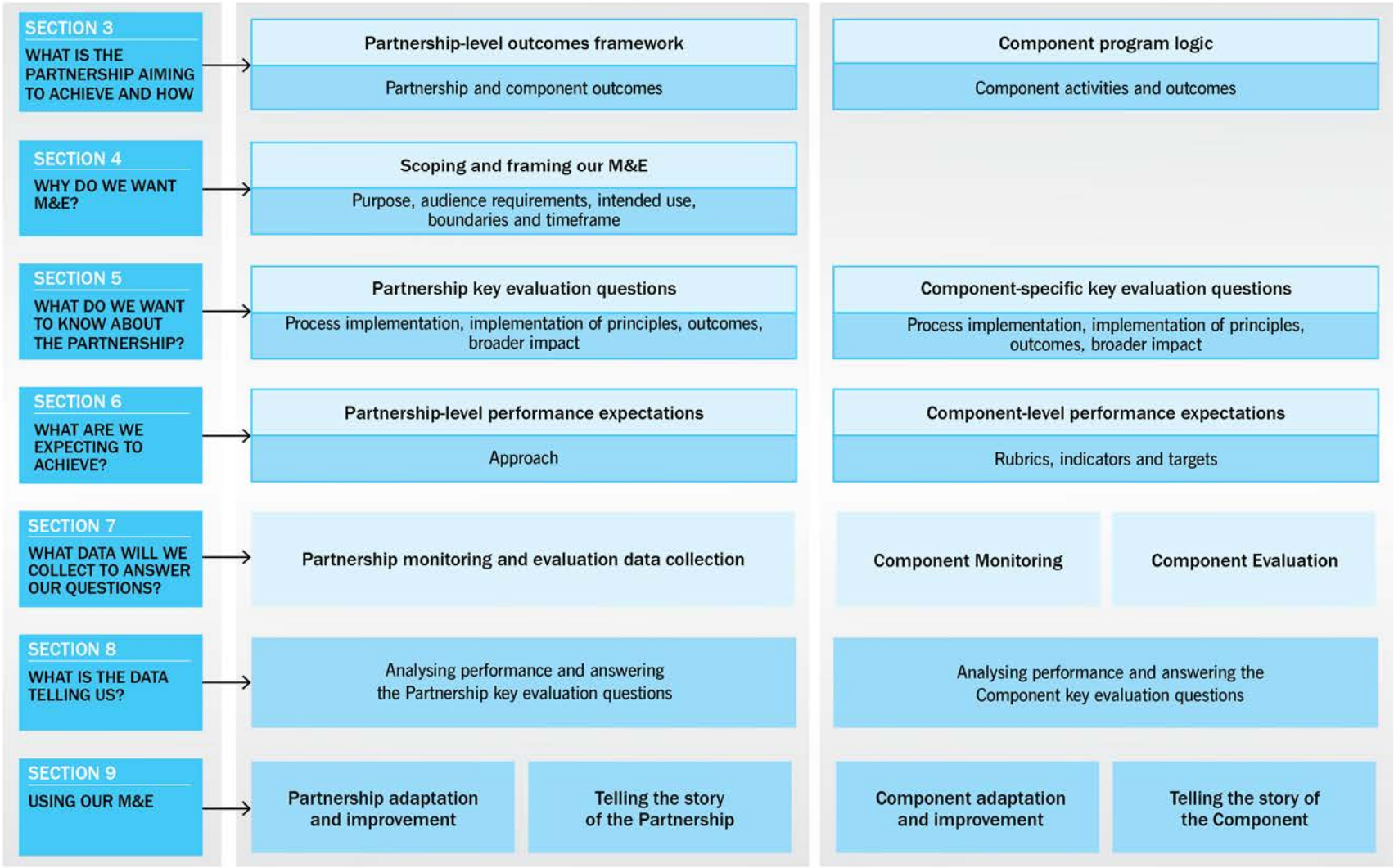
Section 8 describes the points at which evaluation will occur, and how, and the process for bringing component-level M&E data together to make Partnership-level evaluative judgements, i.e. how to make sense of what the data is telling us and evaluate Partnership performance. It includes processes for how independence will be brought to Partnership evaluation.

Section 9 describes the process of using M&E information for Partnership adaptation and improvement and telling the story of Partnership performance (reporting).

Sections 10-16 include the component-level M&E plans, organised around component-specific versions of the Partnership-level KEQs to ensure the information required to answer the Partnership KEQs is collected at the component-level. The component M&E plans include:

- A description of the component, including a program logic model showing the expected cause-and-effect relationships between component activities, and intermediate and end of Partnership outcomes, a narrative to accompany the model, the interactions between the components, and principles and key assumptions underpinning the component
- the scope of the component M&E plan
- the performance expectations for prioritised end-of Partnership outcomes for the Component
- the plan for monitoring the progress of the component for prioritised intermediate outcomes, including performance measures.

Figure 2. Structure of the M&E Plan document



3 Partnership outcomes

3.1 Introduction

This section outlines what the Partnership is aiming to achieve, and how, as well as the principles guiding the delivery of the Partnership and the key assumptions underpinning the logic of the Partnership.

The Partnership is framed in two distinct but complementary ways to provide a basis for M&E planning:

1. An overarching outcomes framework that shows the high-level line of sight between the Partnership component outcomes, the expected Grant Agreement outcomes, the Reef 2050 Plan outcomes, and the broader goals for the Great Barrier Reef World Heritage Area (Figure 3).
2. A diagram showing how the components and their outcomes relate to each other (Figure 4).

A description of each is provided below.

3.2 Partnership Outcomes Framework

Figure 3 outlines an Outcomes Framework for the Partnership. It shows that the broader (shared) goal for the Partnership is to ensure the Great Barrier Reef continues to improve on its Outstanding Universal Value every decade between now and 2050 to be a natural wonder for each successive generation to come[4]. The Partnership is expected to achieve a significant, measurable improvement in the health of the Great Barrier Reef World Heritage Area via three specific outcome areas, which collectively frame the ways in which the Partnership will build on and support delivery of the Reef 2050 Plan. These are:

- **Improved management** of the Great Barrier Reef and relevant activities in the adjacent catchments
- **Protection of attributes** that contribute to the outstanding universal value of the Great Barrier Reef, including species, habitats and Indigenous values
- **Management of key threats** to the Great Barrier Reef, including poor water quality and crown-of-thorns starfish outbreaks.

The outcomes-focused components of the Grant Agreement will contribute, individually and collectively, to these three outcomes areas.

Figure 3 shows a high-level summary of the component-specific outcomes. Detailed logic models at the component level are provided in sections 10-16 of this document[5].

3.3 Component integration

The Partnership brings the six outcomes-focussed components together into one Portfolio, providing the opportunity to design and deliver on these outcomes in an integrated way, to:

4 The goal statement of 'To ensure the Great Barrier Reef continues to improve on its Outstanding Universal Value every decade between now and 2050 to be a natural wonder for each successive generation to come' is the vision statement for the Reef 2050 Plan (2018). This vision statement is currently under review as part of the Reef 2050 Plan review and the broader goal for the Partnership will be updated as necessary.

5 While monitoring and evaluation effort will be applied to Component 1 (Administrative Activities), it is not included in the Partnership Outcomes Framework as it doesn't have its own unique investment 'outcomes'. Rather, it supports Components 2-6 to achieve their outcomes through ensuring effective and appropriate governance and project management systems and processes are in place. The Reef Trust Partnership Investment Strategy provides for two separate investment strategies for Component 5 (Indigenous and Community Reef Protection) - the Traditional Owner Reef Protection investment strategy and the Community Reef Protection investment strategy. Thus, the Partnership Outcomes Framework includes six outcomes areas, rather than the five outlined in the Grant Agreement.

- maximise the co-benefits that can be achieved
- provide considerable efficiency dividends as outcomes from one component can inform and strengthen the outcomes of others.

This concept – that the value of the Portfolio is greater than the sum of the Grant Agreement component parts – is an important part of the framing of the Partnership for M&E purposes, as the M&E needs to capture not only progress towards component outcomes as articulated in the Grant Agreement but the synergies between the components that enable the additional value of the Partnership to be realised.

Figure 4 shows how the portfolio of components and their outcomes relate to each other. Essentially, the Traditional Owner Reef Protection, Community Reef Protection and IMR components are cross-cutting components, while the Water Quality, COTS Control and RRAS components are 'stand-alone', even though they interact with each other, and with the cross-cutting components. Collectively, the integrated components contribute to the three specific Reef Trust Partnership outcome areas of improved management of the Great Barrier Reef and relevant activities in adjacent catchments; protection of attributes that contribute to the Outstanding Universal Value of the Great Barrier Reef; and management of key threats to the Great Barrier Reef.

3.4 Principles guiding Partnership delivery

The Investment Strategy incorporates and is guided by a suite of Partnership principles, comprising the guiding principles set out in the Grant Agreement, Reef Trust investment principles, and Reef 2050 Plan principles and priorities[6]. The following represents the grouping of the different sources of principles relevant to the Partnership into a consolidated set of principles for the Partnership:

- Strategic and targeted
- Measurable outcomes
- Integration delivering multiple benefits
- Additionality and complementarity
- Cost effectiveness
- Collaboration, partnerships and co-investment
- Evidence-based and scientifically robust
- Transparency and accountability
- Solution-driven innovation
- Future-focus, dynamic and adaptive.

The purpose of clarifying the principles underpinning the Partnership[7] is to help focus M&E effort, as adherence to the Partnership principles has been identified as an area of evaluation focus.

3.5 Assumptions underpinning the Partnership

There are three key assumptions underpinning the logic of the Partnership. The first two relate to the model of delivery, i.e. that bringing investment into a range of Reef 2050 Plan outcomes together under an umbrella Portfolio, and taking a partnership approach, is expected to maximise effectiveness and efficiency, while the third assumption relates to the science underpinning current targets and actions.

- **Partners have the capacity and willingness to innovate and collaborate and scale up.** We are proposing an accelerated, integrated program and will be relying on delivery partners to join in this effort with an innovative and collaborative spirit, and the capacity and commitment to deliver.
- **The philanthropic approach enables greater leverage and co-investment than typical government funding approach.** GBRF was selected to lead this effort, in part because of its ability to use this investment to leverage even greater investments from global philanthropic and corporate actors. Realising this promise will be key to increasing impacts and benefits.
- **Reef 2050 projections and targets are consistent with best available science.** The Grant Agreement obliges the Partnership to deliver in accordance with the Reef 2050 Plan; we assume Reef 2050 Plan targets and actions are based on best available science and will be updated in response to new information, emerging issues and changing circumstances.

6 In addition to these, the Reef 2050 Plan Independent Expert Panel recommended a set of principles that should underpin the Partnership, all of them consistent with and/or complementary to those specified in the Grant Agreement.
7 The principles underpinning the Partnership relate to the way in which the Partnership is delivered; these are different to the M&E principles, which relate to the way M&E for the Partnership is conducted. The M&E principles are provided in Section 3.2.

Figure 3. Partnership Outcomes Framework

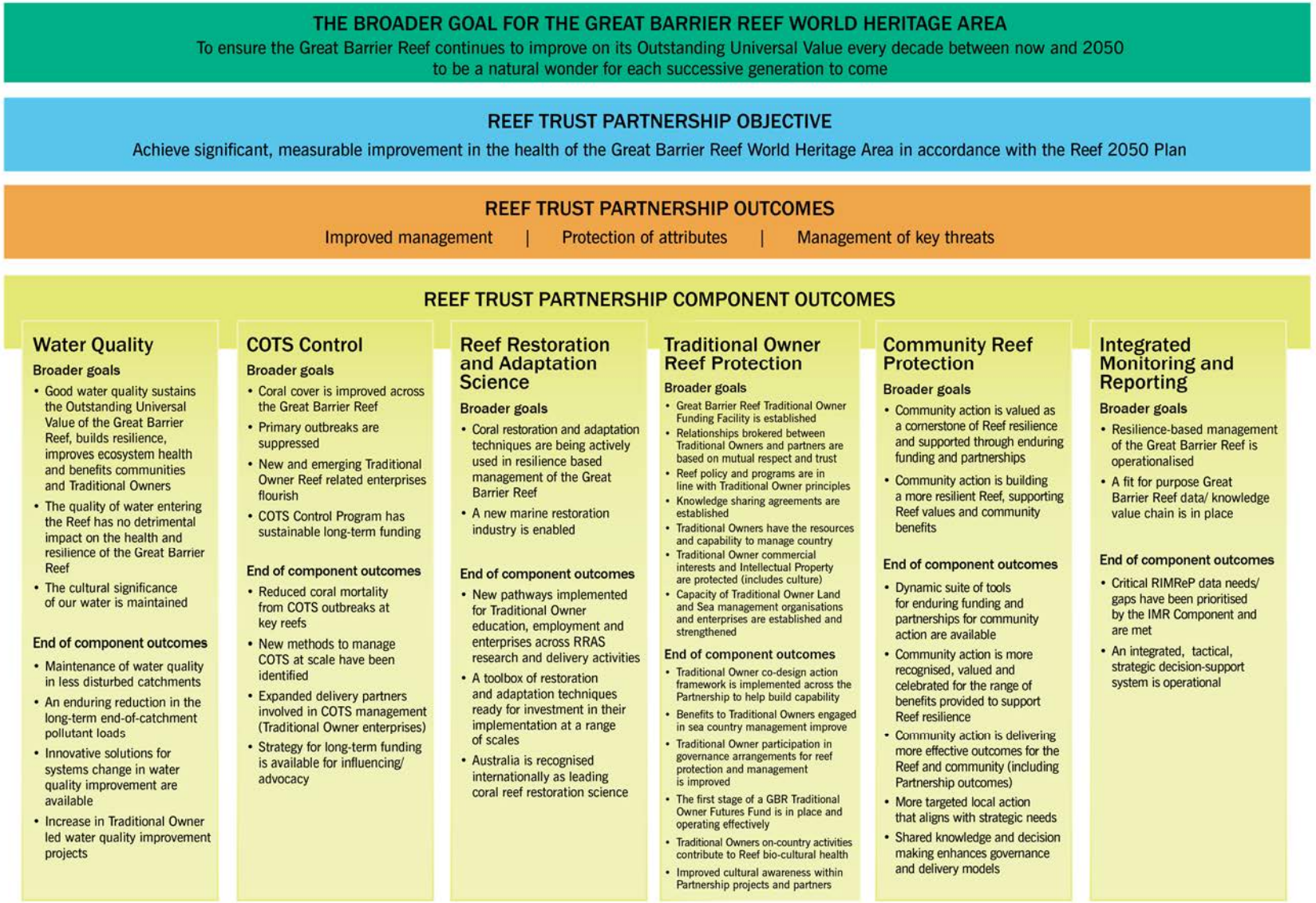
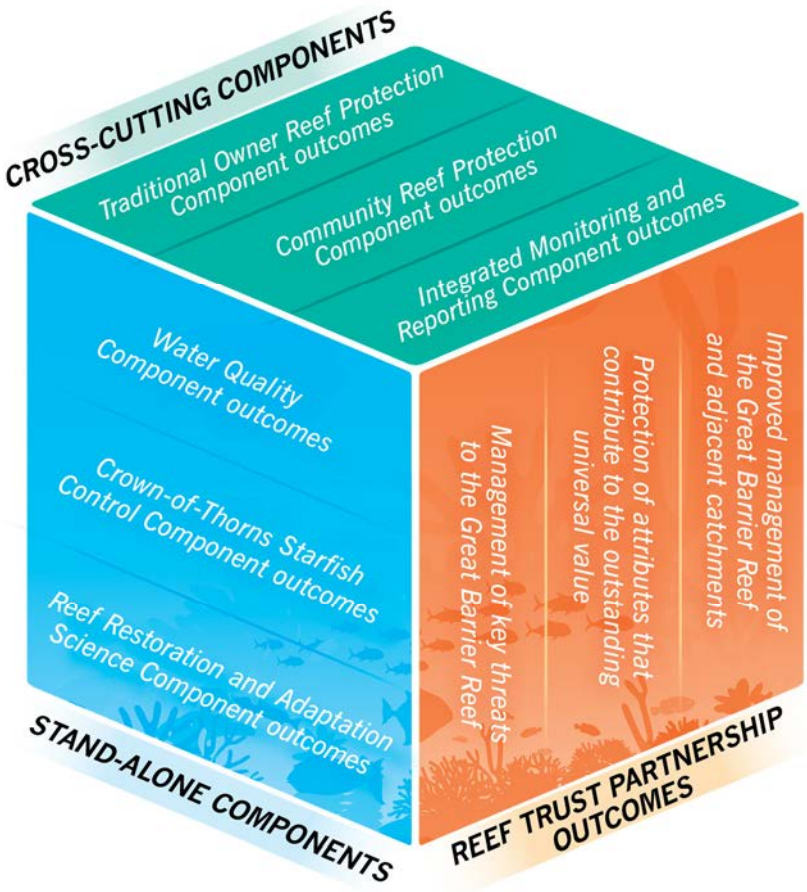
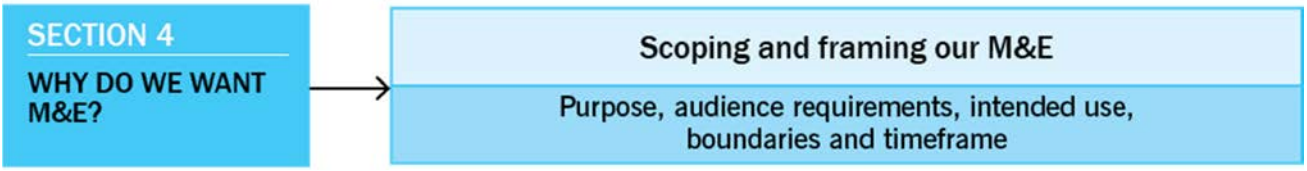


Figure 4. Portfolio components and key interactions



4 Purpose and scope of Partnership M&E



4.1 Purpose

The purpose of the Partnership M&E Plan is to:

- Satisfy the accountability and performance requirements of the Partnership Grant Agreement
- Inform learning and improvement across the Partnership, including prioritising investment
- Test Partnership assumptions and process steps which underpin the delivery of change.

4.2 Audience

The primary audiences for Partnership M&E, i.e. those that will reflect on and use Partnership M&E information to make decisions about the Partnership and its components, include:

- Great Barrier Reef Foundation Board
- GBRF Partnership team
- Partnership Management Committee (PMC) which includes representatives from the Great Barrier Reef Marine Park Authority (GBRMPA), the Queensland Government Office of the Great Barrier Reef (OGBR) and the Australian Department of the Environment and Energy (DoEE)
- Federal Department of the Environment and Energy
- Component-specific working groups
- Delivery partners – involved in implementation and operationalisation.

4.3 Focus and boundaries

The areas of evaluation focus[8] that meet the primary audiences' needs include:

- Outcomes of the Partnership
- Broader impact of the Partnership
- Process implementation
- Implementation of Partnership principles.

The M&E Plan covers all activity invested in under the Partnership to deliver on Reef 2050 Plan outcomes during the period of the Grant Agreement (2018-2024), i.e. is limited to the Grant Agreement's contribution to the relevant Reef 2050 Plan outcomes. It excludes monitoring and reporting on the condition of the Great Barrier Reef[9] in general.

4.4 Resourcing

The Grant Agreement makes available resources for the planning and implementation of Partnership M&E. Table 1 outlines how implementation of the M&E plan will be resourced.

8 For the purposes of M&E, the Partnership makes a specific distinction between 'outcomes' and 'impact':

- Outcomes include:
  - The core intended outcomes expected of each component
  - The intended synergies between components
- Impact includes:
  - Non-core outcomes: broader anticipated positive impacts of the Partnership, including the 'multiple benefits' leveraged across components
  - Conditions the Partnership is providing for enduring progress towards Reef 2050 Plan outcomes into the future (beyond the Partnership timeframe)

9 See Appendix 1 for an explanation of how Partnership M&E fits with the DPSIR framework.

Table 1. Resourcing implementation of the M&E Plan

Level	Resourcing arrangement	FTE equivalent
Component		
M&E data collection – general component activities	Component-level Program managers (guidance from Component Project Directors)	2.5 FTE
Synthesis of component activity M&E information		
Component progress reporting		
Annual component reporting		
M&E data collection – grant project activities	Grantee	NA – grant specific
Partnership		
Additional (non-component) data collection	Partnership Program Manager and ad-hoc support from consultants (guidance from Partnership Project Director)	1 FTE
Synthesis of component-level M&E information		
Partnership progress reporting		
Annual Partnership reporting		
Annual reflection workshops, two-yearly evaluations, impact assessments, expert reviews and grantee capacity training	External resources	$100,000 per annum

5 Key evaluation questions

The Partnership key evaluation questions (KEQs) crystallise the purpose of the M&E Plan and the primary audience's information needs for understanding Partnership outcomes, impact, process implementation and adherence to principles. The distinction the Partnership makes between outcomes and impact (see Section 4.3) is reflected in the KEQs.

The KEQs (Table 2) provide the organising construct for all monitoring and evaluation activities at both the Partnership and component levels, guiding all M&E data collection and providing the structure against which evaluation reporting will occur.

The component-level M&E plans have tailored the Partnership KEQs related to outcomes and broader impact to the unique nature of the components.

Table 2. Partnership key evaluation questions

Key evaluation questions	Sub-questions
Outcomes of the Partnership	
1. How effective has the Partnership been in achieving its intended outcomes?	a) How effective have the components been in achieving their intended outcomes? b) In what ways have synergies between components been created? c) To what extent has the Partnership contributed to the expected outcomes of the Grant Agreement, including: • improved management of the Great Barrier Reef and relevant activities in the adjacent catchments • protection of attributes that contribute to the Outstanding Universal Value of the Great Barrier Reef, including species, habitats and Indigenous values • management of key threats to the Great Barrier Reef, including poor water quality and crown-of-thorns starfish outbreaks? d) To what extent did the Partnership contribute to delivering on Traditional Owner aspirations for the Reef? e) To what extent did the Partnership empower Reef 2050 Plan community partners to contribute to protecting the Reef?
Broader impact of the Partnership	
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the Partnership advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef? b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up? c) To what extent has the Partnership leveraged investment[10] and co-investment from local and global actors? d) To what extent has the Partnership maximised the achievement of multiple (ancillary) benefits?
3. What unintended outcomes (positive and negative) have occurred?	
Process implementation	
4. To what extent is the Partnership being implemented in accordance with the Grant Agreement?	a) Have funded activities been delivered as planned, and on time and to budget? b) Is the Partnership operating in accordance with governance and management plans and policies[11]?

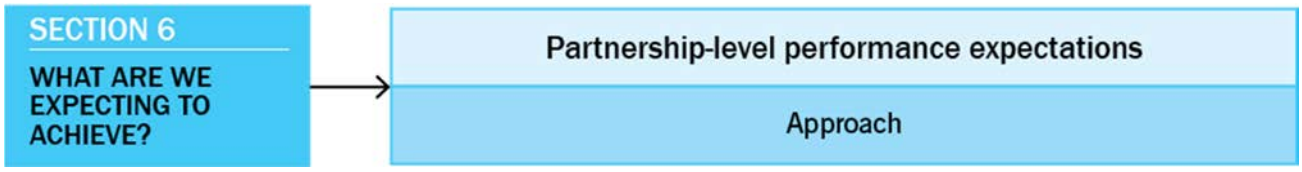
10 Investment is defined here as 'macro-investment', i.e. investment that is catalysed as a result of the Innovative Finance and Funding (IFF) Strategy offering, and not the IFF offering itself.

11 Activity Gantt Chart and Governance Arrangements document, Investment Strategy and Annual Work Plan Consultation Plan, Resourcing Plan, Co-financing Strategy Plan (Collaborative Investment Strategy), Risk Management Plan, Communication and Engagement Plan, Fraud Prevention Plan

Key evaluation questions	Sub-questions
5. How well has the Partnership implemented adaptive management processes to improve the effectiveness of the Partnership?	
6. To what extent were Traditional Owners' ways of knowing and doing adopted in Partnership processes?	
Implementation of Partnership principles	
7. To what extent have the principles of the Partnership been adhered to?	a) To what extent has the Partnership adhered to the principles underpinning the Reef Trust Partnership Investment Strategy? b) To what extent have the components adhered to: • the six guiding principles of the Grant Agreement[12] • any important component-specific principles? c) To what extent has the Partnership contributed to building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef? d) To what extent has innovation: • driven or accelerated the achievement of outcomes? • supported the achievement of outcomes that will endure?

12 These principles are designed to ensure the Partnership: addresses the highest priority threats in the highest priority locations; delivers improvements to the condition of the Reef through on-ground change; complements existing investments and maximises environmental benefit for each dollar spent; uses co-investment, collaborations and partnerships; and is guided by the best available science and expert knowledge.

6 Performance expectations



6.1 Introduction

Performance expectations are used in monitoring and evaluation processes in general to provide standards to judge and track the success (or otherwise) of a program over time and describe 'what success looks like'. Performance expectations can take many forms and include metrics such as key performance indicators (quantitative and qualitative), targets and rubrics, etc. that are used to describe a benchmark against which a program can be determined to be of sufficient value or quality. Where possible, benchmarks describe both the magnitude of change expected as well as the timeframe within which they are expected to be reached.

The following sections outlines the approach the Partnership M&E Plan has taken to performance expectations.

6.2 Grant Agreement expectations of performance

The objective of the Partnership as outlined in the Grant Agreement is to achieve 'significant, measurable improvement in the health of the Great Barrier Reef World Heritage Area'. There is no definition of 'significant' in the Grant Agreement; rather, the Grant Agreement refers to the actions, targets, objectives and outcomes of the Reef 2050 Plan as the 'target, objective and proposed outcome' for each component.[13]

As a result, performance expectations for the Partnership are outlined at the component level. It is an expectation of the Grant Agreement that performance expectations are outcome-based. Judgements of the performance of the Partnership, and its contribution to Reef 2050 Plan targets, will be provided by judgments of the performance of the components in achieving their outcomes.

6.3 Defining performance at the component level

Performance expectations at the component level include either indicators (both with and without targets), rubrics, or a combination of indicators and rubrics. The component M&E plans separate out performance expectations as follows:

- Performance expectations for prioritised **end of Partnership outcomes** – to make it clear how performance will be measured at the end of the Partnership. These expectations support assessment of the contribution of the Partnership to Reef 2050 Plan targets.
- Performance expectations for prioritised **intermediate outcomes** of the component – to make it clear how progress towards achievement of the end of Partnership outcomes will be tracked during the life of the Partnership.

As described in Section 2.3, indicators are deliberately pitched at the intermediate outcomes level, acting as lead indicators for the longer-term end of Partnership outcomes. Performance expectations have been defined only for those outcomes prioritised for measurement. It is good practice to be selective and strategic about what to measure, as not everything needs to be measured. The choice of what outcomes to prioritise for measurement was made on the basis of those outcomes that, if measured, would provide credible information about component outcomes achievement and the contribution of the Partnership to Reef 2050 Plan outcomes. Setting performance expectations at the intermediate outcomes levels is very important for demonstrating the progress of the Partnership towards its end of Partnership outcomes.

As per the Grant Agreement, the indicators are independently verifiable. Not all indicators have targets, and there are several reasons for this:

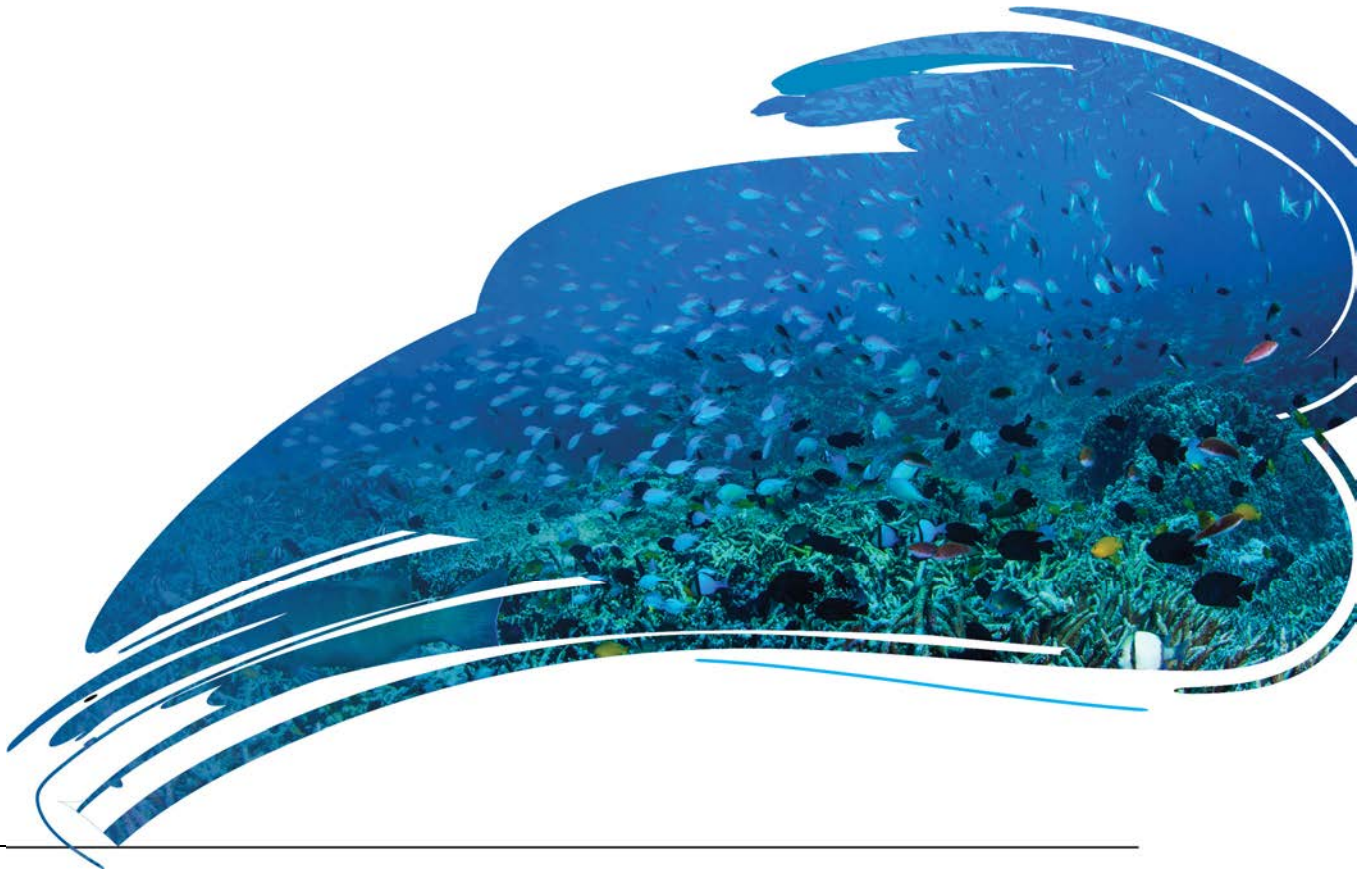
- Not all indicators require targets
- For some component outcomes, it is too early to set targets
- In some instances, it is more appropriate to set targets at the project level[14].

