




Queensland Government Annual Investment Plan 2016–2017

Reef Water Quality Protection Plan



Prepared by: Office of the
Great Barrier Reef, Department
of Environment and Heritage
Protection

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Executive summary

The Queensland Government has committed to providing \$35 million per year to activities that support Reef Water Quality Protection Plan outcomes. In 2015, the Queensland Government committed an additional \$100 million over five years and set new ambitious targets for water quality to achieve up to an 80% reduction in nitrogen and up to a 50% reduction in sediment from priority catchments by 2025. This takes the Queensland Government's commitment to \$275 million over five years. Of the additional \$100 million investment, \$10 million was dedicated to establishing three net-free fishing zones in Cairns, Mackay and Rockhampton and the remaining \$90 million was committed to reef water quality improvement.

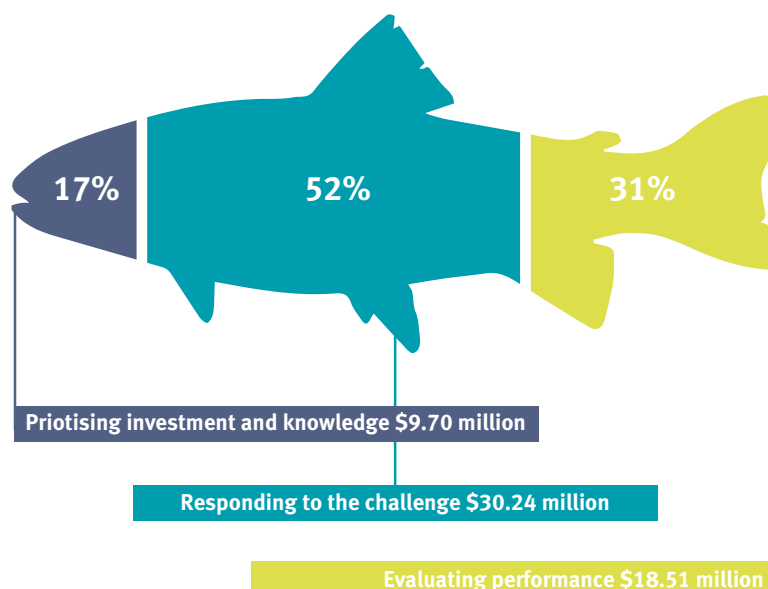
In May 2015, the Great Barrier Reef Water Science Taskforce was established to provide advice to the Queensland Government on the best possible approach to meeting its water quality targets and the priority areas for investing the additional \$90 million. The Taskforce consisted of experts in science, industry, government and the community and was chaired by Queensland's Chief Scientist, Dr Geoff Garrett AO. In May 2016, the Taskforce released its final report making 10 broad policy, investment and governance recommendations to the Government. In August 2016, the Queensland Government agreed in principle to all 10 recommendations and implementation of the Queensland Reef Water Quality Program commenced.

This annual investment plan details the Queensland Government's investment in 2016-2017 including the \$35 million ongoing annual investment, carryover from 2015-2016 (\$1.72 million) and the first year (2016-2017) of major implementation of the \$90 million additional investment (\$21.73 million).

The plan outlines how the Queensland Government's total annual investment of \$58.45 million is aligned to the outcomes and key work areas identified in the Reef Water Quality Protection Plan Investment Strategy 2013-2018 – see Figure 1. This ensures that investment is targeted at activities that genuinely address water quality improvement for the Great Barrier Reef and that duplication in investments is avoided across the Queensland Government.

The Queensland Reef Water Quality Program is managed by the Office of the Great Barrier Reef in the Department of Environment and Heritage Protection with funding distributed across a number of departments and organisations to deliver different program elements. The ongoing \$35 million is made up of a range of existing programs funded across multiple agencies that contribute to reef water quality improvement. Agencies also undertake other policy and program work that is foundational to supporting reef water quality outcomes.

Figure 1: Funding split across the three key areas







Introduction

This annual investment plan delivers on the Great Barrier Reef Water Science Taskforce (the Taskforce) recommendation to develop a combined investment plan for the additional \$90 million and the existing \$35 million per year. This funding implements Reef Water Quality Protection Plan actions and other programs that will improve the quality of water flowing to the reef.

The Reef Water Quality Protection Plan will be updated in 2017 to align with the overarching Reef 2050 Long-Term Sustainability Plan (Reef 2050 Plan). The update will deliver on the Taskforce recommendation to review and refine the water quality targets and set targets at the regional and basin scale. This second annual investment plan provides transparency and accountability to the government's reef investments.

Figure 2 shows how this investment plan fits within the framework of delivering reef water quality improvement.

Figure 2: Framework for improving reef water quality.





What is included in the \$58.45 million?

Ongoing funding

The ongoing \$35 million funding includes activities across a number of Queensland Government agencies and is not a discrete funding program. It includes a range of multi-year programs such as the Reef Protection Package which funds the Reef Water Quality Science Program, Best Management Practice programs and extension services. The Reef Protection Package provides \$55 million over five years with the majority of funding (\$50 million) allocated to the Department of Environment and Heritage Protection and the remainder to the Department of Agriculture and Fisheries. As this is a multi-year funding program, the investment is not evenly spread across the five years. The Annual Investment Plan 2015–2016 included \$10 million; however, only \$8.28 million was spent with the remaining funding (\$1.72 million) carried over for a total investment of \$36.72 million in 2016-2017.