13 While the July 2018 review of the Reef 2050 Plan did not alter the vision, outcomes, objectives or targets of the Plan (except for the water quality theme), the groundwork currently being undertaken for the 2020 review of the Plan is seeing some significant revisions to the logic of the Reef 2050 Plan. The Partnership must remain cognisant of any changes to the outcomes and targets of the Reef 2050 Plan as a result of the review.

14 As described in Section 2.3, more detailed M&E planning will occur at the project level, when projects are awarded.

Some component use rubrics instead of indicators to define performance, or a combination of rubrics and indicators. Rubrics are a tool for systematically and transparently defining what constitutes poor, adequate, excellent, etc. performance in practice. They can be applied at a KEQ level (i.e. to define what poor, adequate, excellent, etc. effectiveness looks like) or to an outcome, and can be either specific or generic.

The components that have used rubrics have applied them at both KEQ and outcome levels, and used specific rather than generic rubrics.



7 Data collection

SECTION 7

WHAT DATA WILL WE COLLECT TO ANSWER OUR QUESTIONS?

→ **Partnership monitoring and evaluation data collection**

7.1 Approach

Data collection to answer the KEQs essentially occurs at the component level, as almost all Partnership activity occurs via the components. The approach to data collection at the Partnership level is thus largely an exercise of synthesising component level M&E information related to the Partnership KEQs.

The relationship between the KEQs, performance expectations and data collection is presented in Table 3. As the table shows, and as explained in Section 6, performance expectations for the Partnership are outlined at the component level. As the table also shows, a small amount of additional data collection to complement component level information will occur at the Partnership level, including:

- Unintended (positive and negative) outcomes occurring from the Partnership, that would not be captured by individual components
- Processes of adaptive management and their outcomes
- Adoption of Traditional Owner ways of knowing and doing
- Instances of building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef.

Table 4 outlines how the small amount of Partnership-level data to complement the component level M&E data will be collected for these areas.

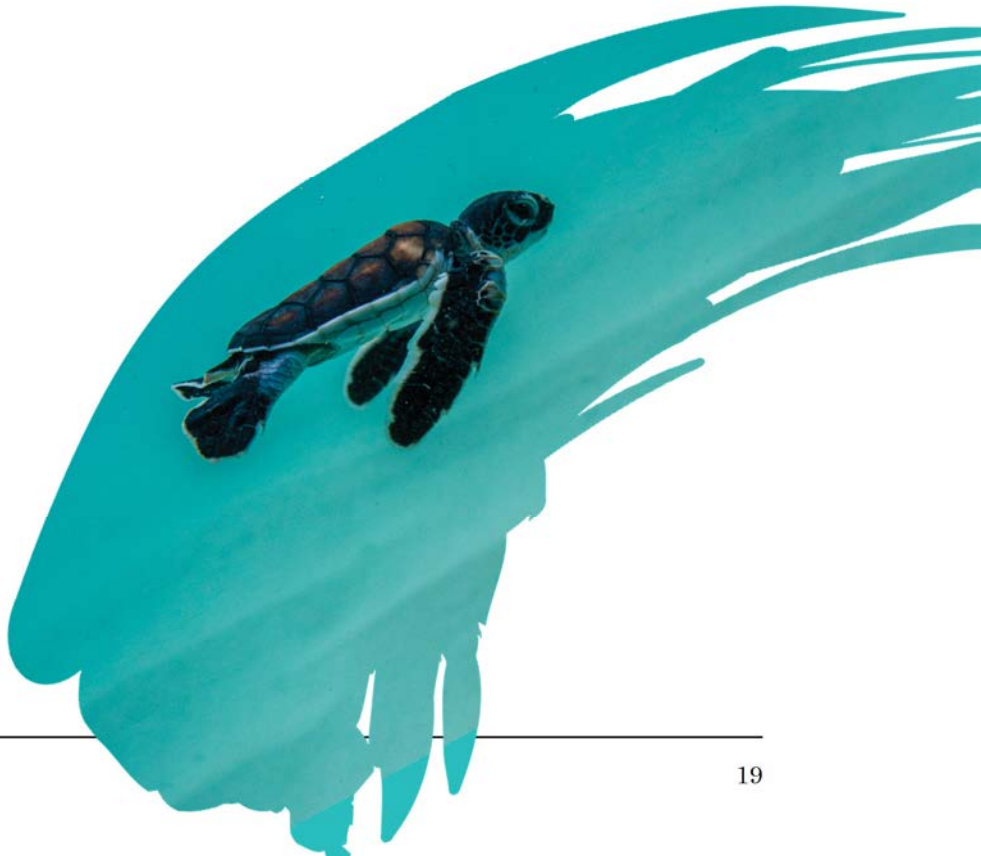


Table 3. High-level approach to addressing the key evaluation questions

Key evaluation questions	Sub-questions	Performance expectations	Overarching approach
Outcomes of the Partnership			
1. How effective has the Partnership been in achieving its intended outcomes?	a) How effective have the components been in achieving their intended outcomes?	Components have met component-specific performance expectations (see Component M&E plans for performance expectations)	Synthesis of achievements across the Partnership from component reporting
	b) In what ways have synergies between components been created?	• Instances of co-investment • Instances of joint and/or strategic initiatives with impact in multiple areas • Other examples of expected synergies (see Component M&E plans)	Synthesis of achievements across the Partnership from component reporting
	c) To what extent has the Partnership contributed to the expected outcomes of the Grant Agreement, including: i. improved management of the Great Barrier Reef and relevant activities in the adjacent catchments? ii. protection of attributes that contribute to the outstanding universal value of the Great Barrier Reef, including species, habitats and Indigenous values? iii. management of key threats to the Great Barrier Reef, including poor water quality and crown-of-thorns starfish outbreaks?	As for KEQ1 (a)	Synthesis of achievements across the Partnership from component reporting
	d) To what extent did the Partnership contribute to delivering on Traditional Owner aspirations for the Reef?	Number of projects, level of investment and related outcomes that are directly contributing to Traditional Owner aspirations for the Reef	Synthesis of achievements across the Partnership from component reporting
	e) To what extent did the Partnership empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Number and outcomes of investments and projects targeting Reef 2050 Plan community partner empowerment to contribute to Reef protection	Synthesis of achievements across the Partnership from component reporting
Broader impact of the Partnership			
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the Partnership advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	*Not applicable*	Synthesis of achievements from component reporting (including achievements from fundraising strategy)
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	*Not applicable*	Assessment at component level of impact on outcomes of capacity-related issues within partners

Key evaluation questions	Sub-questions	Performance expectations	Overarching approach
	c) To what extent has the Partnership leveraged investment and co-investment from local and global actors?	Leveraging ratios, type and value of co-contributions	Synthesis of achievements from component reporting (including achievements from fundraising strategy)
	d) How has the Partnership maximised the achievement of multiple (ancillary) benefits?	*Not applicable*	Synthesis of achievements from component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		*Not applicable*	• Ongoing monitoring of Partnership-level unintended outcomes (log – see Table 4) • Synthesis of unintended outcomes from component reporting
Process implementation			

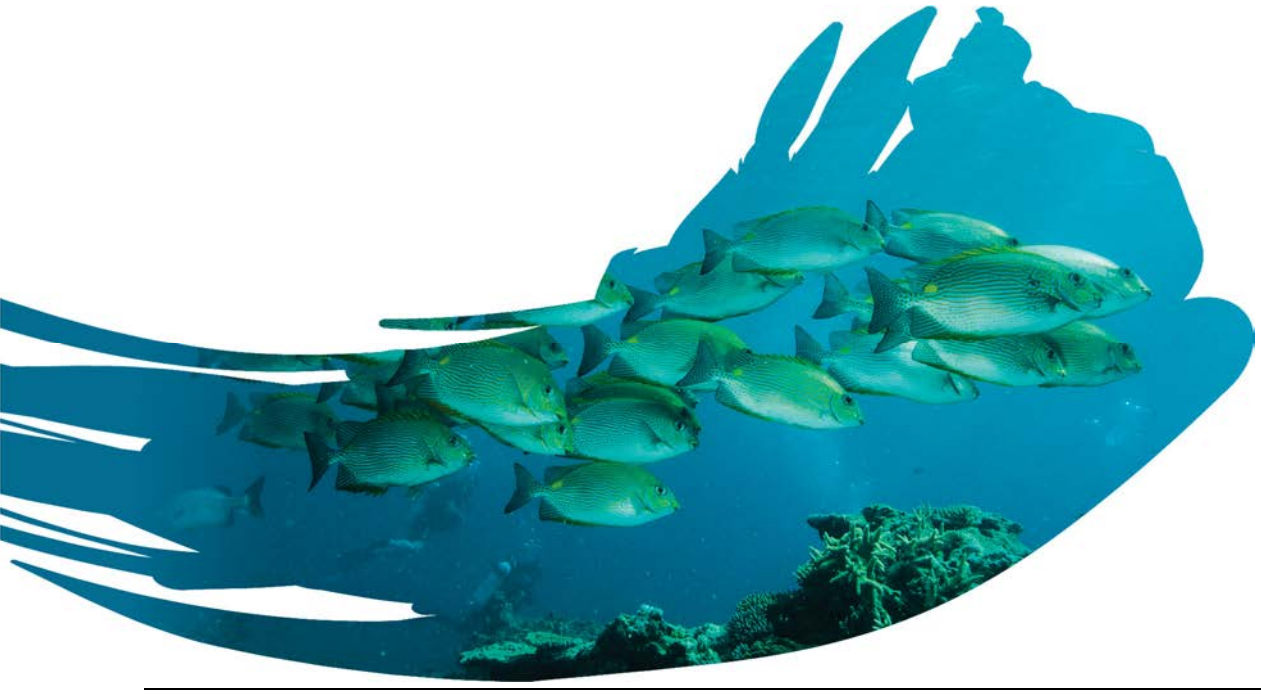
4. To what extent is the Partnership being implemented in accordance with the Grant Agreement?	a) Have funded activities been delivered as planned, and on time and to budget?
	b) Is the Partnership operating in accordance with governance and management plans and policies[15]?
		• Delivery of component activities as per relevant Annual Work Plan
		• No significant departures from relevant Annual Work plan (unless strategic)
		• Delivery of activities diligently, efficiently and ethically:
		  ◦ delivery has met expectations of governance and management plans and policies
		  ◦ no significant instances of departure from governance and management plans and policies (unless strategic)
			Synthesis of activity delivery – as per relevant Annual Work Plan and in accordance with governance and management plan and policies - from Component reporting

15 Activity Gantt Chart and Governance Arrangements document, Investment Strategy and Annual Work Plan Consultation Plan, Resourcing Plan, Co-financing Strategy Plan (Collaborative Investment Strategy), Risk Management Plan, Communication and Engagement Plan, Fraud Prevention Plan

Key evaluation questions	Sub-questions	Performance expectations	Overarching approach
5. How well has the Partnership implemented adaptive management processes to improve the effectiveness of the Partnership?		Instances and nature of adaptive management	• Synthesis of implementation of, and outcomes from, adaptive management from component reporting • Description of implementation of, and outcomes from, adaptive management at the Partnership level (log – see Table 4)
6. To what extent were Traditional Owners' ways of knowing and doing adopted in Partnership processes?		Instances and nature of adoption of Traditional Owner's ways of knowing and doing	• Synthesis of process adoption from component reporting • Partnership-level process monitoring, including log and stories of change (see Table 4)
Implementation of Partnership principles			
7. To what extent have the principles of the Partnership been adhered to?	a) How has the Partnership adhered to the principles underpinning the Partnership Investment Strategy?	*Not applicable*	• Assessment of alignment with principles across Partnership from component reporting • Instances of specific successes and challenges and impact on outcomes
	b) To what extent have the components adhered to: i. the six guiding principles of the Grant Agreement ii. any important component-specific principles?	*Not applicable*	Assessment of alignment with principles across Partnership from component reporting
	c) To what extent has the Partnership contributed to building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef?	*Not applicable*	• Synthesis across Partnership from component reporting • Partnership-level monitoring (log – see Table 4)
	d) In what ways has innovation: i. driven or accelerated the achievement of outcomes? ii. supported the achievement of outcomes that will endure?	*Not applicable*	Narrative and instances of successes across Partnership from component reporting

Table 4. Partnership-level data collection to complement Component M&E data

KEQ	Data collection approach at Partnership level
3. What unintended outcomes (positive and negative) have occurred?	A log will be maintained of any unintended outcomes (positive or negative) resulting from the Partnership that are not the result of any one specific component's activities (each component will monitor and report on any unintended outcomes resulting from the component's work) This will be synthesised with component-level data to report on Partnership-wide unintended outcomes
5. How well has the Partnership implemented adaptive management processes to improve the effectiveness of the Partnership?	A log will be maintained of the instances and results of adaptive management undertaken at the Partnership level that are beyond that undertaken at a component-level (each component will report on the extent to which adaptive management has occurred for the component to improve its effectiveness and impact, including the instances and nature of adaptive management) This will be synthesised with component-level data to report on Partnership-wide adaptive management processes
6. To what extent were Traditional Owners' ways of knowing and doing adopted in Partnership processes?	A log of how the Partnership has adopted Traditional Owner ways of knowing and doing in Partnership processes that are beyond that which occurs at a component-level will be maintained (each component will monitor and report on adoption at the component-level) This will be synthesised with component-level data to report on Partnership-wide adoption of Traditional Owners' ways of knowing and doing in Partnership processes
7.c) To what extent has the Partnership contributed to building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef?	A log of how the Partnership has contributed to building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef that are beyond that which occurs at a component level will be maintained (each component will monitor and report on contribution at the component-level) This will be synthesised with component-level data to report on Partnership-wide contribution to building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef



8 Evaluation

This section describes the points at which M&E data will be brought together to make evaluative judgements of the Partnership, i.e. how data will be made sense of and performance evaluated. It also describes how and when independence will be brought into the process of evaluation.

8.1 Introduction

Evaluation will occur at two levels (component and Partnership levels) and in two ways: a) annual internal evaluation; and b) bi-annual evaluation, which includes an expert panel to bring independence to the preparation of findings and development of recommendations. Each form of evaluation is outlined below.

8.2 Annual internal evaluation

Partnership-level evaluation

Partnership-level evaluation includes the development of a results chart, structured around the Partnership KEQs, that synthesises the results of component evaluations. The format for the results chart is the same as for Table 3, but is populated with evidence and a statement of finding against each KEQ. The results chart will be complemented with the Partnership-level monitoring data related to: unintended outcomes; adaptive management processes and outcomes; adoption of Traditional Owner ways of knowing and doing; and instances of building cultural awareness and understanding of the principles underpinning Traditional Owner aspirations for the Reef, as outlined in Section 7.

The Partnership-level evaluation will include an annual workshop comprising the GBRF Partnership team to collectively make sense of the data from component evaluations and Partnership monitoring, discuss and agree findings and develop recommendations for the next annual cycle of delivery.

Component-level evaluation

Annually, the components will answer their component-specific KEQs, drawing on synthesised outcome monitoring data collected against their program logic models over the reporting period, as well as any other information related to their KEQs, including component-specific activity and output information from component projects. The component-level internal evaluation reports will include the component results chart structured against the program logic, populated with actual data and providing the evidence base for component progress towards expected outcomes.

8.3 Biannual evaluation

Biannual evaluations will follow a similar process to the annual internal evaluations as described above, but will include an expert panel with no vested interest in the Partnership to bring independence to the preparation of findings and development of recommendations. This occur every two years for the duration of the Grant Agreement, in:

- June 2020
- June 2022
- June 2024.

In preparing for the biannual evaluations, the component evaluations will extend the normal annual evaluation process described in Section 8.2 to also assemble any important data about alternative plausible causes for the outcomes their components are expecting to achieve.

The expert panel will be involved in the following way:

- Verification of some of the component-level internal evaluation results
- Review of evidence synthesised into the draft Partnership-level results chart and reflection on the following guiding questions:
    - Are we seeing expected changes in the “preconditions” (intermediate outcomes) of desired end of Partnership outcomes?

- What anomalies or exceptions provide insight as to whether the Partnership caused the change or not?
- Are there any natural comparison sites/groups that didn't receive the investment or received less emphasis/effort, and what happened there?
- Are the assumptions holding true?
- Was the level of effort sufficient to deliver the observed results?
- What other things happened (programs /external factors) in this area/time that could explain the results – e.g. rival hypotheses?
- What are people's views on what would have happened without the program?
- Strength of data and significant data gaps.

The expert panel will work with the GBRF Partnership team to write the statements of findings for KEQs 1 (outcomes) and 2 (broader impact), around the degree to which the Partnership achieved its intended outcomes and had the desired impact, including the panel's level of confidence in these statements.

9 Using monitoring and evaluation information

This section describes the process of using M&E information for Partnership adaptation and improvement and telling the story of Partnership performance (reporting).

9.1 Adaptation and improvement

M&E information will be used to inform continual improvement of both the Partnership itself and the Partnership M&E Plan. Adaptation processes will be largely implemented at the component level, though it will also be necessary to consider Partnership-wide changes or improvements.

There is also a desire to capture *how* M&E information has been used to adapt both the Partnership itself and the M&E Plan, as evidence of the evolution of the Partnership and its M&E.

Improvement of the Partnership

The primary mechanism for the use of M&E information for the improvement of the Partnership will be the existing Partnership Management Committee (PMC). All key stakeholders are represented on the PMC, including the Australian and Queensland governments, Traditional Owners, the Great Barrier Reef Marine Park Authority (GBRMPA) and the tourism industry. Reflection on M&E results will be a standing agenda item for PMC meetings.

The results of PMC decisions on the Partnership will be reflected in regular updates to the Partnership Investment Strategy and will inform the Annual Work Plan. An ongoing log of the changes made to the Partnership will be maintained throughout its duration.

Improvement of the Partnership M&E Plan

It is an expectation of the Grant Agreement that the M&E Plan will be reviewed annually, and updated where necessary. Most improvements or changes to Partnership M&E will occur at the component level and include:

- Refinements to the logics of the components, based on information on what is and isn't working in component implementation, including updates to assumptions
- Changes to monitoring preferences (what is measured) and arrangements (how it is measured) to better reflect what is useful
- Refinements to performance expectations, where required – and the development of targets where possible.

At the Partnership level, changes to the M&E Plan would usually be triggered by changes in the primary audience's information and reporting needs, requiring a review of the KEQs and the nature of reporting. The Partnership must remain cognisant of any changes to the outcomes and targets of the Reef 2050 Plan a result of the 2020 review. Again, an ongoing log of the changes made to the Partnership M&E Plan will be maintained throughout its duration.

9.2 Reporting

Table 5 outlines the various reporting requirements under the Grant Agreement.

Six-monthly progress reporting

The GBRF is required to submit a progress report to the Department every six months for the Partnership as a whole and for each component. Prior to the six-monthly report deadline, component-level progress reporting is completed, with the first six-month cycle (period July-Dec; due February) including a synthesised description of component activity, output and outcome progress only.

Annual reporting

Annual reporting includes the second six month reporting cycle (period Jan-Jun; due August), and, as outlined in Section 8.2, the results of the annual internal evaluations.

Table 5. Partnership reporting requirements

Report type	Content and format	To whom	Timing
Internal progress report	To be scoped with the Partnership Management Committee (PMC)	PMC	To be determined
Six-monthly progress report	A report on the work undertaken for the Partnership, including for each component, uploaded to the DoEE's MERIT system	Reef Trust	1 Feb (1 July-31 Dec); 1st Aug (1 Jan-30 Jun) – each year
Annual Report	Financial report	Reef Trust	Within 90 days of the end of the financial year – each year
Annual report to Ministerial Forum	Report on progress against: • The Reef 2050 Plan • Investment Strategy • Relevant Annual Work Plan	Ministerial Forum	To be confirmed
Final report	A detailed evaluation of the extent to which the objective and outcomes of the Partnership and each component were met uploaded to the DoEE's MERIT system	Reef Trust	Within 60 days of completion of agreement

10 Administrative Activities Component M&E Plan

10.1 Introduction

Given its nature, the Administrative Activities Component M&E Plan is structured differently to the overarching Partnership M&E Plan (and the M&E plans of the outcomes-focused components), while aligning to the general expectations and requirements of Partnership M&E. The Administrative Activities Component M&E plan includes:

- A description of the component
- The component KEQs and summary approach to answering the questions
- The performance expectations of the component
- The plan for monitoring the progress of the Administrative Activities Component.

10.2 The Administrative Activities Component

The purpose of the Administrative Activities Component (Component 1) is to ensure:

- good governance is in place, including systems and processes
- there is effective project management
- scaling-up activities have been undertaken.

The Grant Agreement outlines the range of scaling up activities and associated deliverables required under the Administrative Activities Component, including a range of plans (e.g. Investment Strategy and Annual Work Plan Consultation Plan, Risk Management Plan, etc), and governance arrangements (e.g. establishment of the Partnership Management Committee).

10.3 Approach to addressing the Administrative Activities Component key evaluation questions

The M&E of the Administrative Activities Component is outlined in Table 6. The M&E plan for this component focuses on the effectiveness of the Administrative Activities Component in supporting Partnership implementation through governance and project management systems and processes and the extent to which administrative activities have been delivered, and on time.

Table 6. Administrative Activities Component M&E Plan summary

Key evaluation questions	Sub-questions	Performance expectations	Summary approach
Outcomes of the Partnership			
1. To what extent has the Administrative Activities Component supported the effective and efficient administration of the Partnership?	a) Are the governance systems and processes appropriate and effective for the scale and complexity of the Partnership? b) Are project management processes appropriate and effective for the scale and complexity of the Partnership?	Governance and project management systems and processes meet Partnership needs	Ongoing monitoring of usefulness of governance and project management systems and processes for effective and efficient Partnership delivery

Key evaluation questions	Sub-questions	Performance expectations	Summary approach
Process implementation			
2. To what extent is the Administrative Activities Component being implemented in accordance with the Grant Agreement?	a) Have governance and management plans and policies been delivered as planned, and on time?	• Plans outlining governance and project management systems and processes delivered, on time and to Grant Agreement specifications (see details in Table 7) • DoEE approval of plans	Monitoring of component deliverables against work plan
	b) Are governance and management plans and policies being implemented as planned	Implementation as planned	Ongoing monitoring of implementation of governance plans and policies

10.3 Performance expectation details

The Grant Agreement defines performance expectations for the plans and processes of the Administrative Activities Component, including a timeframe for delivery and/or descriptions of content and/or descriptions of quality. These are detailed in Table 7.

Table 7. Grant Agreement performance expectations for the Administrative Activities Component

Activity item	Performance expectations
Gantt Chart	Delivery by 31 August 2018
Partnership Management Committee	Establishment by 31 August 2018
Investment Strategy and Annual Work Plan Consultation Plan	Method of consultation for following organisations: • Great Barrier Reef Ministerial Forum • Reef 2050 Plan Independent Expert Panel • Reef 2050 Advisory Committee • Queensland OGBR • GBRMPA • DoEE Delivery by 31 August 2018
Resourcing Plan	Approach and activities to ensure GBRF has the resources required to commence, by 1 July 2019, the delivery of all components Grow staffing levels appropriately across the organisation, with the majority of growth taking place in the Projects team (from 15 to 39) Equipment and technology – process to: (i) review equipment and technology; (ii) determine future requirements; (iii) design a technology roadmap; and (iv) implement the roadmap – by December 2018 Systems – process to: (i) review existing systems functionality and interfaces; (ii) future system design and roadmapping; (iii) systems development and implementation; and (iv) staff training on required systems Facilities – relocate to larger office by 1 October 2018 Delivery by 30 September 2018
Co-financing Strategy Plan	Outline steps the GBRF will take to reach its fundraising target ($300M-$400M pledged by the end of the Partnership). See breakdown of target in Table 8 Delivery by 30 September 2018

Activity item	Performance expectations
Risk Management Plan	Containing: (i) Risk Management Framework; (ii) Risk Management Policy; (iii) Risk Appetite Statement; (iv) Business Continuity Plan; and (v) Disaster Recovery Plan Appointment of a Risk Compliance Officer Delivery by 30 September 2018
Communication and Stakeholder Engagement Plan	Approach, protocols and proposed activities regarding GBRF communication and stakeholder engagement processes, including: (i) expanded social media and digital strategy; (ii) detailed stakeholder map; and (iii) a separate stakeholder engagement plan for the Partnership and for each component Appointment of a Stakeholder Manager Delivery by 30 November 2018
Fraud Prevention Plan	Approach to minimising the risk of fraud occurring in connection with any of GBRF's activities, including by GBRF personnel and sub-contractors Including schedule of ongoing planning and review for mitigating the risk of fraud, bribery and corruption within GBRF (see Table 9) Delivery by 30 November 2018
Monitoring and Evaluation Plan	Focuses monitoring and evaluation on Activity outcomes Performance measures that are outcome-based and independently verifiable Drawing on insights from the ANAO's report entitled 'Reef Trust - Design and Implementation' dated 24 November 2016 Stage 1 – delivery by 30 November 2018 Stage 2 – delivery by 31 March 2019 Stage 3 – delivery by 30 June 2019
Investment Strategy	High level roadmap for delivery on each of the components within the Grant Agreement Delivery by 24 December 2018
Annual Work Plan	Detailing the GBRF's priority activities and outcomes and budget for the Partnership and each component for the relevant financial year Sets out projects to be performed, with each project having specified targets including an expected environmental outcome and provide for reporting on achievement of the targets Delivery by 30 June for each relevant year

Table 8. Breakdown of co-financing target

Source	Description	Target (pledged)	Campaign length
Capital campaign	The largest marine science fundraising campaign in Australia – an intensive fundraising campaign with a focus on philanthropy and individual giving tied to Reef Restoration and Adaptation Science (RRAS)	$100m	5 years
Corporate giving	Developing corporate partnerships with iconic Australian businesses that deliver impact and enable planned programs, specific initiatives and activities	$50m	5 years
Individual giving	Five-year strategy developed to build awareness of the Partnership and GBRF and acquire new individual donors through regular giving	$7m	5 years
Research and delivery partners	Formal agreements with collaborators on projects across the Partnership portfolio with an initial focus on RRAS that accurately capture and report investments made by research and delivery partners	$200m	5 years

Table 9. Fraud, bribery and corruption control planning and review activities

Review item	Description	Timeframe
Fraud, Anti-Bribery and Anti-Corruption Policy	Outlines GBRF's guiding principles for managing fraud, bribery and corruption within its operations	Biennial
Fraud Prevention Plan	Documents GBRF's approach to controlling fraud and corruption exposure. Includes fraud management planning, fraud and corruption prevention and detection and incident response	Ongoing

Review item	Description	Timeframe
Fraud and Corruption Risk Assessments	Assessment of fraud and corruption risks prior to the commencement of any major project or substantial changes such as an outsourcing or procurement	Ongoing
Fraud and corruption training	Delivery of training to all Personnel in order to increase awareness of the risks associated with fraud, corruption and bribery and their obligations under the Fraud Prevention Plan and the Fraud and Corruption Policy	At induction and annual policy affirmation program
Conflicts of Interests Policy	Outlines GBRF's procedures to identify and manage legal conflicts of interest that arise in GBRF's business and to protect GBRF and the individuals involved from any impropriety	Biennial
Risk Management Policy	Outlines GBRF's overall approach to risk management	Annual
Risk Management Framework	Outlines GBRF's approach to risk oversight and management and sets out the methodologies adapted by GBRF for the: • Identification, analysis and evaluation of identified risks • Development and implementation of processes to monitor, treat and manage risks • Reporting of risks and mitigating controls • Response to any emerging risks or risks that may materialise as a consequence of adverse events	Annual
Risk Appetite Statement	States GBRF's risk appetite relating to fraud	Biennial
Conflicts of Interest Register	Management of the Conflicts of Interest Register	Ongoing
Gifts, Travel, Entertainment and Hospitality Register	Management of the Gifts, Travel, Entertainment and Hospitality Register	Ongoing
Code of Conduct	Create and maintain high levels of awareness of the Code of Conduct	Ongoing

11 Water Quality Component M&E Plan

11.1 Introduction

The Water Quality M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the Water Quality Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the component with other components
    - the principles and key causal assumptions underpinning the Water Quality Component
- The scope of Water Quality Component M&E
- The Water Quality Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the Water Quality component, including performance measures for prioritised intermediate outcomes.

The Water Quality Component M&E Plan was informed by an M&E planning workshop including representatives from DoEE, the Office of the Great Barrier Reef (OGBR), James Cook University, Queensland Farmers' Federation, CSIRO, Terrain NRM and GBRF. It is worth noting that the activities under the Partnership exist within a broader context of investment in water quality improvements across the Reef and the significant monitoring that supports those investments, including the Paddock to Reef Integrated Monitoring Modelling and Reporting program (P2R).

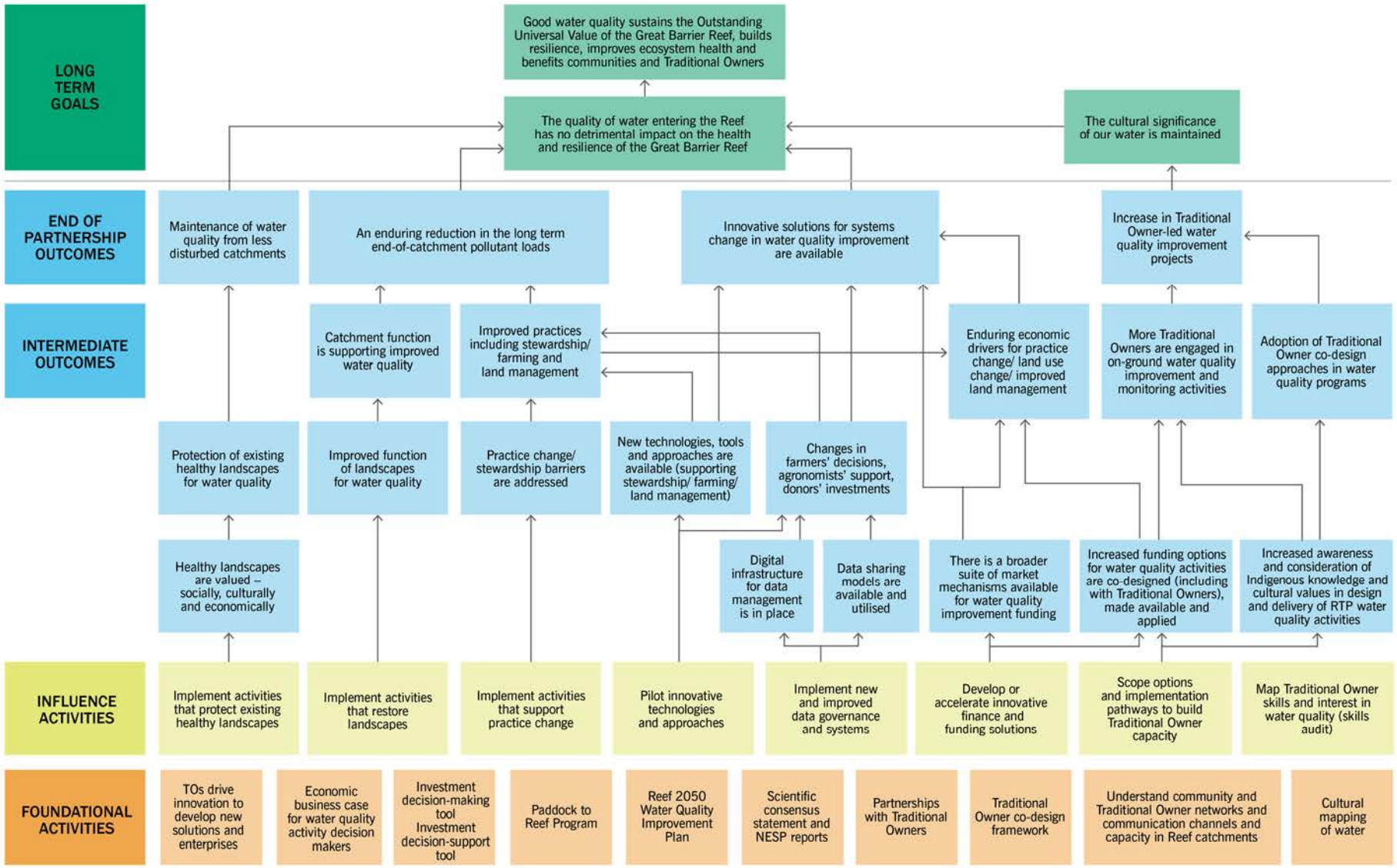
11.2 Logic of the Water Quality Component

The Water Quality Component-level logic model (Figure 5) visually shows how the work undertaken in the Water Quality Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between water quality activities and expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model, with a supporting narrative, the principles that guide the delivery of the Component, and the key causal assumptions underpinning the logic.

The purpose of the narrative is to explain, in words, the broader goals for the Water Quality Component, and how the Water Quality Component is expected to contribute to those broader goals through its activities and outcomes.

Figure 5. Water Quality Component program logic



Narrative

The long-term goals of the Water Quality Component (based on the Reef 2050 Plan) are that good water quality sustains the Outstanding Universal Value of the Great Barrier Reef, builds resilience, improves ecosystem health, and benefits communities and Traditional Owners. This will be achieved in part through the quality of water entering the Reef having no detrimental impact on the health and resilience of the Great Barrier Reef.

The Water Quality Component will contribute to these long-term goals by the end of the Partnership through:

- achieving **an enduring reduction in the long-term end-of-catchment pollutant loads** ('long-term' here is defined specifically as 'modelled average')
- **innovative solutions for system change** – ensuring the availability of innovative solutions for water quality improvement, including with respect to the planning, management, and funding of water quality improvement activities
- the **maintenance of water quality in less disturbed catchments**
- **increasing Traditional Owner-led water quality improvement projects**.

These end of Partnership outcomes will be achieved through the following pathways:

- **Improved catchment function**: The implementation of activities that restore landscapes (e.g. revegetation, rehabilitation of erosion hotspots, improved riparian buffer and wetland function) will improve landscape condition. This will support catchment function to improve water quality, contributing to an enduring reduction in the long-term end-of-catchment pollutant loads.
- **Improved land management practices and stewardship**: Implementing activities that support practice change (e.g. extension, agronomic support, education, incentives, and behaviour change) will address practice change/stewardship barriers (e.g. knowledge, motivation, confidence and awareness). This will lead to improved farming and land management practices. This will contribute to an enduring reduction in the long-term end-of-catchment pollutant loads. (Policy and institutional barriers will not be addressed through this program).
- **Innovation:** Piloting innovative technologies and approaches is expected to lead to new practices being available for farming, land management and stewardship. It will also lead to changes in how farmers make decisions, how agronomists provide support services, and how donors choose to invest. This will lead to improved practices (improved land management pathway) and contribute to innovative solutions for systems change in water quality improvement. Examples of innovation include:
    - Implementing new and improved data, governance and systems, which will lead to digital infrastructure being in place, and data sharing arrangements being available and utilised. The arrangements will include both traditional and local forms of knowledge, supporting them to be understood and embraced in catchment management
    - Systematic planning undertaken and tools developed to assess suitability of on-ground improvement actions and to guide future interventions
    - Co-design and/or co-implementation for place-based approaches for water quality improvement (especially with Traditional Owners and community more broadly).
- **Maintaining less-disturbed catchments**: Activities that protect existing healthy landscapes will see healthy landscapes valued (socially, culturally, and economically), leading to these landscapes being safeguarded for water quality (with a focus on catchments identified as a lower risk to the Great Barrier Reef and therefore a lower priority in the Reef 2050 Water Quality Improvement Plan (WQIP)). This will lead to the maintenance of water quality from less disturbed catchments.
- **Funding**: Through increased funding options for water quality, and their application, there will be a broader suite of market mechanisms available to fund water quality improvement activities. This will also support enduring economic drivers for practice change and where suitable land use change, which will lead to improved practice change (improved land management pathway), as well as support systems change.
- **Traditional Owners:** Through co-designing water quality activities with Traditional Owners, and making opportunities for engagement available, Traditional Owners will be engaged in on-ground water quality improvement and monitoring activities. Increased funding options for water quality activities will also lead to opportunities for Traditional Owner engagement. Together, these will support Traditional Owners to participate and take the lead in water quality improvement and protection activities that align with Traditional Owners' aspirations. This will contribute to the end of Partnership outcome of an increase in Traditional Owner-led water quality improvement projects. This will also apply to a significant extent to the broader community with an emphasis on fostering stewardship in water quality improvement and monitoring.

Component interactions

Table 10 outlines how the activities of the Water Quality Component will interact with the activities of other Partnership components. Understanding and collecting information on these interactions is important for telling the story of the synergies the Water Quality Component has created with other components.

Table 10. Water Quality Component interaction with other Partnership components

Component	Description of interaction with Water Quality Component
Reef Restoration and Adaptation Science (Component 4)	Monitoring and modelling frameworks are aligned to connect land-based activities and reef habitats, including coral which is the subject of RRAS
Traditional Owner Reef Protection (Component 5)	Engagement of Traditional Owners in water quality activities will support the delivery of Traditional Owner Reef Protection outcomes and Water Quality outcomes
Community Reef Protection (Component 5)	Engagement and stewardship activities, in particular with landholders, will support the delivery of Community Reef Protection outcomes
Integrated Monitoring and Reporting (Component 6)	Water quality monitoring and evaluation will inform the knowledge value chain described in the Integrated Monitoring and Reporting Component, and the alignment of monitoring and modelling decision frameworks is essential

Principles

The delivery of the Water Quality Component is guided by the following suite of component-specific principles:

- Use best available science (including community and Traditional Knowledge)
- Adopt a balanced portfolio of interventions while maintaining a focus on priority pollutants and priority locations
- Build on proven initiatives while driving innovation
- Support local community design
- Support innovative sustainable financing models
- Establish the foundations for long term commitments/enduring improvements
- Take consideration of multiple-benefits.

Assumptions

Table 11 presents the causal assumptions that underpin the Water Quality Component program logic, along with an assessment of the assumptions for M&E planning purposes. Surfacing the assumptions underpinning the Water Quality Component is important for assessing how robust the design of the Component is, and identifying any assumptions that might be important to track. Those assumptions identified for further investigation/inclusion in M&E are included in the monitoring plan for the Water Quality Component (Table 15).

Table 11. Assumptions from Water Quality Component program logic

Key assumptions underpinning the logic We assume that...	Evidence for/ against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H)*	Investigate further/ include in M&E? Yes (Y) / No (N)
Farmers will change practices if we provide the right support	Experience from previous Reef protection initiatives	L-M	H	Y
A suite of mechanisms is required to accommodate the diversity of landholder practice change drivers	Historical experience, literature	H	L	N
A focus on existing proven techniques will provide significant water quality improvements	P2R modelling and science	M	H	N

Key assumptions underpinning the logic We assume that...	Evidence for/ against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H)*	Investigate further/ include in M&E? Yes (Y) / No (N)
Landholders will be prepared to share their data through a non-government data cooperative	Speaking to farmers. Evidence of why they have not shared data in the past, integrated into design of model	M	L	N
Innovation will lead to a step change in water quality improvement effectiveness without sacrificing farm profitability	Examples of specific innovations having led to economic and water quality improvements	L	M	Y
Delivery partners have the capacity and capability to implement projects at the required scale	Experience with previous and ongoing Reef projects	M	H	Y
Healthy landscapes maintain catchment function and improve water quality at end-of-catchment	Best available science, local monitoring data and modelling	H	H	N
Co-design can lead to improved buy-in and stewardship, and ultimately better outcomes	Major integrated projects (MIPs) are an experiment in this	M	M	Y
Lack of funding/finance can be a barrier to practice change	Experience with previous Reef projects, literature	H	L	N

* H=High, M=Medium, L=Low

11.3 Scope of the Water Quality Component M&E Plan

No component-specific additions are required for the scope of the Water Quality Component M&E Plan.

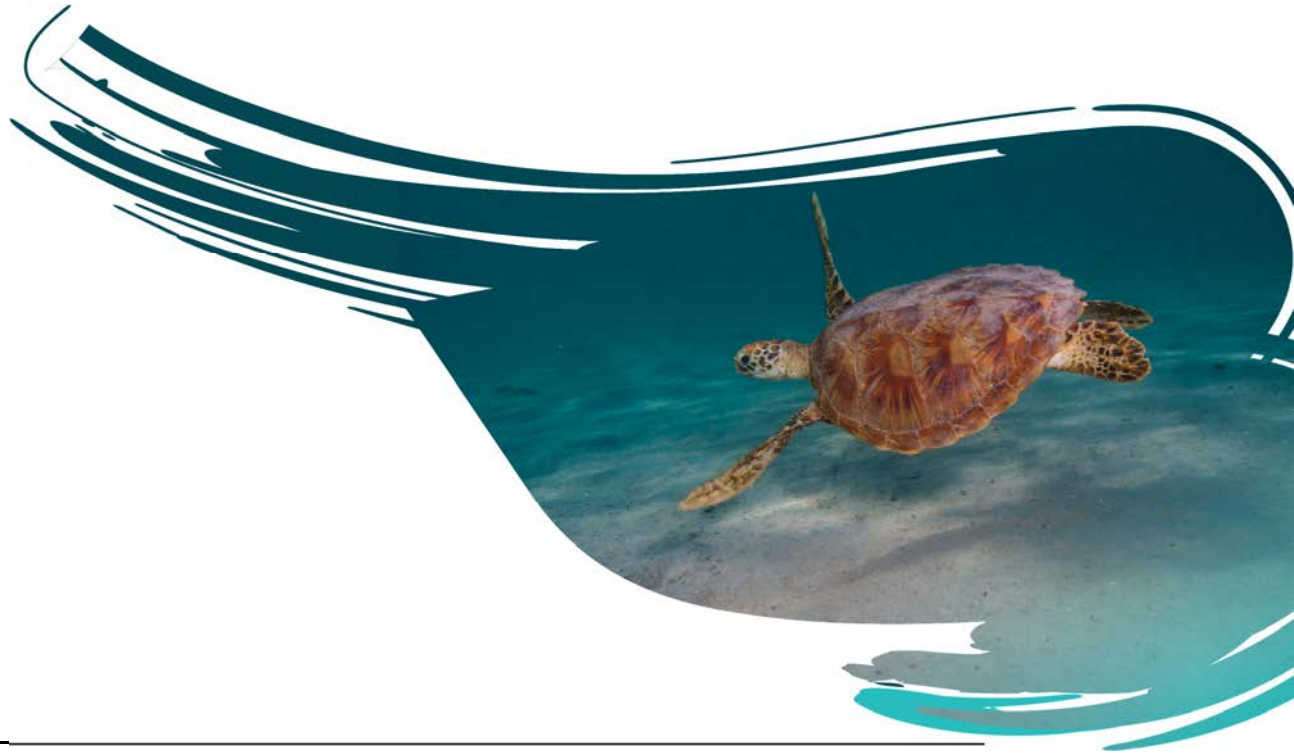
11.4 Approach to addressing Water Quality Component key evaluation questions

Table 12 presents tailored versions of the Partnership outcomes and impact questions for the Water Quality Component and summarises the approach to addressing the KEQs within the Water Quality Component (in alignment with Section 7.2).

Table 12. Water Quality Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the Water Quality Component been in achieving its intended outcomes?	a) To what extent has the Water Quality Component: i. achieved an enduring reduction in the long-term end-of-catchment pollutant loads? ii. maintained water quality in less disturbed catchments? iii. produced innovative solutions for systems change in water quality improvement? iv. led to an increase in Traditional Owner-led water quality improvement projects?	• Assessment of outcomes achievement against expectations outlined in Table 13 • Monitoring of progress towards outcomes during implementation as outlined in Table 15 • Targets for reductions in long-term end-of catchment pollutant loads shown in Table 14
	b) In what ways have synergies (with other components) been created through the Water Quality Component?	Description of the ways in which the Water Quality Component has created synergies with other components (Table 10 outlines the expected interactions with other components)
	c) What expected outcome(s) of the Grant Agreement has the Water Quality Component contributed towards, and how?	Description of how the achievements of the Water Quality Component are contributing to the expected outcomes of the Grant Agreement, specifically: • Improved management of relevant activities in the adjacent catchments to the Great Barrier Reef • Management of key threats to the Great Barrier Reef
	d) To what extent did the Water Quality Component contribute to delivering on Traditional Owner aspirations for the Reef?	Description of how the Water Quality Component has supported Traditional Owner aspirations
	e) To what extent did the Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Description of Water Quality Component has supported community partners to contribute to Reef protection

Key evaluation questions	Sub-questions	Summary approach
Broader impact of the Component		
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the Water Quality Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	c) To what extent has the Water Quality Component leveraged investment and co-investment from local and global actors?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	d) How has the Water Quality Component maximised the achievement of multiple (ancillary) benefits?	Synthesis of achievements from Component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		Log of positive and negative unintended outcomes resulting from Water Quality Component activities



11.5 Performance expectations for the Water Quality Component

Table 13 outlines the performance expectations for the Water Quality **end of Partnership outcomes**. As described in Section 6, these expectations make it clear how performance of the Water Quality Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the Water Quality Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan target for Water Quality is:

- WQT4: Water Quality in the Great Barrier Reef has a stable or positive trend.

Table 13. Water Quality Component end of Partnership outcomes performance measures

End of Partnership outcomes	Performance measure (Indicators and targets if required)	Data collection
An enduring reduction in the long-term end-of-catchment pollutant loads	**Indicator** Reduction in the long-term, average modelled load of pollutant at end of catchment **Targets** • 456t reduction in dissolved inorganic nitrogen (DIN) loads • 462kt reduction in sediment loads • 250kg reduction in pesticide loads Table 14 sets out the targets for the long-term reduction in pollutant loads for specific catchments for the different priority pollutants	Projects to collect data and report in accordance with the Paddock to Reef Integrated Monitoring, Modelling and Report Program (P2R)
Maintenance of water quality from less disturbed catchments	**Indicators** • Additional length (km) of riparian land/area (ha) of catchment that has land use protection measures in place, including legal and/or physical measures • Length (km) of riparian land/ area (ha) of catchment that has been rehabilitated or revegetated • Metrics to be developed on potential decline in water quality in absence of the interventions **Targets** To be set as part of detailed program design	Project-level reporting on the area and approach to protection
Innovative solutions for systems change in water quality improvements are available	**Indicators** • More cost-effective approaches to improving water quality have been identified and demonstrated • Feasibility of new data sharing platforms has been demonstrated • Tools to improve the effectiveness and efficiency of planning and implementation of water quality improvement activities have been developed and demonstrated • New mechanisms for funding water quality improvement activities are available	As per Table 15
Increase in Traditional Owner led water quality improvement projects	**Indicators** • Number of projects led by Traditional Owners • Increase in number of Traditional Owner groups involved in Water Quality improvement projects and related activities	As per Table 15

The predicted load reductions shown in Table 13 and Table 14 for dissolved inorganic nitrogen, sediment, and pesticides refer to modelled average long-term end-of-catchment reductions. These may be adjusted to reflect improvements in the underlying modelling. The basis for predicting load reductions is set out in Alluvium, 2019.[16]

Table 14. Target long-term reductions in pollutant loads

NRM Region	Catchment	Target pollutant	Predicted long-term reduction in pollutant load	Target load reduction based on the WQIP
Wet Tropics	Herbert River	Dissolved inorganic nitrogen	140t	641t
		Sediment	12kt	95kt
	Johnstone	Dissolved inorganic nitrogen	100t	471t
	Mulgrave-Russell	Dissolved inorganic nitrogen	72t	336t
	Tully	Dissolved inorganic nitrogen	70t	249t
Burdekin	Lower Burdekin	Dissolved inorganic nitrogen	48t	585t
		Pesticides	35kg	1318kg
	Bowen Bogie	Sediment	330kt	426kt
	East Burdekin	Sediment	20kt	75kt
	Upper Burdekin	Sediment	22kt	245kt
Mackay Whitsunday	Plane Creek	Dissolved inorganic nitrogen	26t	230t
		Pesticides	130kg	1271kg
	Pioneer River	Pesticides	85kg	737kg
Fitzroy	Fitzroy River (lower)	Sediment	44kt	200kt
	Mackenzie River	Sediment	6kt	62kt
Burnett Mary	Mary River	Sediment	28kt	131kt

11.6 Monitoring the progress of the Water Quality Component

Table 15 shows the plan for monitoring the progress and performance of the Water Quality Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indicators at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the Water Quality Component.

Table 15 is structured against the outcome pathways of the Water Quality Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the Water Quality logic assumptions (from Table 11) prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

In terms of the existing projects under the Water Quality Component (2018-2019 investments), Appendix 4 explains the approach to collect relevant monitoring data to inform the progress of the Component.

16 Alluvium 2019. Effective and Efficient Pathways for Investment in Improved Water Quality in the Great Barrier Reef: Final Report. A report for the Great Barrier Reef Foundation, Brisbane.

Table 15. Plan for monitoring the progress of the Water Quality Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Improved catchment function pathway			
Improved function of landscapes for water quality	• To what extent have activities led to improved water quality outcomes? • To what extent are the outcomes expected to endure beyond the life of the program?	• Increased area (ha) of landscape or length (km) of streambank where active restoration work has been undertaken • Increased area (ha) of landscape or length (km) of streambank where stock and/or other exclusion zones have been established • Reduction in sediment and/or DIN runoff from site • Extent of measures in place to support reduction in threat of degradation • Extent of measures in place to support long-term maintenance of the restored site	Project defined reporting
Improved land management pathway			
Improved practices including stewardship/farming and land management	To what extent are targeted practice change barriers been addressed?	• Number and area (ha) of sub-catchments where local water quality data is available and accessible to landowners • Profitability and productivity of agricultural production on properties that have adopted improved management practices • Number of landholders participating in training and other initiatives aimed at improving water quality outcomes	P2R plus project defined reporting
	To what extent are targeted practices being improved?	• Area (ha) and number of farmers with grazing management plans, nutrient management plans, irrigation management plans, and/or pesticide management plans • Area (ha) and number of landholders accredited under industry best management practice guidelines • Area (ha) and number of landholders with improved land management practice, identified by sector	Project reporting into P2R
	To what extent have landholders engaged with and contributed to water quality improvement projects?	• Number of land managers successfully engaged in water quality improvement activities and scope of that involvement • Amount of time and resources contributed by landholders and other partners towards water quality improvement activities • Extent to which landholders have promoted project water quality improvement approaches to other landholders • Extent to which water quality is demonstrated to be a consideration in farm planning and decision making	• Project reporting into P2R (social indicators) • Project defined reporting on landholder behaviour and contributions, including time committed to project, other in-kind support

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Innovation pathway			
New technologies, tools and approaches are available (supporting stewardship/farming/land management)	• What new technologies, tools, and approaches have been developed and/or validated? • What potential do the technologies, tools, and approaches have for a step change in water quality? • What existing technologies, tools, and approaches have been improved (effectiveness and efficiency)?	• Number of new approaches that have been developed and/or validated using criteria related to cost-effectiveness, feasibility, and potential to achieve water quality improvements at scale. • Cost effectiveness of new water quality improvement approaches or improvement of cost-effectiveness of existing approaches, relative to existing practices based on Alluvium (2019) benchmarks • Number of new tools available to support program, project and farm-scale planning and implementation of water quality improvement activities and the potential of those tools to improve effectiveness and efficiency • Extent to which new technologies, tools and approaches have been demonstrated and/or adopted	Project defined reporting
Digital infrastructure for data management is in place for water quality	• Is the infrastructure in place? • What signs are there that systems change is going to drive water quality improvements?	• Number of landholders (i) contributing to and (ii) accessing information from the data system • Data sharing agreements in place • Extent to which landholders, advisors and/or investors are making decisions informed by the data	• Use information from the digital infrastructure system • Survey of end-users • Other project-defined data sources
Maintaining less-disturbed catchments pathway			
Protection of existing healthy landscapes for water quality	Are healthy landscapes valued socially, economically and culturally with respect to their contribution to maintaining or improving water quality outcomes?	• Extent to which information is available on the contribution of healthy landscapes to maintaining water quality and priorities for future protection and conservation • Number of approaches that have been identified and demonstrated as feasible and known to be effective for protecting healthy landscapes • Extent to which incentives for protecting healthy landscapes have been identified and demonstrated	• Consultancy to collate and evaluate information • Project defined reporting
Funding pathway			
Enduring economic drivers for practice change/land use change/ improved land management	To what extent have new funding options or incentives for water quality improvements become available?	• Number of new market mechanisms for water quality improvement that have become available • Existing mechanisms have been improved and their potential to contribute to water quality improvement	Description and evaluation of new financing mechanisms

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Traditional Owners pathway			
More Traditional Owners are engaged in on-ground water quality improvement and monitoring activities	To what extent have water quality activities been co-designed with Traditional Owners?	Extent to which Traditional Owners have been involved in the activity design	Description and documentation of Traditional Owner activities
	To what extent have Traditional Owners been engaged in on-ground water quality improvement and monitoring activities?	Number of and extent to which projects engage Traditional Owner groups in on-ground water improvement and monitoring activities	Description and documentation of Traditional Owner activities
Assumptions			
Farmers will change practices if we provide the right conditions	*Not applicable*	*Not applicable*	• Captured through indicators above related to extent that practice change is being made and barriers to change are being overcome • P2R and project defined reporting
Innovation will lead to a step change in water quality improvement effectiveness without sacrificing farm profitability	*Not applicable*	*Not applicable*	Captured through indicators above related to new technologies, tools and approaches, and productivity and profitability on farms where new practices have been adopted
Delivery partners have the capacity and capability to implement projects at the required scale	*Not applicable*	*Not applicable*	Strength and depth of responses to calls for expressions of interest/request for proposals for implementation of programs and projects Responses/applications
Co-design can lead to improved buy-in and stewardship, and ultimately better outcomes	*Not applicable*	*Not applicable*	• Monitor outcome from MIPs • Evaluation of program implementation

12 Crown-of-thorns Starfish Control Component M&E Plan

12.1 Introduction

The COTS Control M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the COTS Control Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the component with other components
    - the principles and key causal assumptions underpinning the COTS Control Component
- The scope of COTS Control Component M&E
- The COTS Control Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the COTS Control component, including performance measures for prioritised intermediate outcomes.

The COTS Control Component M&E Plan was developed via an M&E planning workshop including representatives from CSIRO, DoEE, GBRMPA and GBRF. It is worth noting the following when reading the COTS Control Component M&E plan:

- For the purposes of this document, 'COTS control' includes manual in-water control (culling and surveillance), data management, decision-support, innovations in early warning systems, early intervention options, alternative control technologies, and improved prediction and decision-making
- The results of the independent review of the COTS control activities to date, as well as a cross-sectoral COTS Forum in November 2019, will further inform the activities of the COTS Control Component, which may be incorporated in future iterations of the COTS Control M&E Plan.

12.2 Logic of the COTS Control Component

The COTS Control Component-level logic model (Figure 6) visually shows how the work undertaken in the COTS Control Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between COTS control activities and expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model, with a supporting narrative, the principles that guide the delivery of the Component and the key causal assumptions underpinning the logic.

The purpose of the narrative is to explain, in words, the broader goals for the COTS Control Component, and how the COTS Control Component is expected to contribute to those broader goals through its activities and outcomes.

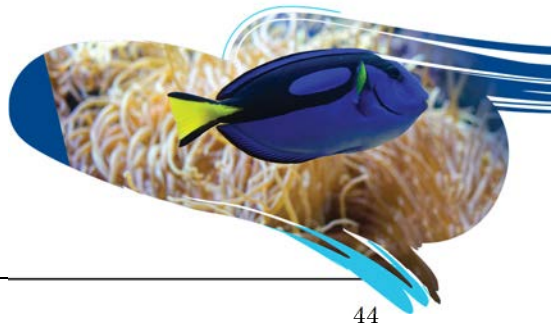
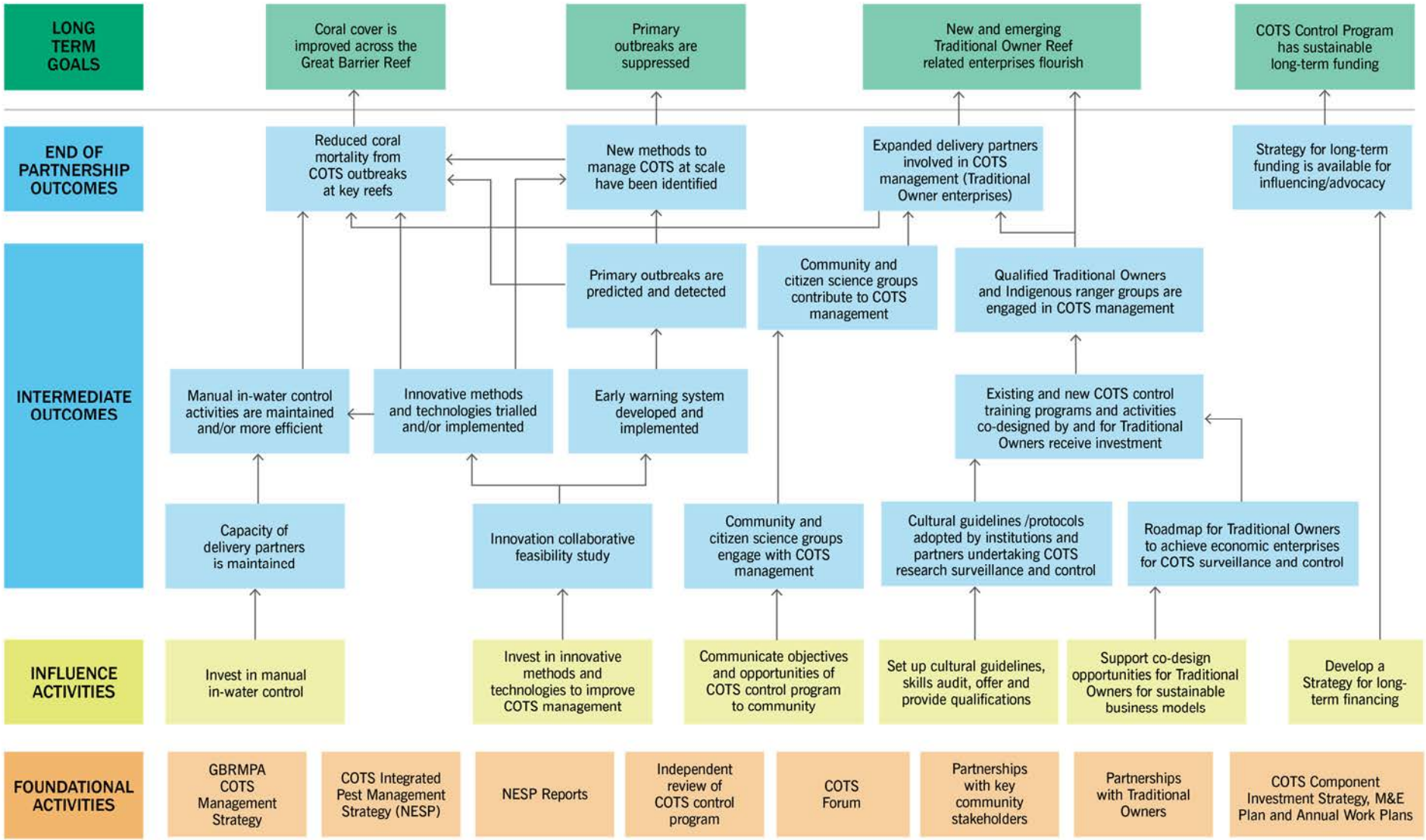


Figure 6. COTS Control Component program logic



Narrative of the logic model

The broader long-term goals of the COTS Control Component are:

- Coral cover is improved across the Great Barrier Reef
- Primary outbreaks are suppressed
- New and emerging Traditional Owner Reef related enterprises flourish
- COTS Control Program has sustainable long-term funding.

The continued control of secondary outbreaks coupled with the suppression of future primary outbreaks are the key precursors to improved coral cover and which the COTS Control Component expects to directly contribute towards. The unique contributions of the COTS Control Component during the Partnership funding period (to 2024) are:

- Reduced coral mortality from COTS outbreaks through targeted manual in-water control at targeted reefs, and the development of innovative alternative control methods and technologies that can complement existing manual in-water control
- An enhanced ability to predict and detect primary outbreaks early, allowing for early intervention and hence suppression of larval export that supports subsequent secondary outbreaks
- Scoping and initiation of opportunities for expanded Traditional Owner and community participation in COTS control
- A strategy that presents a comprehensive business case and real options to support planning and policy development for long-term funding of COTS management.

These contributions represent the end of Partnership outcomes for the COTS Control Component. The Component includes a suite of activity pathways to achieve these end of Partnership outcomes:

- **Manual in-water control**: Through continued investment in manual in-water control activities at a level consistent with the best scientific advice and the intensity of the current secondary outbreaks, the Component expects the capacity of the delivery partners to be maintained. Through the maintenance of manual in-water control and innovations and/or efficiencies therein, it is expected that the manual in-water control will at least be maintained, but ideally be made more efficient.
- **Complementary innovative methods**: By bringing the scientific community together through dedicated COTS Forums and by investing in focussed research and development to improve COTS control, new innovative methods and technologies will be identified and trialled. These will relate to early warning systems, early intervention options, alternative control technologies, and improved prediction and decision-making. Where ready for operation, these will be implemented to complement existing manual in-water control. As a result of this investment it is expected that COTS control operational and strategic management decisions will be improved and that primary outbreaks will be more accurately predicted and detected, contributing to the suppression of primary outbreaks.
- **Expanding delivery partner involvement**: Through collaboration with the Traditional Owner Reef Protection and Community Reef Protection Components, opportunities to enhance Traditional Owner, community and citizen science groups involvement in reef management through participation in COTS control will be mapped and implemented. Traditional Owner activities will be led by and co-designed with Traditional Owners, alongside the development of biocultural guidelines. In all instances the activities will lead to expanded delivery partner involvement in COTS control, which will be likely to include training and direct participation in manual in-water control and surveillance.
- **Long-term funding strategy**: An additional long-term goal for the COTS Control Component is to secure sustainable and long-term funding support for COTS control. This goal has its own pathway, where options will be scoped to present a comprehensive business case and real options to support planning and policy development for long-term sustainable funding of COTS management.

Component interactions

Table 16 outlines how the activities of the COTS Control Component will interact with the activities of other Partnership components. Understanding and collecting information on these interactions is important for telling the story of the synergies the COTS Control Component has created with other components.

Table 16. COTS Control Component interaction with other Partnership components

Component	Description of interaction with COTS Control Component
Reef Restoration and Adaptation Science (Component 4)	COTS control planning and surveillance will provide insights into where and when to target RRAS activities
Traditional Owner Reef Protection (Component 5)	Co-designing and delivering COTS control with Traditional Owner groups will support Traditional Owner aspirations for the Reef
Community Reef Protection (Component 5)	Engaging community and citizen science groups in COTS control will support delivery of Community Reef Protection outcomes
Integrated Monitoring and Reporting (Component 6)	COTS decision-support systems and all COTS control surveillance will feed into RIMReP and the knowledge value chain described in the Integrated Monitoring and Reporting Component

Principles

The delivery of the COTS Control Component is guided by the following suite of Component-specific principles:

- The COTS Control Component is consistent with the Reef 2050 Plan, the GBRMPA COTS Control Strategy (to be released as the COTS Management Strategy), the 2017 Scientific Consensus Statement, and the COTS Integrated Pest Management (IPM) Strategy
- Build the capacity and expertise of partners to contribute and add value to improved COTS control
- Selection of activities based on an open and transparent procurement process, including value for money
- Partner to design and implement control and surveillance based on sound science
- Consistent with Traditional Owner and community engagement principles
- Consistent with the National Environmental Science Program (NESP) IPM Strategy principles, decisions are made in a timely manner based on best available (rather than future 'perfect') knowledge, complemented by adaptive management and continuous learning.

Understanding and collecting information on these is important for telling the story of how well the COTS Control Component adhered to its principles.

Assumptions

Table 17 presents the causal assumptions that underpin the COTS Control Component program logic, along with an assessment of the assumptions for M&E planning purposes. Surfacing the assumptions underpinning the COTS Control Component is important for assessing how robust the design of the Component is, and identifying any assumptions that might be important to track. Those assumptions identified for further investigation/inclusion in M&E are included in the monitoring plan for the COTS Control Component (Table 17).

Table 17. Assumptions from COTS Control Component program logic

Key assumptions underpinning the logic We assume that...	Evidence for/against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H) *	Investigate further/include in M&E? Yes (Y) / No (N)
Partners have the capacity (time/resources) and willingness to innovate and collaborate	A broad range of stakeholders (researchers, operators, government) have contributed to the NESP COTS activities and expressed interest to collaborate and learn	M	M	Y
Traditional Owners are interested in participating in COTS control and surveillance	CSIRO, GBRMPA and GBRF have received direct approaches from community and Traditional Owner groups. Traditional Owners expressed an interest to the Partnership to participate in COTS control	M	M	Y

Key assumptions underpinning the logic We assume that...	Evidence for/against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H) *	Investigate further/include in M&E? Yes (Y) / No (N)
Community are interested in participating in COTS control and surveillance	CSIRO, GBRMPA and GBRF have received direct approaches from community. The Community Reef Protection Component has identified COTS control as an opportunity for community participation in Reef protection	M	L	Y
COTS Integrated Pest Management is a sound approach, consistent with peer reviewed science	NESP IPM Strategy; NESP research; independent peer-review; peer-reviewed literature	H	H	N
Early detection and response are the most effective approach to COTS management	NESP research; peer-reviewed literature; invasive species management literature; expert opinion; ongoing monitoring results	H	H	N

* H=High, M=Medium, L=Low

12.3 Scope of the COTS Control Component M&E Plan

This section includes the elements of the Partnership-level M&E Scope (as outlined in Section 4) that are relevant to the COTS Control Component. This includes some additions to M&E audience for the COTS Control Component and their information needs.

Audience

In addition to the primary M&E audiences for the Partnership in general (Section 4 of this document), the following audiences (Table 18) are important for the COTS Control Component.

Table 18. COTS Control Component M&E audience and information needs

Primary audience	Information requirements
GBRMPA	Co-investment/future investment potential associated with long-term sustainable financing and informing the World Heritage Committee Opportunities and improvement (science and other)
NESP IPM Working Group	How well the Component is operating and where the research needs are Opportunities and improvement (science and other)
Queensland Office of the Great Barrier Reef	As for Partnership as a whole

Secondary audiences that may be interested in the results of the COTS Control Component M&E include:

- Service providers (e.g. vessel operators)
- Traditional Owners
- Tourism operators
- Community groups
- Non-government organisations.

The secondary audiences will also be considered when deciding what information to provide to whom, and in what format.

12.4 Approach to addressing COTS Control Component key evaluation questions

Table 19 presents tailored versions of the Partnership outcomes and impact questions for the COTS Control Component and summarises the approach to addressing the KEQs within the COTS Control Component (in alignment with Section 7.2).

Table 19. COTS Control Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the COTS Control Component been in achieving its intended outcomes?	a) To what extent has the COTS Control Component: i. Reduced coral mortality from COTS outbreaks at key reefs? ii. Identified and/or tested new methods to manage COTS at scale? iii. Expanded delivery partners involved in COTS management (including Traditional Owner enterprises)? iv. Made available a strategy for long-term-funding options?	• Assessment of outcomes achievement against expectations outlined in Table 20 • Monitoring of progress towards outcomes during implementation as outlined in Table 21
	b) In what ways have synergies (with other components) been created through the COTS Control Component?	Description of the ways in which the COTS Control Component has created synergies with other components against expected interactions with other components (Table 16)
	c) What expected outcome(s) of the Grant Agreement has the COTS Control Component contributed towards, and how?	Description of how the achievements of the COTS Control Component (as understood through KEQ1a) are contributing to: • Management of key threats to the Great Barrier Reef
	d) To what extent did the COTS Control Component deliver on Traditional Owner aspirations for the Reef?	Description of how the COTS Control Component has supported Traditional Owner aspirations as outlined in the Traditional Owner Reef Protection Component
	e) To what extent did the Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Description of how the COTS Control Component has supported community partners to contribute to Reef protection
Broader impact of the Component		
2. In what ways has the COTS Control Component created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the COTS Control Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)

Key evaluation questions	Sub-questions	Summary approach
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	c) To what extent has the COTS Control Component leveraged investment and co-investment from local and global actors?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	d) How has the COTS Control Component maximised the achievement of multiple (ancillary) benefits	Synthesis of achievements from Component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		Log of positive and negative unintended outcomes resulting from COTS Control Component activities

12.5 Performance expectations for the COTS Control Component

Table 20 outlines the performance expectations for the COTS Control **end of Partnership outcomes**. As described in Section 6, these expectations make it clear how performance of the COTS Control Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the COTS Control Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan target for COTS Control is:

- EHT5: Condition and resilience indicators for coral reefs, seagrass meadows, islands, estuaries, shoals and inter-reefal habitats are on a trajectory towards at least good condition at local, regional and Reef-wide scales.

Table 20. COTS Control Component end of Partnership outcomes performance measures

End of Partnership outcomes	Sub-questions	Performance measure	Data collection
Reduced coral mortality from COTS outbreaks at key reefs	*Not applicable*	**Target:** Reduction of COTS density at priority reefs • **Indicator:** Number and area of priority reefs where COTS density is maintained below ecological thresholds (the threshold at which coral cover is lost to COTS) 'Area' = total area managed (surveillance and culling) 'Priority reefs' = those with ecological (connectivity) and/or economic (tourism) value **Target:** Reduction of average size of COTS at priority reefs • **Indicator:** Trend toward smaller size classes	GBRMPA COTS Control Program data and NESP reports
New methods to manage COTS at scale have been identified	*Not applicable*	Identification of new methods that generate significant effectiveness and or cost improvements in areas of surveillance, intervention and decision support	• Collation of information from COTS Working Group meeting minutes and milestone deliverables from Annual Work Plan activities arising from the collaborative feasibility study to assess opportunities for innovations in COTS management • Progress reports from innovation study, detailed R&D projects and trials (to be detailed once started) • Documentation and collation of stories, narratives and outputs from activities arising from the collaborative feasibility study to assess opportunities for innovations in COTS management
Expanded delivery partners involved in COTS management (including Traditional Owner enterprises)	To what extent has the COTS Control Component engaged Traditional Owner Reef related enterprises and community and citizen science groups in COTS management activities?	• Number and nature of involvement of expanded delivery partners • Number of trips from involving expanded delivery partners • Dive hours from expanded delivery partners on existing fleet or new vessels	Control program reporting
Strategy for long-term funding is available for influencing/advocacy	*Not applicable*	Options for long-term funding strategy for COTS management available by June 2021	Progress report

12.6 Monitoring the progress of the COTS Control Component

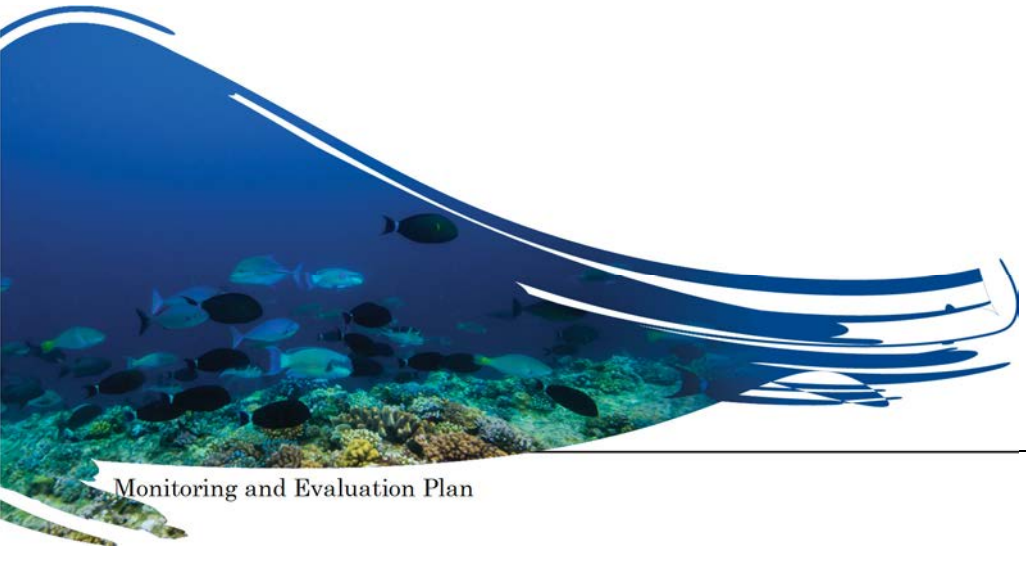
Table 21 shows the plan for monitoring the progress and performance of the COTS Control Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indicators at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the COTS Control Component.

Table 21 is structured against the outcome pathways of the COTS Control Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the COTS Control logic assumptions (from Table 17) prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

Table 21. Plan for monitoring the progress of the COTS Control Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
Manual in-water control pathway			
Manual in-water control activities are maintained and/or more efficient	To what extent can providers continue management effort in accordance with IPM strategy?	Maintenance of current capacity to respond to current outbreak (no gap in funding due to Partnership management)	• Progress reporting from providers • Report of the independent scientific review
Complementary innovative methods pathway			
Innovative methods and technologies trialled and/or implemented	To what extent have new methods been identified and/or trialled?	• Delivery of innovation feasibility study milestones in accordance with Annual Work Plan • Number and type of new methods identified and trialled	Innovation study progress reports
	In what ways are innovative methods and technologies being used to improve COTS control?	Innovative methods adopted as part of the control program	
Early warning system developed and implemented	*Not applicable*	Extent to which new early warning approaches have been identified, trialled and made available	
Expanded delivery partner involvement pathway			
Community and citizen science groups contribute to COTS management	*Not applicable*	Number and extent of involvement of community and citizen science groups in COTS control activities (including surveillance and reporting)	Description and documentation of community and citizen science activities related to COTS

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
Qualified Traditional Owners and Indigenous ranger groups are engaged in COTS management	*Not applicable*	Number and extent of involvement of Traditional Owners and Indigenous ranger groups in COTS control activities (including surveillance and reporting)	Description and documentation of Traditional Owner and Indigenous ranger activities related to COTS
Long-term funding strategy pathway			
Strategy for long-term funding is available for influence and advocacy	In what ways have strategic funding options been presented to decision and policy makers?	*Not applicable*	Strategy options report
Prioritised assumptions			
Partners have the capacity (time/resources) and willingness to innovate and collaborate	*Not applicable*	*Not applicable*	Working Group opinion/observation
Traditional Owners are interested in participating in COTS control and surveillance	*Not applicable*	*Not applicable*	• Traditional Owner Working Group opinion/observation • Track direct approaches (continuous)
Community are interested in participating in COTS control and surveillance	*Not applicable*	*Not applicable*	• Community Reef Protection Working Group opinion/observation • Track direct approaches (continuous)



13 Reef Restoration and Adaptation Science Component M&E Plan

13.1 Introduction

The Reef Restoration and Adaptation Science (RRAS) M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the RRAS Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the component with other components
    - the principles and key causal assumptions underpinning the RRAS Component
- The scope of the RRAS Component M&E
- The RRAS Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the RRAS component, including performance measures for prioritised intermediate outcomes.

The RRAS Component M&E Plan was developed via an M&E planning workshop including representatives from the Reef Restoration and Adaptation Program (RRAP), CSIRO, GBRMPA, GBRF, James Cook University, Queensland University of Technology and The University of Sydney. It is worth noting that:

- The RRAS Component builds on the outcomes of RRAP
- The RRAS activities focus on coral restoration and adaptation efforts. Other ecological reef systems (such as wetlands or seagrass) are only considered as part of the broader picture with flow on benefits.

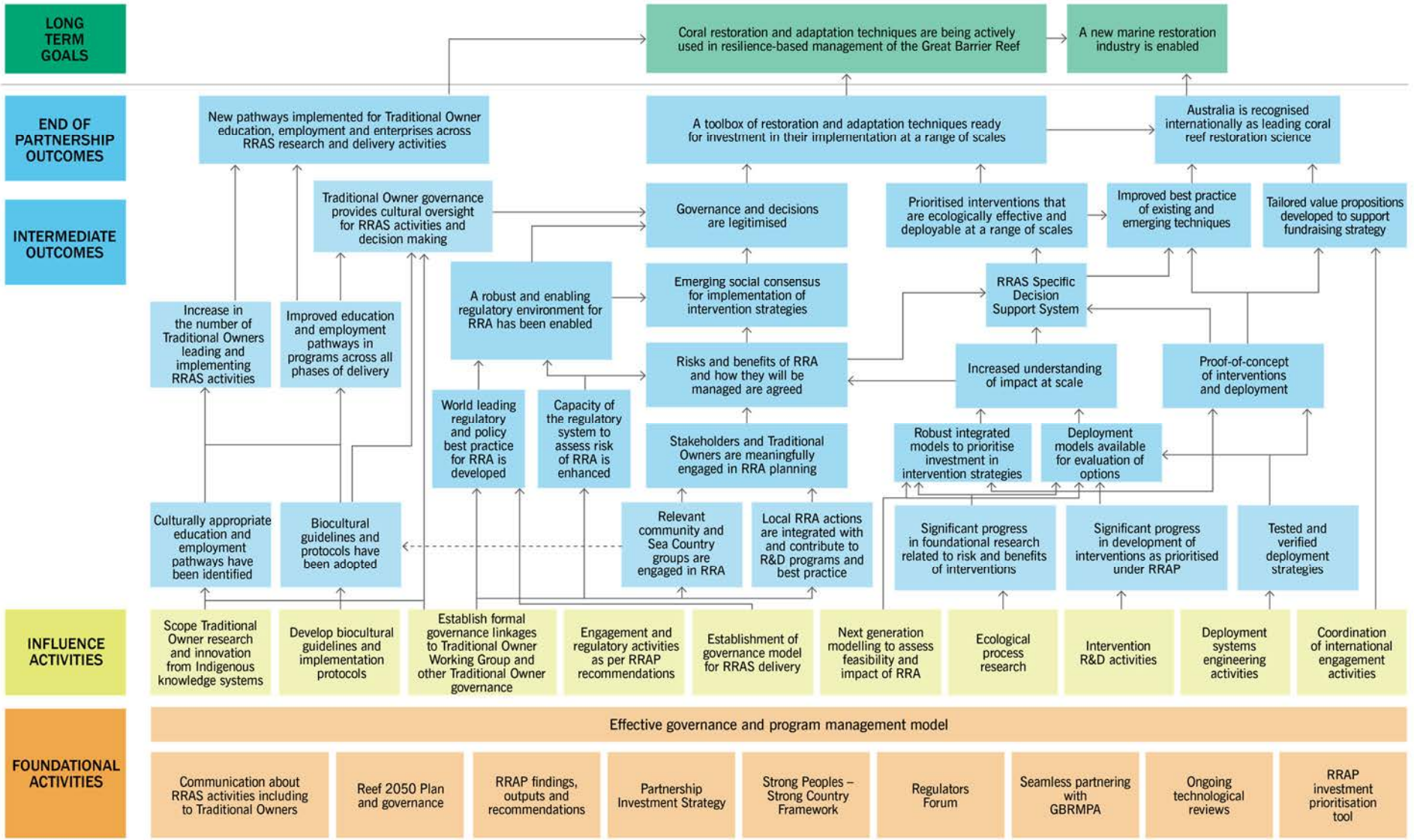
13.2 Logic of the RRAS Component

The RRAS Component-level logic model (Figure 7) visually shows how the work undertaken in the RRAS Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between RRAS activities and expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model, with a supporting narrative, the principles that guide the delivery of the Component and the key causal assumptions underpinning the logic.

The purpose of the narrative is to explain, in words, the broader goals for the RRAS Component, and how the RRAS Component is expected to contribute to those broader goals through its activities and outcomes.

Figure 7. RRAS Component program logic



Narrative

The broader goals of the RRAS Component are that:

- Coral restoration and adaptation techniques are being actively used in resilience-based management of the Great Barrier Reef
- A new marine restoration industry is enabled.

The unique contribution of the RRAS Component to these broader goals during the Partnership funding period (to 2024) are:

- A toolbox of restoration and adaptation techniques are ready for investment in implementation, at a range of scales. These techniques will be in alignment with the objectives for the Reef
- Australia is recognised internationally as leading coral reef restoration science
- New pathways implemented for Traditional Owner education, employment and enterprises across RRAS research and delivery activities.

The development of a toolbox of restoration and adaptation techniques – ready for investment in implementation at a range of scales – requires the establishment of a transparent and inclusive governance structure and program management, focused on building distinct program components, each with their own pathways of change. These are:

- **Regulatory permission**: This will be achieved through a robust and enabling regulatory environment for reef restoration and adaptation. In partnership with GBRMPA and other entities, RRAS will enhance the capacity of the regulatory system to assess risk and will develop world leading regulatory and policy best practice for reef restoration.
- **Social consensus**: RRAS will achieve an emerging social consensus for implementation of intervention strategies and ensure that governance and decisions are legitimised, via the following activities:
    - Relevant community and Traditional Owners are engaged and involved in reef restoration and adaptation activities, both in terms of planning, designing and implementing such activities; and
    - Local reef restoration and adaptation activities are integrated with and contribute to R&D programs and best practice.

Through these activities, the RRAS Component will be materially engaging stakeholders and Traditional Owners in decisions on where and how to intervene in reef restoration and adaptation. This is expected to result in agreement on the risks and benefits of restoration activities and how they will be managed. This will lead to an emerging social consensus for implementation of intervention strategies which, along with a robust regulatory framework, is a precursor to ensuring that governance and decisions are legitimised.

- **Intervention feasibility, prioritisation and deployment**: The Component will develop and prioritise interventions that are ecologically effective and deployable at a range of scales. This will be achieved through the following pathways:
    - RRAS will achieve significant progress in research and development of interventions and ecological processes underpinning these interventions to improve understanding of risk and benefits. There is expected to be significant progress in research areas related to: shading and cooling; assisting reproduction, settlement and survival; and strategies to make corals more resilient to the impacts of climate change. This will lead to an increased understanding of impact at scale, proof-of-concepts of interventions and improved best-practice of existing and emerging techniques.
    - Through engineering in deployment systems, it is expected that deployment strategies will be tested and verified and provide inputs into robust deployment models facilitating the development and assessment of deployment scenarios. This will also enable proof-of-concept of deployment of interventions.
    - Next generation reef models will be developed to underpin feasibility testing and investment decisions, both in terms of interventions and deployment strategies. Robust, integrated and enabling, these models will underpin a RRAS-specific decision-support system, informed by agreed risk and benefits, that will allow the prioritisation of interventions that are ecologically effective and deployable at a range of scales. This will support the legitimisation of governance and decisions and development of improved best practice of reef restoration and adaptation. It is expected that the RRAS-specific decision-support system will feed into the IMR decision-support system.
- **Traditional Owner pathways**: The Component is expected to identify and implement new pathways for Traditional Owner education, employment and enterprises across RRAS research and delivery activities. This will be achieved by increasing the number of Traditional Owners leading and implementing RRAS activities and improving education and employment pathways in programs across all phases of delivery. In addition to these new pathways, Traditional Owner governance is expected to provide cultural oversight for overall RRAS activities and decision-making, alongside the development of biocultural guidelines and protocols.

Another end of Partnership outcome is that Australia is recognised internationally as leading coral reef restoration science. This will be achieved through the toolbox of reef restoration and adaptation techniques, improved best practice of existing

and emerging techniques, and the coordination of international engagement activities leading to the development of tailored value propositions to support the Partnership fundraising strategy.

The RRAS activities and outcomes will be supported by the following foundational activities:

- Reef 2050 Plan and governance
- RRAP findings, outputs and recommendations
- Partnership Investment Strategy
- Strong Peoples – Strong Country Framework
- Regulators forum
- Seamless partnering with GBRMPA
- Ongoing technological reviews (environmental scans)
- Investment prioritisation tool (existing).

Component interactions

Table 22 outlines how the activities of the RRAS Component will interact with the activities of other Partnership components. Understanding and collecting information on these interactions is important for telling the story of the synergies the RRAS Component has created with other components.

Table 22. RRAS Component interaction with other Partnership components

Component	Description of interaction with RRAS Component
Water Quality (Component 2)	Investment in water quality improvement directly affects the modelling of impact and benefits of interventions under RRAS
COTS Control (Component 3)	COTS control is an essential lever in protecting coral populations and is an essential parameter of RRAS modelling and decision support
Traditional Owner Reef Protection (Component 5)	The RRAS social licence activities include engaging and involving Sea Country groups in restoration activities. This supports aspirations related to Traditional Knowledge being recognised, and Traditional Owners caring for Country
Community Reef Protection (Component 5)	Community and citizen science groups are engaged and involved in restoration activities
Integrated Monitoring and Reporting (Component 6)	The robust integrated models underpinning the prioritisation of investments in intervention strategies will interact with the IMR Decision-Support System (DSS)

Principles

The delivery of the RRAS Component is guided by the following suite of component-specific principles. These are in addition to the overarching Partnership principles that apply to all components:

- The program design will be based on three-yearly cycles of do/stop/review to reflect the investigative nature of the Component and ensure proper adaptive management structures
- The program will develop and foster a seamless interface with Reef management frameworks (especially policy and management, GBRMPA and OGBR), which will be facilitated through the design of the governance structure
- Program activities will always and increasingly move towards an “action supported by research” paradigm and away from a conventional “research, followed by action” paradigm
- The program will foster mission-oriented science – focus will be on outcomes for the betterment of the Reef, and on reef impact.

Assumptions

Table 23 presents the causal assumptions that underpin the RRAS Component program logic, along with an assessment of the assumptions for M&E planning purposes. Surfacing the assumptions underpinning the RRAS Component is important for assessing how robust the design of the Component is and identifying any assumptions that might be important to track. Those assumptions identified for further investigation/inclusion in M&E are included in the monitoring plan for the RRAS Component Table 23.

Table 23. Assumptions from RRAS Component program logic

Key assumptions underpinning the logic We assume that...	Evidence for/ against assumption	Confidence in assumption (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H)*	Investigate further/include in M&E? Yes (Y) / No (N)
Partners and stakeholders are willing to engage positively in RRAS, including embracing the mission of Reef outcome-oriented research	Design stage responsiveness is high	Mixed	H	Y
Engaging partners and stakeholders will lead to acceptance and support for RRAS	Plenty of academic evidence, if done well, but not guaranteed	M	H	Y
The RRAS R&D strategy is realistic (sufficient quality data, timeliness, etc.)	Expert review	M	H	N
Governance and management can handle the complexity of the program	RRAP progress over the past 18 months; other programs have succeeded; success factors are understood	H	H	Y
RRAS can achieve scale with some interventions	RRAP business case	H (at some scale)	H	Y
A collaborative relationship and approach/trust is maintained between RRAS and the regulators and governments	The design phase has fostered relationships	H	H	N

* H=High, M=Medium, L=Low

13.3 Scope of the RRAS Component M&E Plan

This section includes the elements of the Partnership-level M&E Scope (as outlined in Section 4) that are relevant to the RRAS Component. This includes some additions to M&E audience for the RRAS Component and their information needs.

M&E Principles

The RRAS Component identified two unique principles that would guide component M&E, in addition to the overall Partnership principles:

- Beyond 'Business as Usual' R&D. Using best practice approaches to inform the M&E strategy[17]
- Being open about the 'failures' and lessons learnt (not promoting the notion that we 'always know' what the outcomes will be).

Audiences

In addition to the primary M&E audiences for the Partnership in general (Section 4 of this document), the RRAS-specific governance structure is also important for the RRAS Component. Their information needs will be the same as the Partnership Management Committee, namely the effectiveness of the Partnership; the co-benefits generated through Partnership implementation; and delivery of the Partnership against its principles.

13.4 Approach to addressing RRAS Component key evaluation questions

Table 24 presents tailored versions of the Partnership outcomes and impact questions for the RRAS Component and summarises the approach to addressing the KEQs within the RRAS Component (in alignment with Section 7.2).

17 Drawing on CSIRO's Socially Responsible Research Innovation initiative.

Table 24. RRAS Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the RRAS Component been in achieving its intended outcomes?	a) In what ways has the RRAS Component: i. Been effective in developing a toolbox of restoration and adaptation techniques ready for investment in implementation at a range of scales? ii. Contributed towards Australia being recognised internationally as leading coral reef restoration science? iii. Implemented new pathways for Traditional Owner education, employment and enterprises across RRAS research and delivery activities?	• Assessment of outcomes achievement against expectations outlined in Table 25-Table 27 • Monitoring of progress towards outcomes during implementation as outlined in Table 28 and Table 29
	b) In what ways have synergies (with other components) been created through the RRAS Component?	Description of the ways in which the RRAS Component has created synergies with other components
	c) What expected outcome(s) of the Grant Agreement has the RRAS Component contributed towards, and how?	Description of how the achievements of the RRAS Component are contributing to the expected outcomes of the Grant Agreement, specifically: • Improved management of the Great Barrier Reef and relevant activities in the adjacent catchments • Protection of attributes that contribute to the Outstanding Universal Value of the Great Barrier Reef, including species, habitats and Indigenous values • Management of key threats to the Great Barrier Reef, including poor water quality and crown-of-thorns starfish outbreaks
	d) To what extent did the RRAS Component contribute to delivering on Traditional Owner aspirations for the Reef?	Description of how the RRAS Component has supported Traditional Owner aspirations as outlined in the Traditional Owner Reef Protection Component
	e) To what extent did the Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Description of how the RRAS Component has supported community partners to contribute to Reef protection
Broader impact of the Component		
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the RRAS Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	c) To what extent has the RRAS Component leveraged investment and co-investment from local and global actors?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)

Key evaluation questions	Sub-questions	Summary approach
	d) How has the RRAS Component maximised the achievement of multiple (ancillary) benefits?	Synthesis of achievements from Component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		Log of positive and negative unintended outcomes resulting from RRAS Component activities

13.5 Performance expectations for the RRAS Component

Table 25-Table 27 outline the performance expectations for the RRAS end of Partnership outcomes. Three effectiveness rubrics have been developed to define levels of performance of the RRAS Component against its core end of Partnership outcomes. As described in Section 6, these expectations make it clear how performance of the RRAS Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the RRAS Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan targets for RRAS are:

- EHT5: Condition and resilience indicators for coral reefs, seagrass meadows, islands, estuaries, shoals and inter-reefal habitats are on a trajectory towards at least good condition at local, regional and Reef-wide scales
- BT2: Trends in the availability and condition of habitat for species of conservation concern are improving at Reef-wide and regionally relevant scales.

Table 25. RRAS Component end of partnership outcome performance measures

End of Partnership outcomes	Sub-questions	Performance measure (indicators and targets if required)	Data collection (source/ method)
A toolbox of restoration and adaptation techniques ready for investment in implementation, which are ecologically effective, and deployable at a range of scales	*Not applicable*	See Rubric in Table 26	Expert elicitation, mid-term independent peer review and annual program reviews
Australia is recognised internationally as leading coral reef restoration science	*Not applicable*	See Rubric in Table 27	Program review of success criteria and mid-term independent review
New pathways implemented for Traditional Owner education, employment and enterprises across RRAS research and delivery activities	*Not applicable*	• Number and nature of involvement of Traditional Owners in RRAS activities • Number of RRAS projects involving or led by Traditional Owners	RRAS program reporting

Table 26. Effectiveness rubric for RRAS Component KEQ1.a.i

KEQ1.a.i: To what extent has the RRAS component delivered a toolbox of restoration and adaptation techniques ready for investment in implementation, which are ecologically effective, and deployable at a range of scales?	
Rating	**Criteria**
Very good	In addition to that defined as 'good': • the toolbox of restoration and adaptation techniques is at a price point that it is affordable to deploy across significant scales, impacting a sufficient percentage of the Reef to retain core functional values
Good	In addition to that defined as 'adequate', the toolbox of restoration and adaptation techniques is logistically feasible to deploy at scales required to have the necessary impact
Adequate	The toolbox of restoration and adaptation techniques is: • Logistically feasible and able to be deployed at reasonable scales to have at least local impact • Culturally appropriate • Supported by effective and robust regulatory frameworks and permission systems • Socially acceptable and supported by Reef stakeholders and communities
Poor	The toolbox of restoration and adaptation techniques: • Does not demonstrate improvements to already existing restoration and adaptation technology • Is logistically feasible and able to be deployed at reasonable scales to have at least local impact
Detrimental	The toolbox of restoration and adaptation techniques: • Is culturally and socially unacceptable • Has detrimental impacts on the coral reef ecosystem

Table 27. Effectiveness rubric for RRAS Component KEQ1.a.ii

KEQ1.a.ii: To what extent has the RRAS Component contributed towards Australia being recognised internationally as leading coral reef restoration science?	
Rating	**Criteria**
Very good	As for 'good', plus: • Active engagement with international partner organisations • International funding agencies and governments are investing in collaborations with Australian teams • Partner countries increase investment in reef restoration and adaptation R&D

KEQ1.a.ii: To what extent has the RRAS Component contributed towards Australia being recognised internationally as leading coral reef restoration science?	
Good	As for 'adequate', plus: • Formalised international collaboration pathways are being used and supported • Co-publication of high impact papers
Adequate	• Evidence of international uptake of guidelines, techniques, policy and regulations • Improved best practice based on shared knowledge and R&D outcomes
Poor	No apparent international impact or collaboration towards Australia being recognised internationally as leading coral reef restoration science
Detrimental	• Australia gets a poor reputation due to lack of sharing or through poor or non-existent forms of collaboration • Australia exports technologies or interventions that have detrimental impacts on coral reefs or associated (or unintentionally impacted) ecosystems

13.6 Monitoring the progress of the RRAS Component

Table 28 shows the plan for monitoring the progress and performance of the RRAS Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indicators at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the RRAS Component.

Table 28 is structured against the outcome pathways of the RRAS Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the RRAS logic assumptions (from Table 23) prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

In terms of the existing projects under the RRAS Component (2018-2019 investments), Appendix 4 explains the approach to collect relevant monitoring data to inform the progress of the Component.

Table 28. Plan for monitoring the progress of the RRAS Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Strong, transparent, inclusive and effective governance and program management (foundational activity)	*Not applicable*	See Rubric in Table 29	Mid-term independent review
Regulatory permission pathway			
A robust and enabling regulatory environment for Reef restoration and adaptation has been enabled	Has the program actively influenced the policy and regulatory planning current undertaken by regulatory agencies, to enable the implementation of Reef restoration and adaptation interventions?	• Timely progress of research permits • Extent to which proposed interventions have been considered from a policy and regulatory perspective as part of the prioritising process • Extent to which regulatory bodies are informed, engaged and facilitating policy change where appropriate	• Evidence of functional research permit issuing processes (do permits get approved? If not, what are the blocks? Are the blocks being addressed?) • Evidence of policy/permitting adjustments
Social consensus pathway			
Emerging social consensus for implementation of intervention strategies	Has the program identified and agreed on the risks and benefits and how they will be managed?	Extent to which the public trusts that risks around interventions are being managed	Annual surveys
	Are stakeholders engaged in restoration planning in a meaningful way?	• Level of active engagement and overall acceptance is increasing • Number and quality of opportunities for consultation/feedback	Annual surveys
	Are local, community-led restoration activities integrated with, and contributing to, R&D programs and best practice?	• Number of local organisations/people engaged in restoration activities • Extent to which community is contributing to learning, planning, implementing, monitoring, and sharing outcomes of restoration sites • Human dimensions indicators are included in evaluation and show positive trends	Project reporting and qualitative feedback from partners
Intervention feasibility, prioritisation and deployment pathway			
RRAS specific decision-support system	• Are ecosystem and process models improving their capacity to deal with uncertainty? • Are underpinning models improving predictive capacity?	• Extent to which models are proven effective to deal with uncertainty • Extent to which model outputs are relied upon to guide prioritisation and investments regarding interventions	Quantitative data from program partner progress reports – relating to reduced uncertainty, the use of model outputs, scientific publications and updates and improvements of decision-support models and their application

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Prioritised interventions[18] that are ecologically effective and deployable at a range of scales	*Not applicable*	• Number of interventions progressing towards field trials (or being removed as they are proven to be ineffective) • Number and extent to which interventions are being implemented and shown to be effective	Program reports contain quantitative data relating to field trials (increased survival/ decreased bleaching mortality/reduced cost/ increased scale)
Traditional Owners pathway			
Traditional Owner governance provides cultural oversight for RRAS activities and decision making	*Not applicable*	• Increase in Traditional Owner-led governance for strategic and cultural oversight of RRAS • Processes in place that build mutual understanding of risks and benefits and appropriate sharing of Indigenous Knowledge with western science • Indicators that Traditional Owners have a voice and are actively involved in decisions that affect their Sea Country	• Description of specific engagement, co-design mechanisms, co-design outcomes • Noting and action on issues/knowledge/ opportunities delivered through the cultural ethics committee
International leaders' pathway			
Improved best practice of existing and emerging technologies	Are improved best practices being communicated and taken up by managers and restoration practitioners in Australia and elsewhere?	Extent to which Australian-led R&D can be attributed to improvements in best practice globally	Mid and end of program review to quantify international uptake and impact of Australian-led interventions/technology pathways
Tailored value propositions to support fundraising strategy	*Not applicable*	• Number of tailored value prepositions developed • Amount and type of funding attracted through tailored value propositions	Reporting on additional funding made available

18 Interventions include technologies such as solar radiation management, improved broodstock, improved deployment, increasing survival of existing and restored coral.

Table 29. Effectiveness rubric for RRAS Component foundational activity

KEQ for foundational activity: To what extent has the RRAS component established strong, transparent, inclusive and effective governance and program management ?	
Rating	**Criteria**
Very good	As for 'good', plus: Program/intervention prioritisation frameworks and decision support tools are in place, are being used, are continually evaluated and adapted, and they: • Contribute to a robust and informed discussion around decision making • Reduce uncertainty • Integrate with broader Reef-related DSS • Consider single as well as combinations of interventions • Include technical and governance/funding elements
Good	As for 'adequate', plus: • The governance and program management team actively engages the best possible program partners and is perceived as open, transparent and inclusive • Program/intervention prioritisation frameworks and decision support tools are continually evaluated and adapted, and they contribute to a robust and informed discussion around decision making
Adequate	• The governance system ensures relevant, scientifically sound, effective and efficient progress • The program committees and sub-committees are engaged and actively contributing to decisions • Program/intervention prioritisation frameworks and decision support tools are in place and are being used
Poor	One or more of the following: • The governance system does not facilitate progress • The governance and program management team are perceived as exclusive and have a poor record of engaging with teams outside the core research partners • The Program committees and sub-committees do not engage • There are no useable program/intervention prioritisation frameworks and decision-support tools
Detrimental	The governance system and program management team are dysfunctional and are contributing to, or worsening the divisions within the coral reef science community

14 Traditional Owner Reef Protection Component M&E Plan

14.1 Introduction

The Traditional Owner Reef Protection Component M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the Traditional Owner Reef Protection Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the component with other components
    - the principles underpinning the Traditional Owner Reef Protection Component
- The scope of the Traditional Owner Reef Protection Component M&E
- The Traditional Owner Reef Protection Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the Traditional Owner Reef Protection Component for prioritised intermediate outcomes, including performance measures.

The Traditional Owner Reef Protection Component M&E Plan was developed via an M&E planning workshop including Traditional Owners from[19] the Lama Lama, Eastern Kuku Yalanji/Mualgal, Nywaigi, Yirrganydji, Wulgurukaba, and Koinmerburra groups. Organisations represented include the Dawul Wuru Aboriginal Corporation, Koinmerburra Aboriginal Corporation, the Australian Institute of Marine Science (AIMS) and GBRF.

It is worth noting the following when reading the Traditional Owner Reef Protection Component M&E Plan:

- The tight timeframes to develop a component-level M&E Plan presented significant challenges
- The M&E planning workshop was able to build on and progress work already approved by Traditional Owners, i.e. the Reef 2050 Traditional Owner Aspirations Project20, coordinated via the Reef and Rainforest Research Centre. The Partnership Traditional Owner Reef Protection Component has taken into consideration the theory of change developed for the Reef 2050 Traditional Owners Aspirations Project in late 2018, and the recommendations and priorities presented in the report for that Project
- There was limited representation at the M&E Planning workshop from other Partnership components and further work took place to ensure a shared understanding across the Partnership about how the components can specifically support the delivery of Traditional Owner aspirations for the Reef. This included a Traditional Owner Reef Protection co-design planning workshop in Townsville in May 2019.

14.2 Logic of the Traditional Owner Reef Protection Component

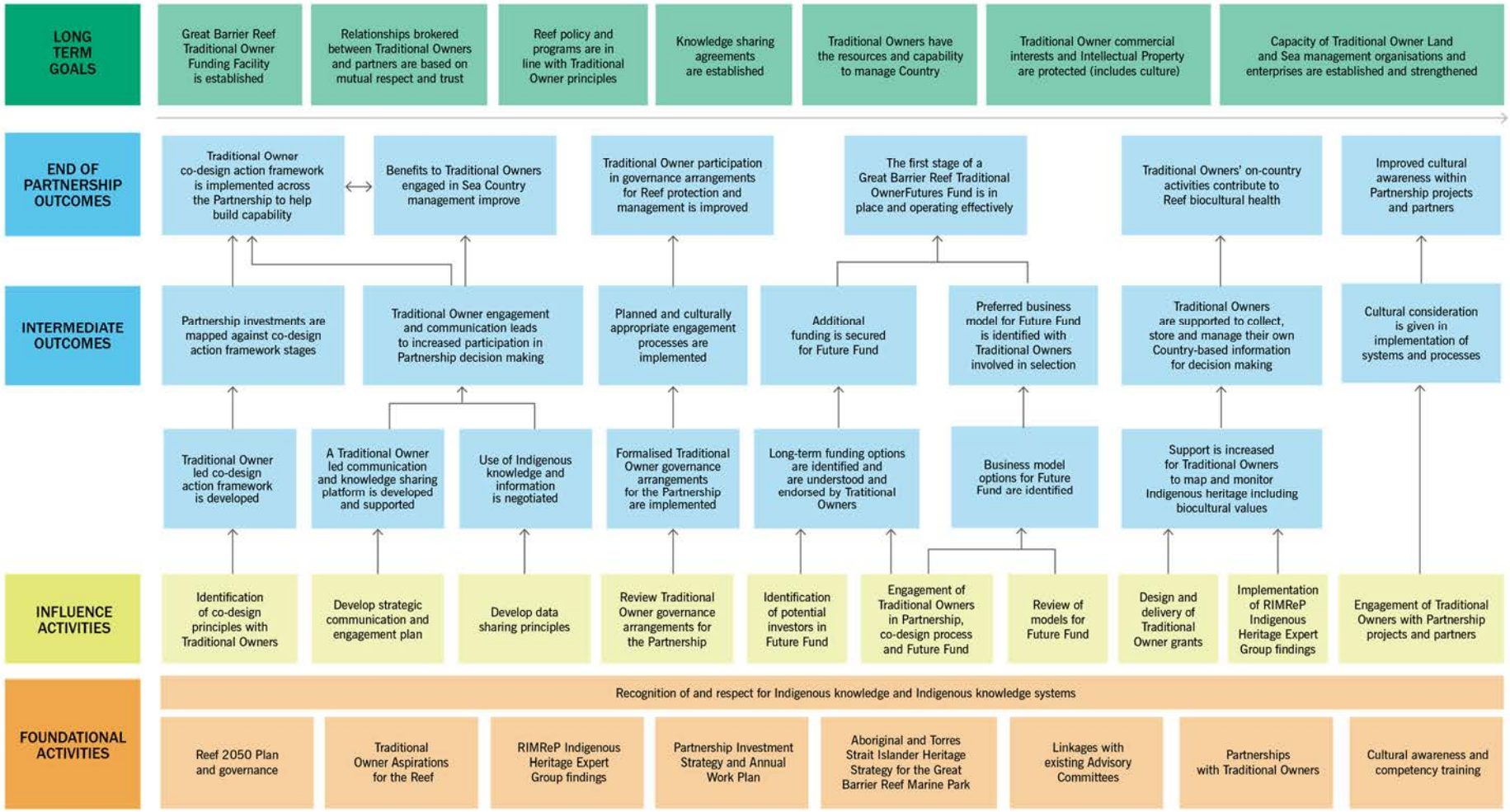
The Traditional Owner Reef Protection Component-level logic model (Figure 8) visually shows how the work undertaken in the Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between Traditional Owner activities, and the expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model with a supporting narrative, the principles that guide the delivery of the Component, and the key causal assumptions underpinning the logic. The purpose of the narrative is to explain, in words, the broader goals for the Traditional Owner Reef Protection Component, and how the Component is expected to contribute to those broader goals through its activities and the outcomes of its activities.

19 There are 70 Traditional Owner groups across the GRBWHA. While the Traditional Owners present at the M&E Planning workshop cannot speak for other people's Sea or Country, they are able to provide insight into the interests and issues that are continually discussed by Traditional Owners along the Great Barrier Reef coastline.

20 Reef 2050 Traditional Owner Aspirations Project (Reef and Rainforest Research Centre): https://www.rrrc.org.au/reef-2050/

Figure 8. Traditional Owner Reef Protection Component program logic



Narrative

The broader goals of the Traditional Owner Reef Protection Component are that:

- Great Barrier Reef Traditional Owner Funding Facility is established
- Relationships brokered between Traditional Owners and partners are based on mutual respect and trust
- Reef policy and programs are in line with Traditional Owner principles
- Knowledge sharing agreements are established
- Traditional Owners have the resources and capability to manage country
- Traditional Owner commercial interests and Intellectual Property are protected (includes culture)
- Capacity of Traditional Owner Land and Sea management organisations and enterprises are established and strengthened.

The unique contribution of the Traditional Owner Reef Protection Component to these broader goals during the Partnership funding period (to 2024) are:

- A Traditional Owner co-design action framework is implemented across the Partnership to help build capacity
- Benefits to Traditional Owners engaged in Sea Country management improve
- Traditional Owner participation in governance arrangements for Reef protection and management is improved
- The first stage of a Great Barrier Reef Traditional Owner Futures Fund is in place and operating effectively
- Traditional Owners' on-country activities contribute to Reef biocultural health
- Improved cultural awareness within Partnership projects and partners.

Achieving these outcomes requires a multi-faceted approach based on the following pathways of change:

- **A Traditional Owner co-design action framework:** Co-design means different things to different people including Reef 2050 partners. This Traditional Owner-led framework will define what constitutes 'co-design' in the Reef space and pathways (including tools, skills and resources) to achieve this at scale. Principles will be developed underpinning the development of a framework which will ensure projects deliver equitable outcomes and maximise co-benefits. Partnership investments will be mapped against the framework and its co-design stages ultimately leading to a full implementation of the framework that delivers increased Traditional Owner capacity and shared benefits.
- **Traditional Owner engagement and communication to increase participation and benefits:** There is a need to raise the profile and awareness of the contribution Traditional Owners make to Reef protection; to keep culture strong by promoting, sharing and celebrating Traditional Owner stories and language; and to build cultural awareness across Reef 2050 Plan partners and the broader community. Underpinned by a strategic communication and engagement plan, a Traditional Owner-led communication and knowledge sharing platform will be developed, supporting an increased recognition and culturally appropriate use of Indigenous Knowledge, resulting in increased Traditional Owner participation in decision making and improvement in benefit sharing.
- **Traditional Owner participation in governance arrangements:** Interim arrangements in the form of a Traditional Owner Working Group (TOWG) were established in December 2018 to guide early investments and program establishment. Governance arrangements and engagement processes will be reviewed to ensure these are fit-for-purpose and culturally grounded for the purpose of guiding investments as the program transitions into operational phase.
- **Design and implementation of a Futures Fund:** Independent and sustainable financing is needed to support: localised governance and a Reef-wide Sea Country Alliance; strategic investments which build Traditional Owner capacity and capability in Reef management and benefit sharing; and fit-for-purpose policy and programs. Business model options for a Futures Fund will be identified and systematically assessed, alongside the identification of potential co-investors, leading to the selection and implementation of a preferred model (first stage) to demonstrate the feasibility and potential impact of this approach to create sustainable funding.
- **Indigenous heritage and biocultural information to support decision-making and Reef protection:** Traditional Owners are the keepers of Indigenous Knowledge and cultural values and have been observing dramatic changes on their Country. There is a need to increase awareness of Indigenous Knowledge and cultural values while putting appropriate safeguards in place to protect Traditional Owners' Intellectual Property and culturally sensitive information. Recommendations of the RIMReP Indigenous Heritage Expert Group and the 'Strong Peoples – Strong Country' Framework will be reviewed and implemented, leading to a more holistic approach to design and delivery of programs within a highly interconnected biocultural landscape. Support will be provided to Traditional Owners to enable the mapping, monitoring, recording and appropriate sharing of Indigenous Knowledge including biocultural information as part of the design and delivery of Partnership investments.
- **Improving cultural awareness and competency:** There is a direct causal link between the cultural competency of partners and being able to effectively and respectfully deliver projects and achieve meaningful outcomes. Improving cultural awareness is also fundamental for effective co-design and a legitimate outcome for this Component. Undertaking targeted cultural awareness and competency training, systematically engaging Traditional Owners with Partnership projects and partners, and giving due consideration to culture in the implementation of systems and processes are key enabling activities and outcomes for this pathway.

Component interactions

As a cross cutting component, the Traditional Owner Reef Protection Component outcomes interact with the activities and end of component outcomes of other Partnership components (see Table 30). The components will interact in both directions, but the following pathways outline how they are expected to support the delivery of Traditional Owner aspirations for the Reef (details are also provided in the component-specific logic models):

Table 30. Traditional Owner Reef Protection Component interaction with other Partnership components

Component	Description of interaction with Traditional Owner Reef Protection Component
Water Quality (Component 2)	Traditional Owners are engaged in on-ground water quality improvement and monitoring activities, which leads to water being ecologically healthy and its cultural significance maintained. This aligns with the aspiration of Traditional Owners caring for Country and maintaining bio-cultural diversity across the Great Barrier Reef
COTS Control (Component 3)	Through co-designing and implementing COTS Control training programs with Traditional Owners, there will be an increase in Traditional Owner-led COTS Control programs. This aligns with the aspiration of new and emerging Traditional Owner Reef related enterprises flourishing
Reef Restoration and Adaptation Science (Component 4)	The Component will engage and involve relevant Sea Country groups in restoration activities and will support aspirations related to Traditional Knowledge being recognised, and Traditional Owners caring for Country
Community Reef Protection (Component 5)	All outcomes associated with the community also consider Traditional Owners specifically. This includes communication and education campaigns such as a National Reef Protection Challenge that also recognises Traditional Owners. It also includes shared knowledge and decision making, and community action This Community Reef Protection Component also supports the aspirations of implementing country-based planning
Integrated Monitoring and Reporting (Component 6)	The knowledge value chain and decision-support system will integrate and include provisions for Traditional Knowledge. This aligns with the aspirations of Traditional Owners setting their own research agendas and Traditional Knowledge being recognised and embedded at equal standing to western knowledge in Reef governance

Each of the components is expected to specifically support the Traditional Owner co-design action framework implementation across the Partnership areas to enhance Traditional Owner capacity.

Principles

The principles for Traditional Owner aspirations for Reef, as outlined in the theory of change model, are the principles for the Traditional Owner Reef Protection Component, and include:

- Empowerment – enhance not replace fit-for-purpose Traditional Owner structures (rights based)
- The Traditional Owner way
- Sharing communication and celebration between and amongst Traditional Owners
- Mandate and effective Indigenous advocacy
- Inscription not prescription – genuine co-governance at all scales
- Overarching and legitimised – learn and leverage from existing structures
- All Traditional Owners have equal voice at the scales that are important to them
- Traditional Owner rights are inherent, not permitted.

14.3 Scope of the Traditional Owner Reef Protection M&E Plan

This section includes the elements of the M&E scope relevant to the Traditional Owner Reef Protection Component. This includes some additions to M&E audience for the Component and their information needs.

Purpose of M&E

In addition to the general purposes of Partnership M&E, the following are the specific purposes of M&E for the Traditional Owner Reef Protection Component:

1. To know about the health of Country and people
2. To identify the gaps and needs
3. To have a seat at the table
4. To understand what is important to Traditional Owners (as opposed to what other researchers/government want to know)
5. To support Traditional Owners to set the Traditional Owner research and management agenda
6. To capitalise on Indigenous strengths – the strengths and expertise of Traditional Owner communities are identified and drawn upon
7. To share their knowledge.

Audience

In addition to the primary M&E audiences for the Partnership in general (see Section 4 of this document), the following audiences (Table 31) were identified as important for the Traditional Owner Reef Protection Component.

Table 31. Traditional Owner Reef Protection Component M&E audience and information needs

Primary audience	Information requirements
Traditional Owners (including Indigenous organisations, i.e. ranger programs) Senior officials from relevant government agencies (GBRMPA, OGBR, DoEE, etc.) GBRF component directors	• The extent to which the Partnership investment reflects priorities identified by Traditional Owners • The extent to which the money allocated for Traditional Owners was spent on Traditional Owners • The extent to which the Component and Partnership are achieving their intended outcomes • The challenges experienced • The extent to which flexibility was built in to accommodate Traditional Owners' ways of knowing and doing • How innovation was used to achieve Traditional Owner outcomes • The unintended outcomes (positive and negative)

Secondary audiences that may be interested in the results of the Traditional Owner Reef Protection Component M&E include Torres Strait Islander Traditional Owners.

14.4 Approach to addressing Traditional Owner Reef Protection Component key evaluation questions

Table 32 presents tailored versions of the Partnership outcomes and impact questions for the Traditional Owner Reef Protection Component and summarises the approach to addressing the KEQs within the Component (in alignment with Section 7.2).

Table 32. Traditional Owner Reef Protection Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the Traditional Owner Reef Protection Component been in achieving its intended outcomes?	a) To what extent has the Traditional Owner Reef Protection Component: i. ensured a Traditional Owner co-design framework is implemented across the Partnership to help build capacity? ii. improved benefits to Traditional Owners engaged in Sea Country management? iii. improved Traditional Owner participation in governance arrangements for Reef protection? iv. ensured the first stage of a Great Barrier Reef Traditional Owner Futures Fund is in place and operating effectively? v. ensured Traditional Owners' on-country activities contribute to Reef biocultural health? vi. Improved cultural awareness within Partnership projects and partners?	• Assessment of outcomes achievement against expectations outlined in Table 33 • Monitoring of progress towards outcomes during implementation as outlined in Table 34
	b) In what ways have synergies (with other Components) been created through the Traditional Owner Reef Protection Component?	Description of the ways in which the Traditional Owner Reef Protection Component has created synergies with other components (Table 30 outlines the expected interactions with other components)
	c) What expected outcome(s) of the Grant Agreement has the Traditional Owner Reef Protection Component contributed towards, and how?	Description of how the achievements of the Traditional Owner Reef Protection Component are contributing to the expected outcomes of the Grant Agreement, specifically: • Improved management of relevant activities in the adjacent catchments to the Great Barrier Reef • Protection of attributes that contribute to the Outstanding Universal Values of the Great Barrier Reef, including species, habitats and Indigenous values • Management of key threats to the Great Barrier Reef
	d) To what extent did the Traditional Owner Reef Protection Component contribute to delivering on Traditional Owner aspirations for the Reef?	*Not applicable. The Component itself and associated program logic is designed to deliver on Traditional Owners' aspirations for the Reef*

Key evaluation questions	Sub-questions	Summary approach
	e) To what extent did the Traditional Owner Reef Protection Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Description of how the Traditional Owner Reef Protection Component has supported community partners to contribute to Reef protection
Broader impact of the Component		
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	How has the Traditional Owner Reef Protection Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	To what extent has the Traditional Owner Reef Protection Component leveraged investment and co-investment from local and global actors?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	How has the Traditional Owner Reef Protection Component maximised the achievement of multiple (ancillary) benefits?	Synthesis of achievements from Component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		• Log of positive and negative unintended outcomes resulting from Traditional Owner Reef Protection Component activities • Evaluation – Most Significant Change stories

14.5 Performance expectations for the Traditional Owner Reef Protection Component

Table 33 outlines the performance expectations for the Traditional Owner Reef Protection Component **end of Partnership outcomes**. As described in Section 6, these expectations make it clear how performance of the Traditional Owner Reef Protection Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the Traditional Owner Reef Protection Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan target for Traditional Owner Reef Protection is:

- HT3: Partnerships between Traditional Owners and all stakeholders are increased to ensure key Reef heritage values are identified, documented, and monitored.
- WQT5: Traditional Owners, industry and community are engaged in on-ground water quality, improvement and monitoring.

Table 33. Traditional Owner Reef Protection Component end of Partnership outcomes performance measures

End of Partnership outcomes	Sub-questions	Performance measure	Data collection
Traditional Owner co-design action framework is implemented across the Partnership to help build capacity	To what extent is the co-design action framework utilised and helping build capacity?	• Co-design action framework is available and number of times it is used • Increase in skills, training or governance systems for Traditional Owners	• Skills and training mapping • Survey/interviews • Partnership progress reports
Benefits to Traditional Owners engaged in Sea Country management improve	What benefits are identified by Traditional Owners?	• List of Traditional Owner benefits • Number of Traditional Owners reporting improvement in sea country management	• Collation of information from workshops/ forums and Traditional Owner involved meetings • Traditional Owner Working Group • Most significant change evaluation
Traditional Owner participation in governance arrangements for Reef protection and management is improved	• What different forms of governance are Traditional Owners able to access or establish? • What are the participation options for Traditional Owners?	• List of governance arrangements • Number of Traditional Owners participating in governance • Number of opportunities made available • Number of Traditional Owners participating in governance arrangements (include demographic breakdown) • Types of governance arrangements Traditional Owners are accessing (and why)	• Documentation and collation of stories, narratives and outputs from activities arising from Traditional Owner involvement. • Minutes from Traditional Owner Working Group meetings and other governance meetings where Traditional Owners are involved
The first stage of a Great Barrier Reef Traditional Owner Futures Fund is in place and operating effectively	• What options are available for a Great Barrier Reef Traditional Owner Futures Fund? • Which Futures Fund model best suits the operational needs of Great Barrier Reef Traditional Owners?	• Futures Fund model is selected, endorsed by Traditional Owners and implemented • Number of projects and initiatives funded by the facility	• Reporting on Futures Fund progress • Collation of information Workshops/forums and Traditional Owner involved meetings • Traditional Owner Working Group

End of Partnership outcomes	Sub-questions	Performance measure	Data collection
Traditional Owners' on-country activities contribute to Reef biocultural health	How are planning and implementation activities (identified by Traditional Owners) contributing to Reef biocultural health?	Reef biocultural health values are documented and shared	• Collation of information from workshops/ forums and Traditional Owner involved meetings • Traditional Owner Working Group • Traditional Owner grant reports • Documentation and collation of stories and narratives from Traditional Owners, scientists and managers • Project reporting (via grants, direct engagement and Partnership activity reports)
Improved cultural awareness within Partnership projects and partners	To what extent has cultural awareness improved within the Partnership?	Number of training and capacity building initiatives Evidence of inclusion of cultural awareness in processes associated with delivery of investment	Surveys and systematic project reviews Partnership progress reporting Traditional Owner Working Group

14.6 Monitoring the progress of the Traditional Owner Reef Protection Component

Table 34 shows the plan for monitoring the progress and performance of the Traditional Owner Reef Protection Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indicators at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the Component.

Table 34 is structured against the outcome pathways of the Traditional Owner Reef Protection Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the program logic assumptions prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

In terms of the existing projects under the Traditional Owner Reef Protection Component (2018-2019 investments), Appendix 4 explains the approach to collect relevant monitoring data to inform the progress of the Component.

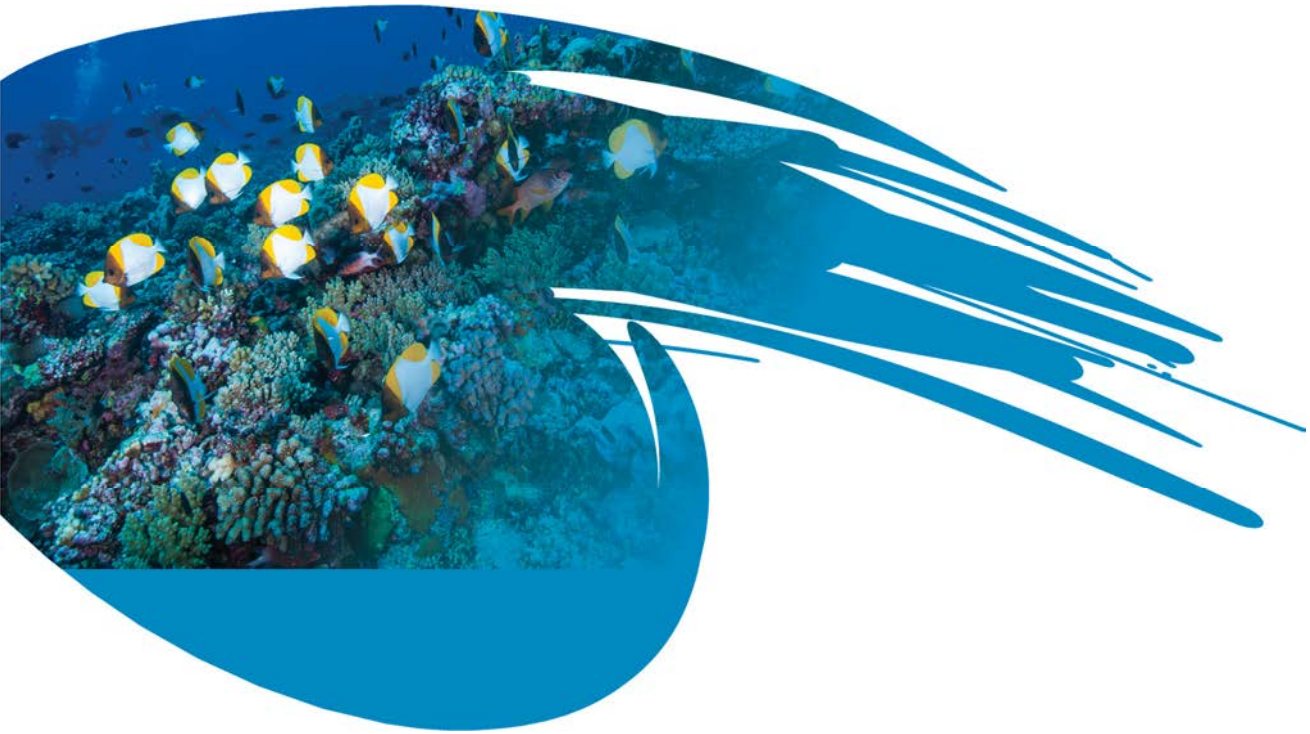
Table 34. Plan for monitoring the progress of the Traditional Owner Reef Protection Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
Traditional Owner co-design action framework pathway			
Traditional Owner-led co-design action framework is developed	• Has the Traditional Owner position on co-design and co-governance been clearly identified? • To what extent have co-design principles underpinning the action framework been identified? • To what extent have the elements of an action framework that partnering investors can map to been identified?	• Co-design principles have been established, reviewed by co-design experts and endorsed by Traditional Owners • Number of Traditional Owners contributing to co-design action framework • Number of experts engaged in designing co-design workshops • Clearly articulated elements of an action framework to allow investment • Endorsement of co-design action framework by Traditional Owners	• Co-design framework description • Project team reflections, Traditional Owner Working Group reflections • Reports and/or meeting notes from collaborations on co-design • Investment activity tracking

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
Partnership investments are mapped against co-design action framework stages	• What Partnership investment opportunities are being implemented? • What is the benchmark for Traditional Owner capabilities and planning? • Have Traditional Owner training priorities been delivered through investments?	• Identification of the skill gaps • Number, type and format of capacity building opportunities. • Demographic data • Types and number of partnership investments, mapped against the co-design action framework • Types and number of workshops, training and products that have been delivered • Types of skills and qualifications achieved	• Partnership progress report, activity and investment tracking • Attendance sheets for workshops and training • Findings of audits and reviews
Traditional Owner engagement and communication to increase participation and benefits pathway			
A Traditional Owner-led communication and knowledge sharing platform is developed and supported	*Not applicable*	Extent to which the communication and knowledge sharing platform is strengthening active participation and decision making	• Traditional Owner Working Group opinion/observation • Description and documentation of Traditional Owner activities
Participation in governance arrangements pathway			
Planned and culturally appropriate engagement processes are implemented	How has engagement been maintained, increased and enhanced?	Traditional Owners engaged as demonstrated by: • Number of Traditional Owners involved in component activities	• Project reporting (via grants, direct engagement and Partnership activity reports), including qualitative feedback from those engaged. • Case studies
	What guidelines or protocols are used to provide advice on culturally appropriate engagement?	Endorsed list of guidelines and protocols available to the Partnership (project delivery managers and partners)	Traditional Owner Working Group
Design and implementation of a Futures Fund pathway			
Additional funding is secured for a Futures Fund	*Not applicable*	Extent to which additional funding has been secured demonstrated by number and quantum of investments	Partnership progress reporting
Preferred business models for Futures Fund are identified with Traditional Owners involved in selection	• What options are available for a Great Barrier Reef Traditional Owner Futures Fund? • Which Futures Fund model best suits the operational needs of Great Barrier Reef Traditional Owners?	Business model options have been identified and prioritised through a transparent process	Partnership report on Futures Fund design and decision making including independent review

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
Indigenous heritage and biocultural information to support decision making and Reef protection pathway			
Support is increased for Traditional Owners to map and monitor Indigenous heritage including biocultural values	• What activities are Traditional Owners applying for and implementing? • What does Reef biocultural health constitute for Traditional Owners? • What Indigenous heritage and biocultural values are targeted?	• Number and type of Traditional Owner grants • Indigenous Heritage Expert Group recommendations are implemented	• Grantees and Partnership progress reports • IMR Component progress reports • Traditional Owner Working Group • Documentation from innovation investment activities
Use of Indigenous Knowledge and information is negotiated	• Have any formal data sharing agreements been negotiated? (What for/with whom?) • What benefits have been derived from these agreements? • Is there a best practice model for commercial interest and copyright protection for Traditional Owners?	• Number of data sharing agreements with Traditional Owner groups • Features of agreements • Benefits have been systematically identified • A best practice model has been identified	• Systematic analysis of data sharing agreements • Traditional Owner survey and audit of Partnership grants and projects • Desktop study and reviews by independent experts
Improving cultural awareness and competency pathway			
Engagement of Traditional Owners with Partnership projects and partners	To what extent have Traditional Owners been engaged in Partnership investments?	Number of Traditional Owners and Traditional Owner groups engaged	• Attendance sheets • Activity records • Description and documentation of Traditional Owner activities
Prioritised assumptions			
Partners have the capacity and willingness to engage and collaborate with Reef Traditional Owners	*Not applicable*	*Not applicable*	• Traditional Owner Working Group opinion/observation • Findings from forums and workshops • Partnership progress reporting
Traditional Owners are interested in participating in GBRF Partnership programs	*Not applicable*	*Not applicable*	• Traditional Owner Working Group opinion/observation • Findings from forums and workshops • Track direct approaches • Partnership progress reporting

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Indicator (and target if required)	Data collection (source/ method)
GBRF is able to target programs to meet Traditional Owner prioritised needs	*Not applicable*	*Not applicable*	• Traditional Owner Working Group opinion/observation • Findings from forums and workshops • Track direct approaches • Partnership progress reporting



15 Community Reef Protection Component M&E Plan

15.1 Introduction

The Community Reef Protection Component M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the Community Reef Protection Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the Component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the Component with other components
    - the principles and key causal assumptions underpinning the Component
- The scope of the Community Reef Protection Component M&E
- The Community Reef Protection Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the Component, including performance measures for prioritised intermediate outcomes.

The Community Reef Protection Component M&E Plan was developed via an M&E planning workshop that included representatives involved in a range of organisations and networks including the Australian World Heritage Advisory Committee, GBRMPA and Local Marine Advisory Committees (LMACs), the Reef Advisory Committee, researchers from Queensland University of Technology and The University of Queensland, and GBRF. Participants had a wide background in grassroots conservation, policy, natural resource management, citizen science, education, governance and social science. Feedback from the three-day Traditional Owner planning workshop in May 2019 also informed development.

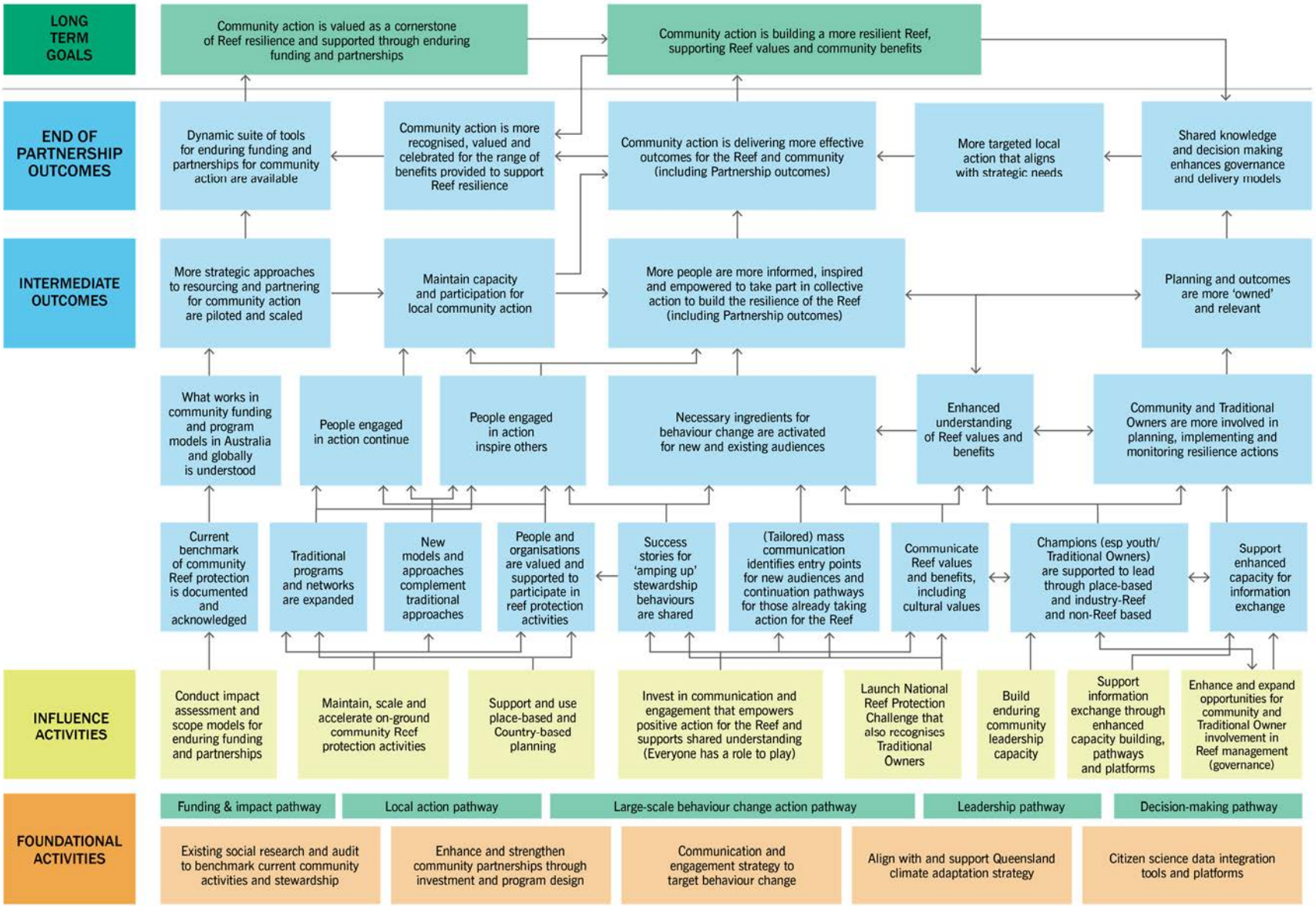
15.2 Logic of the Community Reef Protection Component

The Community Reef Protection Component-level logic model (Figure 9) visually shows how the work undertaken in the Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between Component activities and expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model, with a supporting narrative, the principles that guide the delivery of the Component and the key causal assumptions underpinning the logic.

The purpose of the narrative is to explain, in words, the broader goals for the Community Reef Protection Component, and how the Component is expected to contribute to those broader goals through its activities and the outcomes of its activities.

Figure 9. Community Reef Protection Component program logic



Narrative

The broader goals of the Community Reef Protection Component are that:

- Community action is building a more resilient Reef, supporting Reef values and community benefits
- Community action is valued and supported as a cornerstone of Reef resilience through enduring funding and partnerships.

Reef resilience is defined holistically as the capacity of reef ecosystems and the individuals, businesses and communities that depend upon them to survive, adapt and recover from the stresses and shocks that they experience (Resilient Reefs project[21]).

The Community Reef Protection Component will contribute to these broader goals by the end of the Partnership through:

- Community action delivering more effective outcomes for the Reef and community (including Partnership outcomes through the other components – COTS Control, Water Quality, RRAS, Traditional Owner Reef Protection and Integrated Monitoring and Reporting)
- A dynamic suite of proven tools for enduring funding and partnerships for community action are available (i.e. the cycle of short-term funding and partnerships for community action is improved)
- Community action is more recognised, valued and celebrated for the range of benefits provided to support Reef resilience (i.e. social, cultural, economic and environmental)
- Shared knowledge and decision making enhances governance and delivery models to support more targeted local action that aligns with strategic needs and complementary approaches.

These end of Partnership outcomes will be achieved through the following suite of pathways:

- **Local action:** Through maintaining and scaling (through strengthening, accelerating and connecting) on-ground community Reef protection (management and monitoring) activities, and supporting and utilising place-based and Country-based planning, it is expected that:
    - Those who are engaged are feeling valued and being supported to continue Reef protection activities
    - Traditional programs and networks (organisational and partnerships) are scaled and enhanced
    - New models and approaches being developed are complementing and building on traditional approaches.

  It is expected that these outcomes will support people who are already engaged to continue to be engaged (no net loss of participation), and inspire others to participate (net gain), which in turn is expected to contribute to enhanced collective action for Reef resilience (along with the large-scale behaviour change action and leadership pathways), including community benefits.
- **Large-scale behaviour change action**: This pathway involves investing in:
    - Communication and engagement that empowers positive action for the Reef (e.g. 'everyone has a role to play' messaging and stories from impactful community programs), as well as strengthening shared understanding
    - High-profile public behaviour change campaigns (e.g. a National Reef Protection Challenge for the Reef that also recognises Traditional Owners).

  These activities are expected to empower positive action for the Reef, eliciting the desired changes for perceptions of capacity to take action, sense of responsibility and establishment of social norms for Reef action. From this it is expected that 'less engaged' people will have a greater understanding of entry points and pathways for taking action for the Reef' and the potential benefits, creating a sense of responsibility and identity. It is also expected that the 'already/more engaged' people will feel supported to further 'improve' their actions for the Reef, with their success stories being reinforcing mechanisms for 'ramping' people further up the participation spectrum. Through these approaches more people will be informed and empowered to take more action to build the resilience of the Reef (e.g. through 'decarbonising' their lifestyle).

  Underlying the behaviour change pathway is a behaviour change theory informed by behavioural science and psychological research. The theory indicates that behaviours are influenced by a range of factors, including:
    - Attitudes about the behaviour
    - Perspectives about whether others perform or support the behaviours
    - Personal capacity to take action
    - Perceived effectiveness of certain actions
    - Opportunity and contextual factors
    - Habits
    - Identity – how an individual views themselves
    - Sense of responsibility.

  The Community Reef Protection Component initiatives may target any of these factors to promote change. Research indicates that successful behaviour change programs typically target multiple drivers of behaviour. For example, promoting stewardship programs can create new opportunities for individual action, while concurrent

21 https://www.barrierreef.org/science-with-impact/resilient-reefs

communication initiatives may highlight effectiveness of certain actions and foster a sense of collective responsibility.

- **Leadership:** Through building leadership capacity, with a focus on youth and community partnerships, particularly partnerships with Traditional Owners, it is expected that champions within communities (geographic, place-based and within industry – Reef and non-Reef) will be supported to lead (grow and strengthen capacity). By empowering people to take leadership roles, champions will emerge within both community and industry, facilitating structural leadership opportunities that support transformation of whole supply chains (e.g. tourism and businesses) and supporting enhanced networks for action. Building the capacity of youth and the organisations that can support them will result in stronger pathways for future leaders.

  Working with the Traditional Owner Reef Protection Component to support Traditional Owner partnerships and build the capacity of the community to understand holistic cultural perspectives will lead to enhanced complementary planning and project frameworks, and greater opportunities for Aboriginal Peoples and Torres Strait Islanders to contribute to projects under the Component.

  Enhanced capacity for local leadership will in turn support more community members to feel confident and prepared to participate in place-based decision-making processes and supporting community action.
- **Connecting community in decision-making:** Through enhancing and expanding community and Traditional Owner involvement in Reef management and governance, and supporting information exchange pathways and platforms, it is expected that the community and Traditional Owners can become more involved in decision-making, planning, implementing and monitoring resilience actions.

  This is expected to result in action planning being more 'owned' and more relevant at local and broader scales. A key element of this pathway is improving the quantity and quality of information sharing – through capacity building (both bottom up – strengthening participatory process and co-design; and top down – building capacity of decision-making to better integrate and consider community and Traditional Owners) and supporting information exchange pathways and platforms (such as initiatives to integrate citizen science data into existing decision-making platforms and supporting broader sharing of information in accessible formats). These are expected to lead to more trust and ownership, which will enhance governance and delivery models to support enduring outcomes. This knowledge sharing and integrated decision-making can in turn support more targeted local action that aligns with strategic needs and complementary approaches across many partners delivering outcomes for a more resilient Reef.
- **Funding and impact:** Through assessing and scoping models for enduring funding and partnership models, and further demonstrating the positive impact of community activities, it is expected that 'what works' to grow and maintain investment and co-investment will be understood, applied and scaled. This will lead to business case(s) being built, and a strategic approach to community action being delivered, valued and resourced. This will support a dynamic business model for more sustainable funding to support community networks through revising frameworks for delivering community funding, and increasing capacity for community projects to raise funds and access ongoing funding sources. This business model will also be informed by the effectiveness of the community action in delivering outcomes for the Reef.

Component interactions

Table 35 outlines how the activities of the Community Reef Protection Component will interact with the activities of other Partnership components. Understanding and collecting information on these interactions is important for telling the story of the synergies the Component has created with other components.

Table 35. Community Reef Protection Component interaction with other Partnership components

Component	Description of contribution from Community Reef Protection Component
Water Quality (Component 2)	Community and citizen science activities may support water quality conservation and protection activities. Stewardship is a key factor in implementation of changes in land management practices
Crown-of-thorns Starfish Control (Component 3)	Community and citizen science activities will support delivery of COTS surveillance and control activities
Reef Restoration and Adaptation Science (Component 4)	Community Reef Protection Component activities will support engagement, social licence and capacity for trialling local-scale, place-based restoration approaches.
Traditional Owner Reef Protection (Component 5)	Many of the Community Reef Protection Component activities especially around engagement, co-design and communication, directly support the delivery of Traditional Owner Aspiration outcomes, including supporting Sea Country Alliances
Integrated Monitoring and Reporting (Component 6)	Citizen science and Human Dimensions monitoring activities will feed into RIMReP and the knowledge value chain described in Integrated Monitoring and Reporting Component

Principles

The delivery of the Community Reef Protection Component is guided by the following suite of Component-specific principles:

- Be inclusive in developing and delivering projects, including participatory and co-design where suitable
- Build on what works
- Support partnerships for enduring outcomes, including a focus on youth and Aboriginal and Torres Strait Islander peoples (including Traditional Owners)
- Introduce a "fresh" approach that brings the traditional and new together
- Collaborate for planning and action (to scale)
- Support the planning and implementation for community activities to be more strategic and targeted
- Integrate support for community resilience in the face of climate change, including supporting community response to large disturbance events with the intent to foster wellbeing, help to maintain momentum for positive project outcomes, and support new innovative approaches to adaptation.

Assumptions

Table 36 presents the causal assumptions that underpin the Community Reef Protection Component program logic, along with an assessment of the assumptions for M&E planning purposes. Surfacing the assumptions underpinning the Component is important for assessing how robust the design of the Component is, and identifying any assumptions that might be important to track. Those assumptions identified for further investigation/inclusion in M&E are included in the monitoring plan for the Community Reef Protection Component (Table 43).

Table 36. Assumptions from Community Reef Protection Component program logic

Key assumptions underpinning the logic We assume that...	Evidence for/against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H) *	Investigate further/include in M&E? Yes (Y) / No (N)
Aboriginal Peoples and Torres Strait Islanders, including Traditional Owners want to be engaged in Reef action	Desire is documented in the Reef 2050 Traditional Owners Aspirations Project, Caring for our Country, etc. The cultural obligations Traditional Owners have as custodians	H	H	N
Youth want to be engaged in Reef action	Reef Guardians program identifies, through their schools program, youth desire to be involved. Social media engagement. Feedback from schools	H	H	N
Community want to be engaged in Reef action	Participation and interest in projects, results from Social and Economic Long-Term Monitoring Program and similar Community disengagement in response to ongoing Reef impacts and the complexity of issues must be considered	H	H	N
There is a spectrum of engagement levels in Reef protection across the community	Interest in the multiple pathways for engagement that exist, such as Cane Changer program, many levels of citizen science programs	H	M	N
We can influence 'intention' and social norms through tailored mass communication	Behaviour change research and campaigns across a range of disciplines support this, but further understanding of effectiveness and endurance will be required to implement an adaptive approach	L-M	H	N

Key assumptions underpinning the logic We assume that...	Evidence for/against assumption	Confidence in assumptions (L, M, H)*	Riskiness to achievement of end of Partnership outcomes (L, M, H) *	Investigate further/include in M&E? Yes (Y) / No (N)
There is a willingness for co-investment	The research that underlies the collaborative co-investment strategy. NGOs' ability to engage co-investors	M	H	N
There is a desire by funders to move away from short-term funding models and support long-term sustainable community-based funding models	The principle is well recognised, but the practice of it is not for the Reef per-se	L	H	Y
The biophysical sciences community (scientist/ managers) have greater acceptance of and support for the value of community-based contributions/actions	Evidence is emerging, e.g. Reef 2050 RIMReP human dimensions. Yet, greater exchange, integration and support pathways needed between biophysical and social sciences	L-M	M-H (loss if integration)	Y
Strategic community action will accelerate and scale achievement of outcomes	Lots of evidence of the outcomes of community action approaches, but limited evidence of scaling and accelerating	H	H	N
People / decision makers accept/ understand/apply/are aware of the linkages between resilient communities and a resilient Great Barrier Reef	Limited evidence of multi-disciplinary processes, but growing recognition of importance and frameworks (Queensland Climate Adaptation strategy, Reef Guardian Councils, 100 Resilient Cities)	L	H	Y

* H=High, M=Medium, L=Low

15.3 Scope of the Community Reef Protection M&E Plan

This section includes the elements of the Partnership-level M&E Scope (as outlined in section 4) that are relevant to the Community Reef Protection Component. This includes the following clarifications of the boundaries specific to this Component M&E Plan:

- As the Component has both specific outcomes, and also acts as a cross-cutting theme, the Community Reef Protection Component M&E focuses on Component specific outcomes. Outcomes associated with the interaction of the Community Reef Protection Component with the other Partnership components are (or will be) captured in the respective Component M&E Plans
- Co-investment, communication and engagement activities driven by Component 1 – Administrative Activities, are out of scope of the Community Reef Protection M&E Plan.

15.4 Approach to addressing Community Reef Protection Component key evaluation questions

Table 37 presents tailored versions of the Partnership outcomes and impact questions for the Community Reef Protection Component and summarises the approach to addressing the KEQs within the Community Reef Protection Component (in alignment with Section 7.2).

The approach will apply a combination of internal monitoring and evaluation based on data collected by GBRF, partners and funded projects, as well as independent evaluations or audits by suitably qualified and experienced specialists where suitable. These will be built into the program approach (for example the National Reef Protection Challenge behaviour change initiatives).

Monitoring and evaluation data collected through this component will focus on outcomes that can be attributed to project activities.

Contextual information about broader Reef stewardship patterns will be considered using information from external programs such as the Social and Economic Long-Term Monitoring Program (Marshall et al. 2018) – particularly the aspirations, and Community Vitality sections – to which Component activities may have contributed to, or be influenced by.

This Component will also coordinate monitoring and evaluation approaches with data collection around Human Dimensions of the Reef through the Integrated Monitoring and Reporting Component. Other sources of contextual human dimensions data will be considered where suitable.

Targets for the Community Reef Protection Component will be developed and implemented after undertaking a community Reef protection benchmark study to document the current landscape of projects, activities, participation levels and outputs (FY 2019-2020). This study will help to demonstrate the current status and positive impacts of community Reef protection activities, as well as help build understanding around future potential for filling gaps, building connections or focusing efforts. Follow-up studies will be planned for 2022 and 2024.

Table 37. Community Reef Protection Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the Community Reef Protection Component been in achieving its intended outcomes?	a) To what extent has the Community Reef Protection Component: i. facilitated approaches to share knowledge and connect Community with decision making to enhance governance and delivery models that can help deliver more targeted and strategic local action? ii. improved community engagement to deliver more effective outcomes for the Reef and community? iii. increased recognition for the value of community action and the Community benefits it provides? iv. provided a dynamic suite of tools for enduring funding and partnerships for Community action?	• Assessment of outcomes achievement against expectations outlined in Table 38-Table 42 • Monitoring of progress towards outcomes during implementation as outlined in Table 43
	b) In what ways have synergies (with other components) been created through the Community Reef Protection Component?	Description of the ways in which the Community Reef Protection Component has created synergies with other components (Table 35 outlines expected synergies with other components)
	c) What expected outcome(s) of the Grant Agreement has the Community Reef Protection Component contributed towards, and how?	Description of how the achievements of the Community Reef Protection Component (as understood through KEQ1a) are contributing to: • Improved management of the Great Barrier Reef and relevant activities in the adjacent catchments • Protection of attributes that contribute to the Outstanding Universal Value of the Reef, including species, habitats, and Indigenous values • Management of key threats to the Reef, including poor water quality and crown-of-thorns starfish outbreaks
	d) To what extent did the Community Reef Protection Component contribute to delivering on Traditional Owner aspirations for the Reef?	Description of how the Community Reef Protection Component has supported Traditional Owner aspirations as outlined in Traditional Owner component

Key evaluation questions	Sub-questions	Summary approach
	e) To what extent did the Community Reef Protection Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	*Not applicable*
Broader impact of the Component		
2. In what ways has the Partnership created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the Community Reef Protection Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	c) To what extent has the Community Reef Protection Component leveraged investment and co-investment from local and global actors?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	d) How has the Community Reef Protection Component maximised the achievement of multiple (ancillary) benefits?	Synthesis of achievements from Component and individual project reporting in terms of ancillary benefits
3. What unintended outcomes (positive and negative) have occurred?		Log of positive and negative unintended outcomes resulting from Community Reef Protection Component activities

15.5 Performance expectations for the Community Reef Protection Component

Table 38-Table 42 outline the performance expectations for the Community **end of Partnership outcomes**. Four effectiveness rubrics have been developed to define levels of performance of the Community Reef Protection Component against its core end of Partnership outcomes. As described in Section 6, these expectations make it clear how performance of the Community Reef Protection Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the Community Reef Protection Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan community benefit targets related to community stewardship by 2020 are:

- CBT2 Community benefit values have been identified and are considered in decision making
- CBT3 Community participation in stewardship actions to improve Reef health and resilience continues to grow
- CBT4 Community benefit values for Great Barrier Reef coastal ecosystems are being monitored and show a positive trend.

The Reef 2050 Plan community benefit objectives for community by 2035 are:

- CBO2 A healthy Reef that supports sustainable lifestyles and livelihoods, and provides coastal communities with protection from extreme weather events
- CB03 Community benefits provided by the Reef, including its superlative natural beauty and the sense of place, are maintained for current and future generations
- CBO4 Local, regional and Reef-wide community benefits are understood and the community is actively engaged in managing Reef activities.

Table 38. Community Reef Protection Component end of Partnership outcome performance measures

End of Partnership outcomes	Sub-questions	Performance measure (indicators and targets if required)	Data collection (source/method)
Shared knowledge and decision making enhances governance and delivery models to help deliver more targeted and strategic local action	To what extent has the Community Reef Protection Component facilitated approaches to share knowledge and connect community with decision making to enhance governance and delivery models that can help deliver more targeted and strategic local action? (KEQ1.a.i)	See Rubric in Table 39	• Synthesis of monitoring data • User survey and expert elicitation
Community action is delivering more effective outcomes for the Reef and community (including Partnership outcomes)	To what extent has the Community Reef Protection Component improved community engagement to deliver more effective outcomes for the Reef and community? (including Partnership outcomes) (KEQ1.a.ii)	See Rubric in Table 40	• Synthesis of monitoring data • Sector survey and expert elicitation • Independent review for behaviour change outcomes
Community action is recognised, more valued and celebrated for the range of benefits provided to support Reef resilience	To what extent has the Community Reef Protection Component increased recognition for the value of community action and the community benefits it provides? (KEQ1.a.iii)	See Rubric in Table 41	• Synthesis of monitoring data • Sector survey and expert elicitation
Dynamic suite of tools for enduring funding and partnerships for community action are available	To what extent has the Community Reef Protection Component provided a dynamic suite of tools to foster enduring funding and partnerships for community action? (KEQ1.a.iv)	See Rubric in Table 42	• Synthesis of monitoring data • Sector survey and expert elicitation

Table 39. Effectiveness rubric for Community Reef Protection Component KEQ1.a.i

KEQ1.a.i: To what extent has the Community Reef Protection Component facilitated approaches to share knowledge and connect community with decision making to enhance governance and delivery models that can help deliver more targeted and strategic local action?	
Rating	**Criteria**
Very good	• All four of the outlined platforms and processes were successfully implemented to connect community with decision-making, including: knowledge sharing platforms (e.g. technology for data sharing); processes (e.g. mechanisms for community data exchange / sharing); citizen science data integration (e.g. examples of effective community data integration); inclusive place-based planning initiatives (e.g. strategic planning processes to inform and be informed by community) • These mechanisms have strong partner support and are accepted as part of an effective strategic approach for selection, integration and delivery of community actions • Capacity building for community leadership (with a focus on youth and Traditional Owners) is perceived to enhance planning processes and community feels more ownership of planning outcomes • Strong and enduring systems are in place to facilitate ongoing knowledge exchange and planning processes into the future
Good	• Many platforms and processes were successfully implemented to connect community with decision-making, including: knowledge sharing platforms (e.g. technology for data sharing); processes (e.g. mechanisms for community data exchange / sharing); citizen science data integration (e.g. examples of effective community data integration); inclusive place-based planning initiatives (e.g. strategic planning processes to inform and be informed by community) • These mechanisms have mostly positive partner support and some acceptance as part of an effective strategic approach for selection, integration and delivery of community actions • Capacity building for community leadership (with a focus on youth and Traditional Owners) is perceived to make some positive contributions to planning processes and community feels more ownership of planning outcomes • Some effective demonstration projects will continue beyond the Partnership to facilitate knowledge exchange and planning processes into the future
Adequate	• Some platforms and processes were successfully trialled during the Partnership to connect community with decision-making, including: knowledge sharing platforms (e.g. technology for data sharing); processes (e.g. mechanisms for community data exchange / sharing); citizen science data integration (e.g. examples of effective community data integration); inclusive place-based planning initiatives (e.g. strategic planning processes to inform and be informed by community) • These mechanisms have mixed levels of partner support and some acceptance as part of an effective strategic approach for selection, integration and delivery of community actions and recommendations are available to further develop effective approaches • Capacity building for community leadership (with a focus on youth and Traditional Owners) is seen to be contributing to outcomes in planning processes and community feels more ownership of planning outcomes • There were pilot projects to demonstrate opportunities for community data use for strategic applications
Poor	• No change from current status of knowledge sharing and community connection with decision making to enhance governance and delivery models or local action which contribute to efforts to manage key threats to the Reef and protect community benefits provided by the Great Barrier Reef
Detrimental	• Activities cause unintended negative consequences

Note: Factors being considered in this rubric are a) implementation of platforms and processes for selection; integration and delivery of community actions; b) level of support for platforms and processes; c) extent to which community leadership initiatives are seen to contribute to processes; d) enduring nature of initiatives

Table 40. Effectiveness rubric for Community Reef Protection Component KEQ1.a.ii

KEQ1.a.ii To what extent has the Community Reef Protection Component improved community engagement to deliver more effective outcomes for the Reef (including Partnership outcomes)?	
Rating	Criteria
Very good	As for good, plus: • The Component enabled approaches that measurably increased the quantity and quality of community on-ground action (including monitoring and management), and participation in targeted measurable behaviours to help protect the Reef[22] • A national Reef protection challenge is supported by an extensive and diverse range of partners and demonstrated measurable collective action for positive behaviour change, including indications of shaping social norms at local, regional and nationwide scales • There are many examples of proven strategies that have been supported and scaled for the community to actively contribute to Reef management and strong and enduring systems are in place for continued delivery of activities
Good	As for adequate, plus: • The Component enabled approaches that measurably increased the quantity and quality of community on-ground action (including monitoring and management), and participation in targeted measurable behaviours to help protect the Reef • A national Reef protection challenge was supported by many partners and demonstrated measurable collective action for positive indicators of behaviour change at local, regional and nationwide scales • There are some examples of proven strategies that have been supported and scaled for the community to actively contribute to Reef management and there are some ongoing examples of project activities that will continue to be funded into the future
Adequate	• The Component enabled approaches that measurably increased the quantity and quality of community on-ground action (including monitoring and management), and participation in targeted measurable behaviours to help protect the Reef • A national Reef protection challenge was supported by some partners and demonstrated measurable collective action for positive behaviour change at multiple scales and has informed future delivery approaches • Community benefit values, including cultural values, are better understood, monitored and used to design, implement and evaluate projects (e.g. a holistic approach to Reef resilience) • The component has provided an enabling environment for community to actively contribute to Reef management during the life of the Partnership
Poor	• No change from current status of community engagement for outcomes for the Reef
Detrimental	• Activities cause unintended negative consequences

Note: Factors being considered in this rubric are: a) extent to which Component enabled approaches to increase Community Reef protection actions; b) level of support for National Reef protection challenge; c) use of community values to inform processes; d) enduring nature of initiatives

22 Targets for levels of "Good" and "Very good" levels of increased engagement in community participation in Reef protection activities will be set based on the benchmark study (FY 2019-2020).

Table 41. Effectiveness rubric for Community Reef Protection Component KEQ1.a.iii

KEQ1.a.iii To what extent has the Community Reef Protection Component increased recognition for the value of community action and the Community benefits it provides?	
Rating	**Criteria**
Very good	As for good, plus: • Community Reef protection activities are perceived as a critical ingredient for Reef resilience by the wider community, management, science and decision makers. A more holistic definition of resilience is being accepted and applied within the Reef sector • Many people and organisations feel supported to contribute to Reef protection activities and recognised for their contribution • There are many examples of partnerships, organisations and local community leaders with demonstrated support through capacity building and platforms for acknowledgement, and feeling empowered to lead
Good	As for adequate, plus: • Community Reef protection activities are perceived as a valued ingredient for Reef resilience by the wider community, management, science and decision makers. A more holistic definition of resilience is gaining acceptance and application within the Reef sector
Adequate	• Community Reef protection activities are perceived as a useful ingredient for Reef resilience to support community benefits. A more holistic definition of resilience is being accepted and applied by project partners • There are some examples of partnerships, organisations and local community leaders that feel increased support for their work through capacity building platforms for acknowledgement, and feeling empowered to lead • Communication approaches (including case studies, stories, engagement models) demonstrated some effectiveness in helping to share knowledge and increase recognition
Poor	• No change from current levels of recognition of the value of community action to inspire understanding, hope and further action
Detrimental	• Activities cause unintended negative consequences

Note: Factors being considered in this rubric are: a) perception of community Reef protection value; b) perception of support; c) effective communication and promotion approaches

Table 42. Effectiveness rubric for Community Reef Protection Component KEQ1.a.iv

KEQ1.a.iv To what extent has the Community Reef Protection Component provided a dynamic suite of tools for enduring funding and partnerships for Community action?	
Rating	**Criteria**
Very good	As for good, and: • The Reef Stewardship benchmarking study and impact assessment is informing opportunities for strategic community action to identify gaps, connect processes and prioritise opportunities. The benchmark, used to showcase current community efforts and potential at the start of the project, is demonstrating a positive trend in the extent and quality of engagement in 2024 • Funding delivery frameworks providing increased support for partnerships and planning were met with mostly positive feedback • New and stronger funding and partnership models external to the Partnership have emerged and continue to be implemented • Community partnerships are strengthened (number and quality) with evidence of scaling successful approaches, including with including Traditional Owners and industry sectors • The trial of models for alternative funding frameworks to support community action has seen investment secured for ongoing resourcing for community Reef protection activities
Good	As for adequate, and: • The Reef Stewardship benchmarking study is used to showcase current community efforts and potential • Funding delivery frameworks providing increased support for partnerships and planning were met with some positive feedback and some recommendations for adaptation • Community partnerships are strengthened, including with including Traditional Owners and industry sectors • Some models for alternative funding and partnership frameworks to support community action have been trialled • Approaches and learnings are being used to actively explore emerging opportunities for enduring investment and partnership approaches
Adequate	• A Reef Stewardship benchmarking study and impact assessment is available to inform opportunities for strategic community action to identify gaps, connect processes and prioritise opportunities • Funding delivery frameworks delivered through the Partnership responded to community concerns on short-term investment, as well as providing some increased support for partnerships and planning processes • A dynamic suite of tools for supporting enduring community Reef protection are available for community groups to build their capacity to secure funds, and to propose models for alternative funding and partnership frameworks to support community action • Community partnerships are maintained, including with including Traditional Owners and industry sectors • There are approaches and learnings that will contribute to benefit other funding delivery pathways
Poor	• While a Reef Stewardship benchmarking study and impact assessment is available, there has been limited interest and support for the resources generated and no documented change in approaches based on the work
Detrimental	• Activities cause unintended negative consequences

Note: Factors being considered in this rubric are: a) availability of benchmark study; b) Partnership community funding delivery models; c) availability of tools for community partnerships and funding; d) extent of community partnerships; e) implementation and adaptation extent of enhanced opportunities for community and Traditional Owner involvement in Reef management and governance; f) information exchange pathways and platforms

15.6 Monitoring the progress of the Community Reef Protection Component

Table 43 shows the plan for monitoring the progress and performance of the Community Reef Protection Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indictors at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the Community Reef Protection Component.

Table 43 is structured against the outcome pathways of the Community Reef Protection Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the Community logic assumptions (from Table 36) prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

In terms of the existing projects under the Community Owner Reef Protection Component (2018-2019 investments), Appendix 4 explains the approach to collect relevant monitoring data to inform the progress of the Component.

Table 43. Plan for monitoring the progress of the Community Reef Protection Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Funding and impact pathway			
More strategic approaches to resourcing and partnering for community action are piloted and scaled	*Not applicable*	**Quantitative measures** • New strategies/approaches/business models are available • Increase in resourcing/ donations through GBRF to support enduring community-based Reef protection action	Type and number reported by GBRF
		Qualitative measures • New strategies/approaches/business models are being used and receiving positive feedback • Increase in self-reported capacity of community organisations to facilitate enduring program investment • Integration of approaches that support consultation and engagement with Traditional Owners through funding frameworks	Qualitative feedback from those using resources on applicability and benefits

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Local action pathway			
More people are informed, inspired and empowered to take part in collective action to build the resilience of the Reef (including Partnership outcomes)	How has engagement in on-ground local action been maintained, increased and enhanced?	Positive trend in the number of Community members engaged in Reef protection activities including: Planning / delivery / training / participating in activity (on-ground action, behaviour change action, leadership development, decision making processes, other Component activities) as demonstrated by: • Number of existing participants involved in Component activities (with specific figures for Traditional Owners/Aboriginal peoples and Torres Strait Islanders and youth under 25) • Number of new participants involved in Component activities (with specific figures for Traditional Owners/Aboriginal & Torres Strait Islanders and youth under 25)	• Project reporting (via project reporting) and GBRF direct engagement where appropriate • A performance target for years 2-5 will be set after the Benchmark assessment on Community Reef protection undertaken in FY2019-2020
		Positive trend in the number of programs and networks delivering community Reef protection activities, including: • Number of organisations/partners involved in Component activities • Number of partnership initiatives (e.g. networks) involved in Component activities • Number of initiatives supporting Traditional Owner partnerships • Number of initiatives supporting youth engagement • Diversity of network (as measured by type of organisations involved) • Number of models/platforms to strengthen collaboration/integration/ sharing resources • Number of program expansions/ scaling • Number of new, complementary models of work	To indicate activity levels, the number of people and platforms for engagement will be measured through project reporting (via grants and direct GBRF engagement)

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
		Increase in quality of engagement/ programs/ network models to strengthen engagement/ collaboration/integration/sharing resources – this should specifically address each of the components	• To indicate quality of initiatives and models, qualitative feedback and critical reflection will be collected from those engaged through project reporting (via grants and direct GBRF engagement). Measures of high quality will consider adherence to principles and enhanced benefits • A survey provided to all funded grant projects may provide a consistent platform for collecting information about participant experience across Component activities. A project survey for funded participants and partners may provide information about partnerships, collaboration, integration and sharing
		Positive trend in the examples of recognising and celebrating community work including: • Number of media stories • Number of awards/recognition initiatives	Reported via grants and direct GBRF initiatives
	Are the necessary ingredients for behaviour change activated for new and existing audiences?	Number of behaviour change entry points and pathways that were supported or created	Reported via grants and direct GBRF initiatives
		Measurable change in precursors for identified behaviour change pathways (for new and existing audiences)	Data collection for monitoring and evaluation will be specifically designed to suit the behaviour change initiatives
		Measurable change in reported behaviour change outcome	Data collection for monitoring and evaluation will be specifically designed to suit the behaviour change initiatives
		Increased understanding of Reef values and benefits, including cultural understanding	Data collection for monitoring and evaluation will be specifically designed to suit the behaviour change initiatives. May also include project reporting (via grants and direct engagement)
Leadership pathway			
Champions (esp. youth/Traditional Owners) within communities are supported to lead – geographic (place-based) and industry- (Reef and non-Reef) based	*Not applicable*	Number and type of leadership development and capacity building initiatives	Project reporting (via grants and direct engagement)
		Community organisations and participants indicate that capacity building initiatives were effective in supporting priority needs and opportunities	Project reporting (via grants and direct engagement), including qualitative feedback from those engaged, and critical reflection

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/method)
Decision-making pathway			
Community and Traditional Owners are more involved in planning, implementing and monitoring resilience actions	*Not applicable*	• Type and number of instances where community data has been applied to inform planning or management • Type and number of place-based and Country-based planning initiatives that are used to promote information exchange and inform • New strategies/approaches/program models are available	Description of platforms, models and processes, project reporting (via grants and direct engagement). This may include case studies
	Not applicable	• Increased quality of engagement of community members, organisations and Traditional Owners and youth in sharing and planning • Increased sense of ownership of outcomes by community • Increased recognition and perceived value of community engagement in decision-making systems and to deliver on-ground action (to inform and be informed by strategic planning) • New strategies/approaches/business models are being used and receiving positive feedback	Description of quality of process and outcomes through key network channels, which may include: LMACs, regional report card partnerships, regional Reef Blueprints, Traditional Owner groups, grant funded projects) including qualitative feedback from those engaged, and critical reflection. This may include case studies
Prioritised assumptions			
There is a desire by funders to move away from short-term funding models and support long-term sustainable community-based funding models	*Not applicable*	*Not applicable*	Regular feedback from government departments and other funders, observation of relevant funding programs
The biophysical sciences community (scientist/ managers) have greater acceptance of and support for the value of community-based contributions / actions	*Not applicable*	*Not applicable*	Survey of sentiment and qualitative feedback, examples of community data being used, examples of recognition of value of community contributions
Decision makers and the wider community understand and accept the linkages between resilient communities and a resilient Great Barrier Reef	*Not applicable*	*Not applicable*	Monitoring communication products from funded project activities for examples of a more holistic definition of Reef resilience being adopted and applied for Reef science, management and policy

16 Integrated Monitoring and Reporting Component M&E Plan

16.1 Introduction

The Integrated Monitoring and Reporting (IMR) Component M&E Plan is structured around the overarching framework of the Partnership M&E Plan (Section 2), and includes:

- A description of the IMR Component, including:
    - a program logic model, which describes the expected cause and effect relationships between the component's activities and outcomes
    - a narrative describing the logic model
    - the interactions of the component with other components
    - the principles and key causal assumptions underpinning the IMR Component
- The scope of the IMR Component M&E
- The IMR Component KEQs and summary approach to answering the questions
- The performance expectations for prioritised end-of Partnership outcomes for the Component
- The plan for monitoring the progress of the IMR Component, including performance measures for prioritised intermediate outcomes.

The IMR Component M&E Plan was developed via an M&E planning workshop including representatives from AIMS, CSIRO, DoEE, GBRMPA, GBRF and The University of Queensland. It is worth noting the following when reading the IMR Component M&E Plan:

- The purpose of the IMR Component is to support the implementation of the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP), which is led by the Great Barrier Reef Marine Park Authority (GBRMPA), with design recommendations and a Version 1 prototype expected in June 2019. The IMR Component will both support and be informed by the design and implementation of RIMReP
- GBRMPA is also leading the development of an implementation roadmap, which will provide context on how the IMR Component outcomes will be integrated into RIMReP Version 2
- When the term 'monitoring' is used in reference to RIMReP and the IMR Component, it is inclusive of 'monitoring and modelling'.

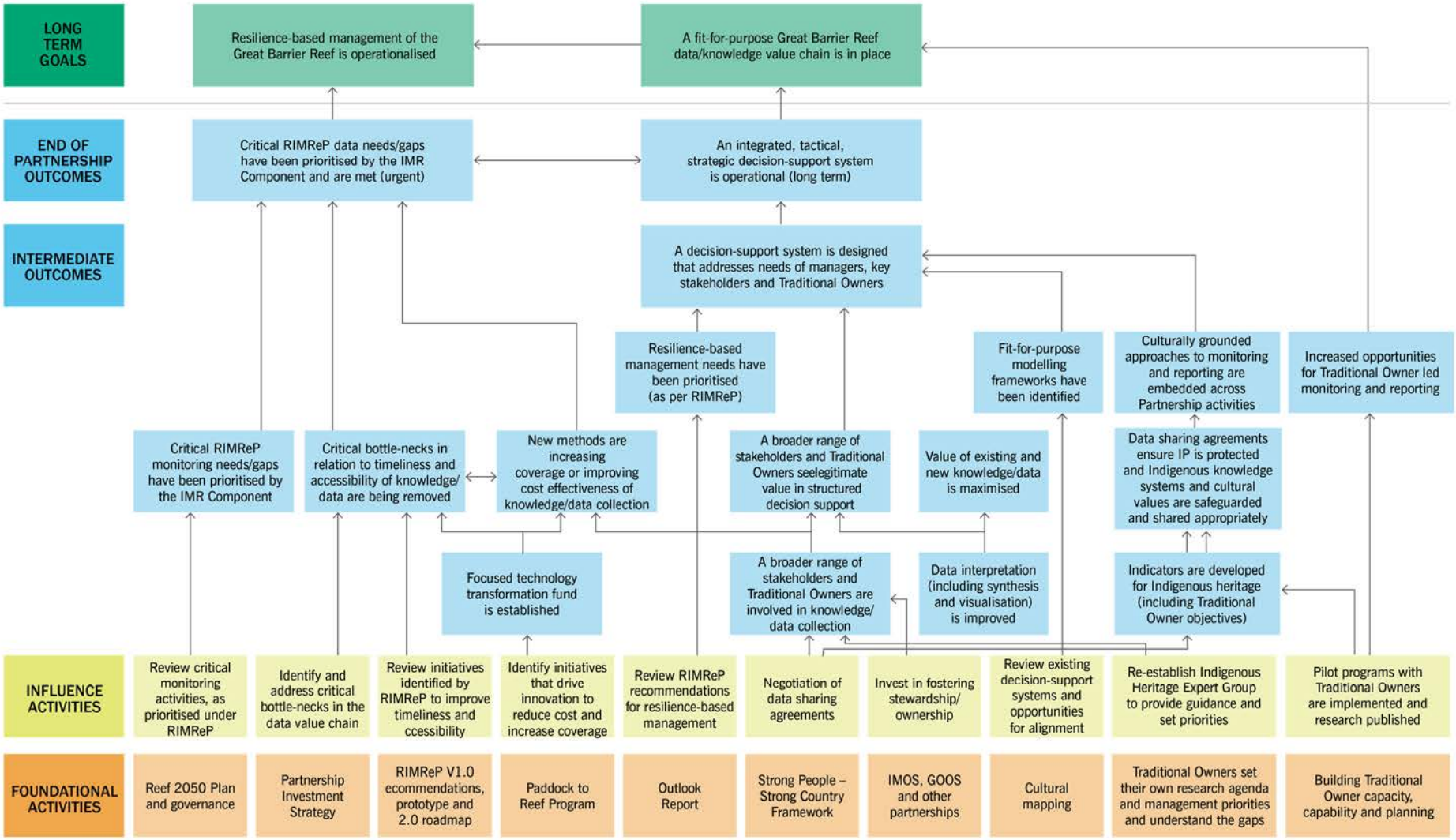
16.2 Logic of the IMR Component

The IMR Component-level logic model (Figure 10) visually shows how the work undertaken in the IMR Component is expected to bring about desired change. The logic outlines the anticipated cause-and-effect relationships between IMR activities and expected intermediate and end of Partnership outcomes (as described in Section 3).

The logic is presented as a model, with a supporting narrative, the principles that guide the delivery of the Component, and the key causal assumptions underpinning the logic.

The purpose of the narrative is to explain, in words, the broader goals for the IMR Component, and how the IMR Component is expected to contribute to those broader goals through its activities and the outcomes of its activities.

Figure 10. IMR Component program logic



Narrative

The broader goals for the IMR Component are that resilience-based management of the Great Barrier Reef is operationalised and that a fit for purpose data/knowledge value chain is in place, which includes the following elements:

- Knowledge/data acquisition (including data processing)
- Knowledge/data management and sharing
- Interpretation (including synthesis and visualisation)
- Translation into decision response options/adoption.

By the end of the Partnership (2024), the IMR Component will contribute to these goals through two key outcomes:

- An integrated, tactical, strategic decision-support system (DSS) being operational, and
- Critical RIMReP needs/gaps, prioritised by the Partnership, are being met.

The first outcome addresses longer term needs, while the second outcome addresses urgent needs. The two outcomes inform each other, i.e. the DSS, once established, will continue to inform critical monitoring and reporting needs, and identified critical needs will continue to feed the DSS.

The influence activities and pathways of change for the IMR Component align with key principles articulated in the Partnership Investment Strategy. Since the IMR Component is to support the implementation of RIMReP, these activities and pathways will be informed by RIMReP's ultimate design, which will only become available in June 2019. Nevertheless, it is anticipated that the following pathways will be at the core of the IMR component:

- **Scoping, development, prototyping and operationalisation of a Great Barrier Reef decision-support platform**: The Reef needs a consistent and transparent approach to decision making based on data that is current and accurate and on models that enable forecasting and scenario planning. In that sense, the DSS will include catchment (Paddock to Reef program) and marine components (multiple programs). The initial focus of integration between the catchment and marine components is the Marine Monitoring Program and Marine Modelling Program components of the broader Paddock to Reef program.

  To realise its value, the DSS needs to be operational by the end of the Partnership and, to ensure its legitimacy and usefulness, be based on a design that addresses needs of managers (especially GBRMPA), Traditional Owners and key stakeholders. The latter will be achieved by reviewing and prioritising recommendations from RIMReP in terms of resilience-based management, and by fostering stewardship/ownership to ensure a broader range of stakeholders and Traditional Owners are involved in both knowledge/data collection and DSS design.

  Technically, the DSS will be underpinned by fit-for-purpose modelling frameworks to be systematically identified by the Partnership.
- **Supporting critical monitoring activities identified via RIMReP**: Critical data needs as defined by RIMReP are anticipated to be much wider than the funding capacity of the Partnership. These will therefore need to be prioritised for funding by the IMR Component based on the Partnership objectives and principles. Delivery mechanisms will vary based on the type of monitoring activities, existing programs and delivery providers.
- **Catalysing innovation in technology to increase coverage, efficiency and impact**: Beyond increasing funding for monitoring, addressing unmet monitoring needs can also be achieved by identifying and removing critical bottlenecks in timeliness and accessibility of data, where relevant via investment in technology transformation and identification of new methods to increase coverage or improve cost-effectiveness of knowledge/data collection.
- **Embedding Traditional Knowledge and sharing benefits:** There is a need to foster stewardship and to promote the involvement of Traditional Owners and a range of stakeholders in knowledge/data collection. In particular, Traditional Owner innovations and Indigenous Knowledge systems are expected to inform the finalisation and implementation of the Strong Peoples – Strong Country Framework, inclusive of data sharing agreements. Through this pathway the IMR Component will also build or maintain capacity of Traditional Owners and support transition into sunrise industries for increased business enterprise opportunities.

The foundational activities that underpin the IMR logic more broadly are:

- Reef 2050 Plan and governance
- Partnership Investment Strategy
- RIMReP Version 1 recommendations, prototype and RIMReP Version 2 roadmap
- Paddock to Reef Integrated Monitoring, Modelling and Reporting Program
- eReefs project
- Outlook Report
- Strong Peoples – Strong Country Framework
- Integrated Marine Observing System (IMOS), Global Ocean Observing System (GOOS) and other partnerships
- Appropriate and effective engagement with Traditional Owners
- Cultural mapping
- Loreful relationships with government, NGOs and research
- Building Traditional Owners' capability and planning

Component interactions

Table 44 outlines how the activities of the IMR Component will interact with the activities of other Partnership components. Understanding and collecting information on these interactions is important for telling the story of the synergies the IMR Component has created with other components.

Table 44. IMR Component interaction with other Partnership components

Component	Description of interaction with IMR Component
Water Quality (Component 2)	Interactions with the Marine Monitoring Program elements of the Water Quality Component across the knowledge value chain, in terms of monitoring and modelling needs to measure the impact in the marine environment of changes in land management practices or land restoration activities and with the decision-support system(s)
COTS Control (Component 3)	Multiple interactions across the knowledge value chain, in terms of monitoring of COTS and coral cover, and with the decision-support system(s) around the continuous improvement of existing regional and site prioritisation models enabling targeted COTS control
Reef Restoration and Adaptation Science (Component 4)	Multiple interactions across the knowledge value chain, in terms of monitoring of ecological processes and with the decision-support system(s) to support recovery efforts, in particular around the development of next generation models and RRAS-specific decision-support systems to enable reef restoration and adaptation
Traditional Owner Reef Protection (Component 5)	Interactions across the whole knowledge value chain, around critical monitoring and capacity building priorities as defined under RIMReP and with the decision-support system(s)
Community Reef Protection (Component 5)	Interactions across the whole knowledge value chain, around strategies to invest in fostering stewardship/ownership and with the decision-support system(s)

Principles

The delivery of the IMR Component is guided by the following suite of Component-specific principles:

- Alignment to RIMReP goals of developing an 'effective', 'efficient' and 'evolving' knowledge system
- The role of the IMR is to support RIMReP implementation, not to provide component performance monitoring for the Partnership. The data collected via RIMReP and the IMR Component will however play a significant role in evaluating the Partnership performance
- Demonstrate mutual benefits for those inputting data and contributing to components of the knowledge value chain
- Opportunities for Traditional Owners and community groups to be involved in monitoring – creating space for Traditional Owners and community to lead on what is important to them
- Make decisions based on best available evidence, not waiting for 'perfect' information/knowledge
- Consider all parts of the knowledge value chain in the prioritisation process and recognise the dependencies within the value chain elements
- Be strategic about tactical responses.

Assumptions

Table 45 presents the causal assumptions that underpin the IMR Component program logic, along with an assessment of the assumptions for M&E planning purposes. Surfacing the assumptions underpinning the IMR Component is important for assessing how robust the design of the IMR Component is, and identifying any assumptions that might be important to track. Those assumptions identified for further investigation/inclusion in M&E are included in the monitoring plan for the IMR Component (Table 50).

Table 45. Assumptions from IMR Component program logic

Key assumptions underpinning the logic We assume that...	Evidence for/against assumption	Confidence in assumptions (L, M, H)	Riskiness to achievement of end of Partnership outcomes (L, M, H)	Investigate further/include in M&E? Yes (Y) / No (N)
There is institutional willingness to embrace a fully integrated and open approach to IMR	Key institutions (universities, CSIRO, etc) are part of this. There is a global movement in science towards this	H	H	Y – whether institutions are actually enabling the sharing of data
There is the technical expertise to embrace a fully integrated and open approach to IMR	e-Reefs and RRAP projects have demonstrated feasibility and suitable skills in the Great Barrier Reef and Australia	H	H	N
The technical experts have the capacity to contribute to a fully integrated and open approach to IMR	Evidence that capacity of experts may be restricted	L	H	N – critical risk. Mitigation strategies to be considered
Governance arrangements can support the implementation of an operational decision-support system	RIMReP process has provided evidence of challenges but made significant progress	M	H	Y – to what extent current governance arrangements enable or impede implementation of DSS
The integration of human and Traditional Owner dimensions will be successful, and we will know what to monitor	Evidence of successful integration of social dimension within RRAP. RIMReP and Reef Water Quality Improvement Plan identified path to integration and initial attempts at monitoring program design	L to M	H	N – sits within critical bottlenecks to be addressed

* H=High, M=Medium, L=Low

16.3 Scope of the IMR Component M&E Plan

This section includes the elements of the Partnership-level M&E Scope (as outlined in Section 4) that are relevant to the IMR Component. This includes some additions to M&E audience for the IMR Component and their information needs.

Audiences

In addition to the primary M&E audiences for the Partnership in general (see Section 3.2 of this document), specific sections within GBRMPA relevant to the IMR Component were explicitly identified as an IMR M&E audience, as information going into Partnership Management Committee (PMC) may not flow to them. Their information needs will be the same as the PMC, namely the effectiveness of the component; the co-benefits generated through component implementation, and delivery of the component against its principles.

16.4 Approach to addressing IMR Component key evaluation questions

Table 46 presents tailored versions of the Partnership outcomes and impact questions for the IMR Component and summarises the approach to addressing the KEQs within the IMR Component (in alignment with Section 7.2).

Table 46. IMR Component KEQs summary

Key evaluation questions	Sub-questions	Summary approach
Outcomes of the Component		
1. How effective has the IMR Component been in achieving its intended outcomes?	a) To what extent has the IMR Component: i. delivered and made operational an integral, tactical and strategic decision-support system? ii. prioritised and met critical RIMReP data needs/gaps?	• Assessment of outcomes achievement against expectations outlined in Table 47-Table 49 • Monitoring of progress towards outcomes during implementation as outlined in Table 50
	b) In what ways have synergies (with other components) been created through the IMR Component?	Description of the ways in which the IMR Component has created synergies with other components against expected interactions with other components (Table 44)
	c) What expected outcome(s) of the Grant Agreement has the IMR Component contributed towards, and how?	Description of how the achievements of the IMR Component are contributing to the expected outcomes of the Grant Agreement, specifically: • Improved management of the Great Barrier Reef and relevant activities in the adjacent catchments; • Protection of attributes that contribute to the Outstanding Universal Value of the Great Barrier Reef, including species, habitats and indigenous values; and • Management of key threats to the Great Barrier Reef, including poor water quality and COTS outbreaks
	d) To what extent did the IMR Component deliver on Traditional Owner aspirations for the Reef?	Description of how the IMR Component has supported Traditional Owner aspirations
	e) To what extent did the Component empower Reef 2050 Plan community partners to contribute to protecting the Reef?	Description of how the IMR Component has supported community partners to contribute to Reef protection
Broader impact of the Component		
2. In what ways has the Partnership, through the IMR Component, created the momentum, solutions, awareness and resources necessary to meet Reef 2050 Plan outcomes?	a) How has the IMR Component advanced partnerships and approaches to build and accelerate the delivery of enduring outcomes for the Reef?	This question is also answered at the Partnership level, but individual components will need to provide specific information about this
	b) To what extent did partners bring the required capacity and willingness to innovate, collaborate and scale up?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
	c) To what extent has the IMR Component leveraged investment and co-investment from local and global actors?	Assessment at Component level of impact on outcomes of capacity-related issues within partners
	d) How has the IMR Component maximised the achievement of multiple (ancillary) benefits?	Synthesis of achievements from Component reporting (including achievements from fundraising strategy)
3. What unintended outcomes (positive and negative) have occurred?		Log of positive and negative unintended outcomes resulting from IMR Component activities

16.5 Performance expectations for the IMR Component

Table 47-Table 49 Outline the performance expectations for the IMR Component **end of Partnership outcomes**. Two effectiveness rubrics have been developed to define levels of performance of the IMR Component against its core end of Partnership outcomes. As described in Section 6, these expectations make it clear how performance of the IMR Component will be judged at the end of the Partnership and will support:

- Assessment of the contribution of the IMR Component to the Reef 2050 Plan
- Assessment of the overall effectiveness of the Partnership.

The Reef 2050 Plan Target for IMR Component is:

- GT5: A comprehensive Integrated Monitoring and Reporting Program is established and operational and the reporting informs review and updating of this Plan
- GT4: Investment in actions is prioritised using evidence-based risk assessment to maximise benefits for Reef health and resilience
- GT3: Actions under this Plan are prioritised and tailored to reflect local or regional differences in threats to the values of the Reef.

Table 47. IMR Component end of Partnership outcome performance measures

End of Partnership outcomes	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/ method)
An integrated, tactical, strategic decision-support system is operational	To what extent has the IMR Component delivered and made operational an integral, tactical and strategic decision-support system? *(KEQ1.a.i)*	See Rubric in Table 48	End user survey
Critical RIMReP needs/gaps have been prioritised by the IMR Component and are met	To what extent have critical RIMReP needs/gaps been prioritised and met by the IMR Component? *(KEQ1.a.ii)*	See Rubric in Table 49	Independent review and expert elicitation

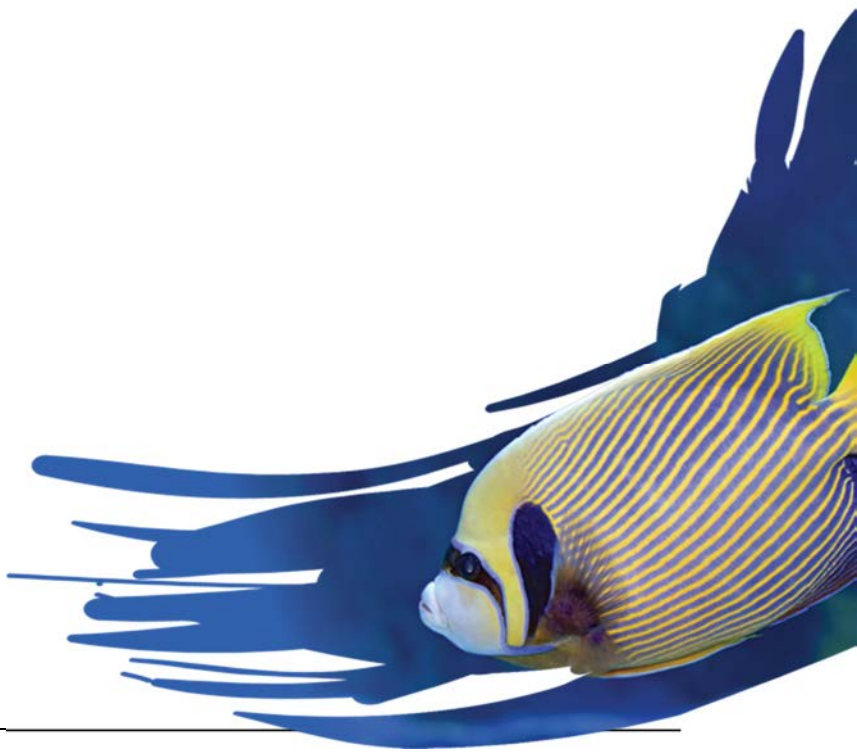


Table 48. Effectiveness rubric for IMR Component KEQ1.a.i

KEQ1.a.i: To what extent has the IMR Component delivered and made operational an integrated decision-support system?	
Rating	**Criteria**
Very good	• The DSS is fully functional addressing a broad range of strategic and tactical issues. It is aligned with DIPSR and integrates a broad range of drivers and pressures • The DSS is operational, fully scalable and maintenance and operating costs are fully funded • Key Reef 2050 partners are using the DSS and the broader community is supportive of the DSS and how it enables transparent management decisions • The DSS is highly innovative and a unique example is being replicated or inspiring similar initiatives outside the Great Barrier Reef and Australia
Good	• The DSS is functional addressing a limited range of key strategic and tactical issues. It is aligned with DIPSR and integrates key drivers and pressures • The DSS is operational, maintenance and operating costs are funded for a limited number of critical applications • Key Reef 2050 partners are using the DSS and the broader community is aware of its role in management • The DSS is innovative and is generating interest outside the Great Barrier Reef and Australia
Adequate	• The DSS allows decision making of limited complexity and scenario running by integrating key drivers and pressures • The DSS is operational for a limited number of critical applications and a model has been recommended for long-term maintenance and operation • GBRMPA and policy makers are using the DSS but it remains out of reach for the broader community • The DSS builds on existing systems and can be applied outside the Great Barrier Reef but is not flexible enough to attract interest outside Australia
Poor	• The DSS only allows decision making and scenario running for simple situations involving few drivers and pressures • The DSS runs in research mode, is not operational as such and presents no clear path to long-term funding and operation • GBRMPA and policy makers do not have confidence in using the DSS outside research projects; it is opaque to the broader community • The DSS adds limited value and cannot compete with other existing systems
Detrimental	• The DSS is not capable of dealing with any significant level of integration of multiple drivers and pressures • The DSS displays limited functionality and can only be deployed as a research product and at great cost • GBRMPA, policy makers and the broader community see no value in the DSS or any specific application which would benefit from the DSS • The DSS is not seen by experts as a step forward and negatively impacts the decision-making space

Note: Factors being considered in this rubric are: a) Functionality and integration; b) Operation, maintenance and scalability; c) End users and their needs; d) Innovation and quality

Table 49. Effectiveness rubric for IMR Component KEQ1.a.ii

KEQ1.a.ii: To what extent have critical RIMReP needs/gaps been prioritised and met by the IMR Component?	
Rating	**Criteria**
Very good	• Monitoring priorities are fully aligned with RIMReP. The IMR Component and RIMReP are fully integrated and adding value to each other • Investment in monitoring is underpinned by a clear and transparent prioritisation process supported by key partners and stakeholders • Monitoring activities are delivered very effectively and efficiently (high return on investment) and outputs add value across a range of areas • Data is fully available to the broader community in a variety of formats and is used across multiple platforms
Good	• Monitoring priorities are mostly aligned with RIMReP. The IMR Component and RIMReP are well aligned and contribute to each other • Investment in monitoring is underpinned by a transparent prioritisation process which involves key partners and stakeholders • Monitoring activities are delivered effectively and efficiently (good return on investment) and outputs add value across a range of areas • Data is generally available to the broader community in a variety of formats and can be used across multiple platforms
Adequate	• Monitoring priorities are generally aligned with RIMReP. The IMR Component and RIMReP collaborate and do not conflict with each other • Investment in monitoring is underpinned by a prioritisation process developed in collaboration with a select number of key partners and stakeholders • Monitoring activities are delivered effectively and according to current practice, with limited opportunities for co-benefits from outputs • Data is partly available to the broader community in a few key formats, and can be used across a limited number of platforms
Poor	• Monitoring priorities are only partly aligned with RIMReP. The IMR Component and RIMReP operate in relative isolation • Investment in monitoring is justified but not consistently or transparently prioritised • Monitoring activities are partly delivered; cost effectiveness and return on investment are low • Data is not generally available to the broader community and outputs can only be accessed in a few formats on a single platform
Detrimental	• Monitoring priorities are conflicting with RIMReP in some instances. The IMR Component and RIMReP operate mostly in isolation • Investment in monitoring is not subjected to a consistent prioritisation process • Monitoring activities are poorly delivered; cost effectiveness and return on investment are very low • Data is not available externally and outputs can only be accessed by a limited number of users on a 'research grade' platform

Note: Factors being considered in this rubric are: a) Alignment and collaboration with RIMReP; b) Prioritisation and transparency; c) Delivery and quality; d) Availability of data

16.6 Monitoring the progress of the IMR Component

Table 50 shows the plan for monitoring the progress and performance of the IMR Component as it is being implemented. The plan focuses on monitoring **prioritised intermediate outcomes** and **weak causal assumptions**. As outlined in Section 6.3, indicators at the intermediate outcomes level act as lead indicators for the longer-term end of Partnership outcomes. Data collection at this level: a) enables the Component to understand whether it is on track to achieving its end of Partnership outcomes; and b) generates a substantial proportion of the evidence required to evaluate the overall effectiveness of the IMR Component.

Table 50 is structured against the outcome pathways of the IMR Component program logic. For each outcome prioritised for monitoring, a sub-question and/or indicator(s) have been identified. Some outcomes lend themselves better to a question than an indicator, or to a question with indicator(s), while other outcomes lend themselves well to an indicator(s) only. The table also includes the IMR Component logic assumptions (Table 45) prioritised for inclusion in M&E, as well as the data collection sources/methods that will be used to monitor the assumptions (the assumptions do not need questions or indicators).

In terms of the existing project under the IMR Component (2018-2019 investments), Appendix 4 explains the approach to collect relevant monitoring data of this project to inform the progress of the Component.

Table 50. Plan for monitoring the progress of the IMR Component effectiveness

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/ method)
Scoping, development, prototyping and operationalisation of a Great Barrier Reef decision-support platform pathway			
A decision-support system is designed that addresses needs of managers, key stakeholders and Traditional Owners (Intermediate outcome)	*Not applicable*	• DSS prototype is functional by 30 June 2023 • User testing study shows that most needs have been addressed satisfactorily	• Evidence of DSS prototype • Findings of pilot study and user testing
Fit-for-purpose modelling frameworks have been identified	*Not applicable*	Modelling frameworks have been identified and mapped against agreed resilience-based management needs by 30 June 2020	List of modelling frameworks and finding of mapping and gap analysis
Resilience-based management needs have been prioritised (as per RIMReP) and a broader range of stakeholders and Traditional Owners are involved and see legitimate value in structured decision support.	*Not applicable*	• Agreed list of prioritised needs established by 31 December 2020. • Review and prioritisation of RIMReP recommendations for resilience-based management and consultation of end users completed by 30 June 2020	Deliverables and reports on review, consultation and prioritisation process
Value of existing and new knowledge/data is maximised	To what extent have data collection, sharing, management and processing been optimised to maximise the value of existing and future data?	• Type and number of users and secondary studies using data • Proportion of data that is fully accessible • Time lag between data collection and availability for use/application • Level of cross-discipline and cross-institution data sharing • Number and quality of synthesis reports • Number data sharing agreements established	• Review of Reef-wide knowledge value chain in the context of RIMReP and Reef 2050 Plan • Benchmarking against other equivalent systems/environments (e.g. IMOS) • Case studies
Supporting critical monitoring activities identified via RIMReP pathway			
Critical RIMReP monitoring needs/gaps have been prioritised by the IMR Component	In what ways have RIMReP recommendations been considered and monitoring needs prioritised under the IMR Component?	List of priorities established by 31 January 2020	Deliverable list and description of prioritisation process and alignment with RIMReP

Priorities for monitoring and/or evaluation (from logic)	Sub-questions	Performance measure (Indicators and targets if required)	Data collection (source/ method)
Critical bottlenecks in relation to timeliness and accessibility of knowledge/ data are being removed	In what ways have critical bottlenecks in relation to timeliness and accessibility of knowledge/ data been removed?	*Not applicable*	Description of improvements (such as infrastructure, system, process, data management) improvements and how these have led to bottlenecks being removed
Catalysing innovation in technology to increase coverage, efficiency and impact pathway			
New methods are increasing coverage or improving cost effectiveness of knowledge/data collection	In what ways have coverage or cost effectiveness of knowledge/data collection been improved with new monitoring methods?	*Not applicable*	Description of new methods and how these have contributed to improving coverage and cost-effectiveness of data collection
Focused technology transformation fund is established	To what extent has a focused technology transformation fund been established?	First funding round of technology transformation fund delivered by 30 June 2020	Deliverable
Embedding Traditional Knowledge and sharing benefits pathway			
Traditional Knowledge is recognised and embedded at equal standing to western knowledge in Great Barrier Reef governance	In what ways has Traditional Knowledge been recognised and embedded at equal standing to western knowledge in Great Barrier Reef governance?	*Not applicable*	Description of recognition and inclusion of Traditional Knowledge in decision making and integrated monitoring and reporting program
Benefits are shared from knowledge	In what ways have benefits from knowledge been shared?	Proportion of sharing agreements supporting data collection programs	• Description of shared benefits from knowledge / data collection • Case studies
Prioritised assumptions			
There is institutional willingness to embrace a fully integrated and open approach to IMR	*Not applicable*	*Not applicable*	Evidence of effectiveness of collaboration and flexibility of institutions to consider new approaches developed within IMR Component
Governance arrangements can support the implementation of an operational decision-support system	*Not applicable*	*Not applicable*	Assessment of governance arrangements for second phase of RIMReP and impact of establishment of operational decision-support system

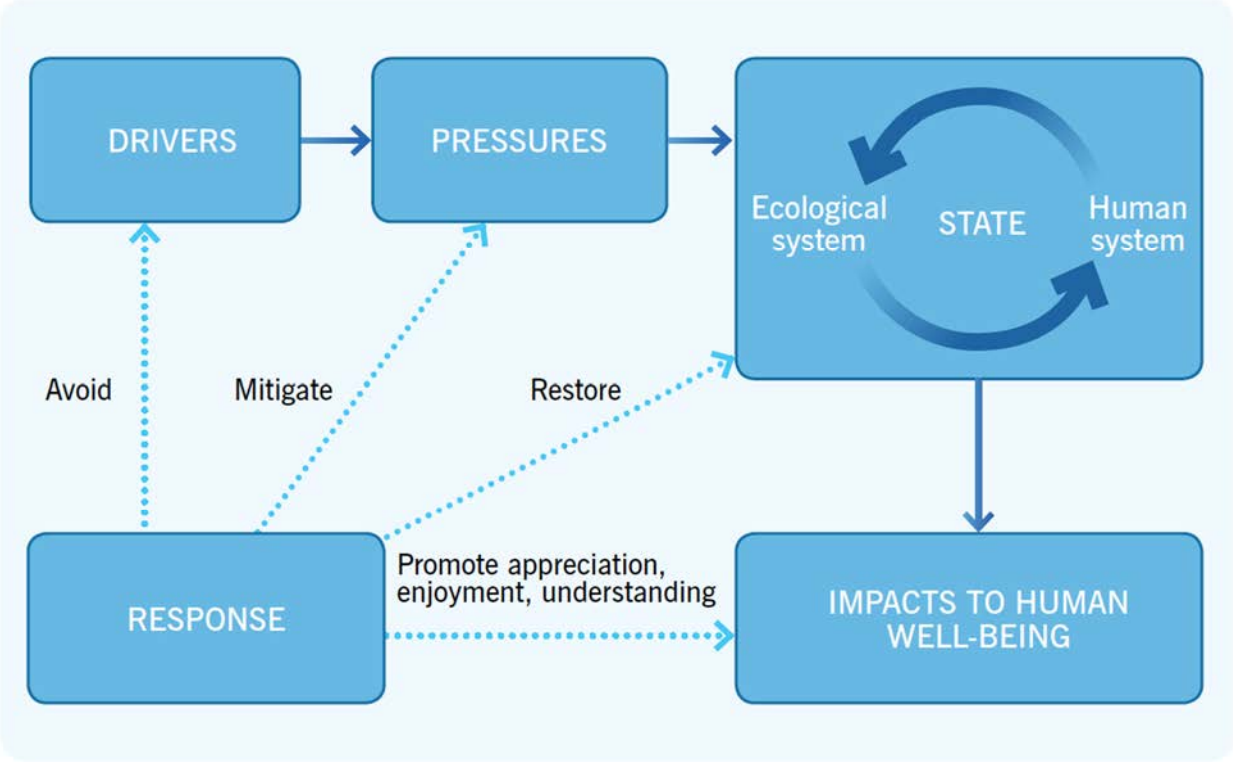
Appendix 1. How does Partnership M&E align with the DPSIR framework?

The driver-pressure-state-impact-response (DPSIR) framework (Figure 11) is a conceptual framework widely used as a tool to structure conversations of how human-environmental systems can be understood or represented. It has been adopted by the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP) as a unifying framework to characterise the Great Barrier Reef system. The Partnership can be thought of as a collection of investments aligned to the 'R' (Response) part of the DPSIR model.

The Partnership M&E Plan will, when implemented, provide information on the performance of Partnership activities across the typical responses of: avoiding (drivers), mitigating (pressures), restoring (the state of the Great Barrier Reef ecological-human system), as well as its efforts in enhancing community support for a mandate to implement response actions.

The Partnership is investing, through Component 6, in supporting the implementation of RIMReP, which invests in improved monitoring and reporting against the DPSIR model. The Partnership M&E for Component 6 will focus on how well the Partnership supports RIMReP to achieve its goals rather than collect additional monitoring data against DPSIR itself.

Figure 11. Driver-Pressure-State-Impact-Response framework



Source: Reef 2050 Integrated Monitoring and Reporting Program Strategy Updated 2018, Commonwealth of Australia, Great Barrier Reef Marine Park Authority

Appendix 2. Audience for Partnership M&E

Table 51 outlines the information requirements for the primary audience for M&E, and the interests of secondary audiences, i.e. those who will be interested in the results of the Partnership but are not required to use the information in the same way as the primary audiences.

Table 51. Partnership M&E audience and information needs

Audience	Information requirements
Primary	
GBRF Board	• Effectiveness of the Partnership • The co-benefits generated through Partnership implementation • Delivery of the Partnership against its principles
Partnership Program team	As above
Partnership Management Committee (PMC) – including representatives of: Traditional Owners, Queensland Government and the Great Barrier Reef Marine Park Authority (GBRMPA)	As above
Australian Department of the Environment and Energy (DoEE)	• Partnership outcomes (the core requirement defined in the Grant Agreement) • Extent to which Grant Agreement expectations in relation to process, spending, etc. are being met (accountability)
Component-specific working groups	• Effectiveness of Components • The co-benefits generated through Component implementation • Delivery of the Component against its principles
Delivery partners (those involved in implementation and operationalisation)	Effectiveness of relevant omponents
Secondary	
Relevant advisory bodies (i.e. the Reef Advisory Committee and the Independent Expert Panel)	General interest in Partnership results – key role is to respond to Partnership requests for advice

Appendix 3. Alignment with other relevant frameworks

Table 52 outlines how the Partnership M&E Plan links to, or is aligned with, other related programs and frameworks.

Table 52. Partnership M&E Plan links to, or alignment with, other related programs and frameworks

Audience	Information requirements
ANAO requirements	ANAO expectations for performance monitoring and reporting, especially the ability to credibly demonstrate outcomes and impact, have been incorporated into the design of the M&E plan
Paddock to Reef (P2R)	Data collected through P2R will likely provide useful information for the contribution analysis undertaken as part of the Partnership evaluation
RIMReP	Data collected through RIMReP will likely provide useful information for the contribution analysis undertaken as part of the Partnership evaluation
2020 review of the Reef 2050 Plan	The 2020 review, and preparations being undertaken for that review (e.g. the current program logic development process), will likely produce revised language and guidance for the Partnership, including outcomes and targets. The Partnership is designed to deliver on the Reef 2050 Plan – any changes to the Reef 2050 Plan will need to be accommodated in the design and therefore M&E planning for the Partnership
Reef 2050 WQIP	The Water Quality Component of the Grant Agreement, and associated investment strategy, is aligned to the Reef 2050 WQIP
Traditional Owner Aspirations Project	The Traditional Owner Reef Protection Component of the Partnership is strongly guided by the Traditional Owner Aspirations Project, including its logic and principles
MERIT	Partnership activity information will be reported into the Australian Government's MERIT system. Partnership outcomes information will also be included where possible
Reef Trust M&E	The Grant Agreement accommodates Reef Trust M&E expectations. The Partnership M&E Plan is based on Grant Agreement expectations
Great Barrier Reef Blueprint for Resilience	The Reef 2050 Plan adopts the Blueprint. The Grant Agreement is tasked with making significant progress towards the Reef 2050 Plan
GBRMPA Outlook report	Information provided by the Outlook Report will likely provide useful information for the contribution analysis undertaken as part of the Partnership evaluation.

Appendix 4. M&E approach for 2018-2019 investments

Table 53 describes the Partnership's approach for monitoring and evaluating investments that are underway.

Table 53. M&E approach for 2018-2019 investments

Component	Number of investments	Description of projects and allocation of funds	Monitoring and evaluation approach
Water Quality	11	**Water Quality Improvement Grants Stage 1** Projects focused on maintaining or developing capacity, and building on existing programs with proven beneficial outcomes	Grantees will prepare specific M&E Plans for their projects based on the targets and indicators identified in the Water Quality Component M&E Plan. These plans will be submitted to GBRF as part of their first progress report The performance measures to consider will be those identified for the following Water Quality pathways (from the program logic): • Improved catchment function • Improved land management practices and stewardship
Reef Restoration and Adaptation Science	3	**"*Coral spawning*" project** Project focused on methods to fast-tracking knowledge to breed, settle and field deploy corals required for restoration at scale through (inter) national collaboration and step-change method development	Ongoing project. The RRAS Component Director will capture the performance measures (indirectly) reported by the delivery partner in its first progress report. Some additional communication with the delivery partner may be required to make sure all relevant data is being collected The delivery partner will then be asked to report against the performance measures identified in the RRAS Component M&E Plan in the final report The performance measures to consider will be those identified for the following RRAS Component pathway (from the program logic): • Intervention feasibility, prioritisation and deployment
		"*RRAP – Restoration regulation*" project Project focused on developing hypothetical use cases for regulatory and permitting planning for RRAP	Project to be completed in June 2019. The RRAS Component Director will capture the performance measures (indirectly) reported by the delivery partner in its progress and final reports. Some additional communication with the delivery partner may be required to make sure all relevant data is being collected The performance measures to consider will be those identified for the following RRAS Component pathway (from the program logic): • Regulatory permission
		"*Coral bleaching processes*" project Project designed to collect field-based information during a bleaching event to fill critical knowledge gaps associated with several (most) of the proposed environmental adjustment interventions	This project has been placed on hold since no significant coral bleaching event was experienced in 2018-2019

Component	Number of investments	Description of projects and allocation of funds	Monitoring and evaluation approach
Community Reef Protection	15	**Community Reef Protection Grants Stage 1: Citizen Science** Projects aimed to boost capacity and collaboration for activities that engage the community in collecting, sharing, and applying Reef health data	Grantees will confirm that they have an M&E Plan as part of their first progress report. Grantees were provided with an optional template for their M&E Plans, along with a series of short videos on M&E. A webinar session was offered to review the planning process, present draft reporting templates and discuss questions The performance measures to consider will be those identified for the following Community Reef Protection pathways (from the program logic): • Local action • Large-scale behaviour change • Leadership • Decision-making
	10	**Community Reef Protection Grants Stage 2: Catalysing Local Action with Local Marine Advisory Committees** Projects designed to empower community Reef protection actions through projects which collaboratively address local Reef threats	Grantees will confirm that they have an M&E Plan as part of their first progress report. Grantees were provided with an optional template for their M&E Plans, along with a series of short videos on M&E. A webinar session was offered to review the planning process, present draft reporting templates and discuss questions The performance measures to consider will be those identified for the following Community Reef Protection pathways (from the program logic): • Local action • Large-scale behaviour change • Leadership • Decision-making
Traditional Owner Reef Protection	18	**Reef Traditional Owner Grants Stage 1** Projects aimed to expand Traditional Owners' Reef protection activities in three priority areas: Indigenous junior ranger programs, country-based planning and implementation of existing land and sea country plans	Grantees will be provided with an optional template for their M&E Plans, along with a series of short videos on M&E. A webinar session will be offered to review the planning process, present draft reporting templates and discuss questions The performance measures to consider will be those identified for the following Traditional Owner Reef Protection pathways (from the program logic): • Traditional Owner co-design action framework • Indigenous heritage and biocultural information to support decision making and Reef protection • Improving cultural awareness and competency
Integrated Monitoring and Reporting	1	***"Essential coral reef monitoring in the Northern Great Barrier Reef"* project** Critical project granted to AIMS to provide an updated 'baseline' assessment of reef condition and recovery in the northern Great Barrier Reef ahead of a potential bleaching event in early 2019	Project to be completed in June 2019. The IMR Component Director will capture the performance measures (indirectly) reported by the delivery partner in its progress and final reports. Some additional communication with the delivery partner may be required to make sure all relevant data is being collected The performance measures to consider will be those identified for the following IMR Component pathway (from the program logic): • Supporting critical monitoring activities