Programs and activities funded in 2016-2017

- **Department of Environment and Heritage Protection**
\$16.30 million
 - Research and development
 - Report cards
 - Policy and planning
 - Wetlands management
 - Governance
 - Best Management Practice (BMP) programs
- **Department of Natural Resources and Mines**
\$12.89 million
On-ground delivery
 - Catchment and regional planning
 - Water, landscape and water quality monitoring, modelling and data management
- **Department of Science, Information Technology and Innovation**
\$3.83 million
 - Catchment loads monitoring and modelling
 - Landscape monitoring
 - Reef science coordination and reporting
 - Regional report card support
- **Department of Agriculture and Fisheries**
\$3.70 million
 - Research, development and innovation
 - Identifying critical, cost-effective and profitable practices
 - Extension and education
 - Management practice adoption reporting

Some programs are discrete funding that solely deliver Reef Water Quality Protection Plan outcomes such as the Reef Water Quality Science Program. Others, such as the Queensland Wetlands Program which funds wetlands management, are state-wide activities and therefore only part of their budget is allocated towards the \$35 million commitment.

Queensland Reef Water Quality Program

The \$21.73 million is the first year of major funding allocation of the \$90 million for implementing the Queensland Reef Water Quality Program. Projects are aimed at accelerating progress towards the reef water quality targets and align to the Great Barrier Reef Water Science Taskforce recommendations:

- review the reef water quality targets
- better communicate how everyone can improve reef water quality
- increase agricultural extension services
- use incentives to drive water quality improvements
- implement staged regulations for agricultural, urban and industrial activities to reduce water pollution
- fund innovation
- expand reef-wide monitoring
- establish two major integrated projects in the Wet Tropics and Burdekin to trial different land management tools and approaches
- develop a joint Queensland and Australian government strategic investment plan and leverage Queensland funding
- simplify and strengthen reef-wide water quality governance arrangements

Planned investment for these projects is indicated in the Snapshot of investment 2016-2017. The funding allocations may change over the year in response to more refined project development as well as emerging opportunities and priorities.





Foundational activities

A range of other Queensland Government activities are foundational to ensuring the appropriate support and policy environment to deliver water quality improvements. For example, protecting catchment and riparian vegetation is important for water quality outcomes and an effective statutory planning framework is essential to managing development pressures to reduce environmental impacts. These programs are not included in this annual investment plan because their primary objectives are not targeted at water quality improvement; however they are essential activities to support the delivery of water quality outcomes.

Alignment with broader reef improvement

The Queensland and Australian governments have jointly committed to implementing the Reef 2050 Plan which delivers outcomes for ecosystem health, biodiversity, heritage, water quality, economic benefits, community benefits and governance. They also committed to continuing to implement the Reef Water Quality Protection Plan which focuses on the water quality theme. An action to review the 2018 targets has been brought forward to 2017 to better align with implementing the Taskforce's recommendations.

Ultimately, the investments outlined in this annual investment plan for the Reef Water Quality Protection Plan, help deliver the Reef 2050 Plan.

The Queensland Government also makes a range of other investments under the Reef 2050 Plan to protect the reef including:

- Delivering the Great Barrier Reef joint Field Management Program—Department of National Parks, Sport and Racing (with the Great Barrier Reef Marine Park Authority)
- Managing shipping, ports and dredging activity—Department of Transport and Main Roads
- Ensuring the sustainability of future port expansion requirements—Department of State Development
- Ensuring new urban development avoids or minimises adverse impacts on water quality—Department of Infrastructure, Local Government and Planning
- Improving water quality from industrial and point source polluters—Department of Environment and Heritage Protection
- Protecting heritage sites—Department of Environment and Heritage Protection
- Managing fisheries—Department of Agriculture and Fisheries.





Great Barrier Reef governance and coordination

The Office of the Great Barrier Reef in the Department of Environment and Heritage Protection is responsible for overseeing implementation of the Queensland Government's reef strategies and programs. To improve coordination across multiple Queensland Government departments, there is a Reef Interdepartmental Committee chaired by the Director-General of the Department of Environment and Heritage Protection. The Committee is responsible for updating the annual investment plan and reporting on progress through an annual report.

Each department is accountable for the delivery of their investment, with the Office of the Great Barrier Reef coordinating a single point of reporting on the total package of reef water quality investments.

There is also a Reef Water Quality Protection Plan Partnership Committee to ensure ongoing collaboration between the Australian and Queensland governments and other Great Barrier Reef stakeholders such as regional natural resource management bodies, industry sectors and conservation groups. The committee is assisting in the review of the Reef Water Quality Protection Plan. Further work is planned to simplify and strengthen these governance arrangements following the Taskforce noting a need to clarify roles and reduce complexity and fragmentation.

Measuring success

Monitoring and reporting activities demonstrate overall improvements in reef water quality and load reductions. Due to the complexity and scale of the Great Barrier Reef and its catchments, making direct links between programs and reef water quality outcomes is not always practicable.

Through the Queensland Reef Water Quality Program, additional monitoring sites will be introduced. The establishment of two major integrated projects in the Burdekin and Wet Tropics with fine scale monitoring will also build an improved picture of the outcomes delivered. Lessons from these projects can be applied to other investments over time to improve the rigour of outcome reporting associated with government investment.

The Office of the Great Barrier Reef will monitor progress and report against the key objectives in this annual investment plan.





Principles for investment

Cost-effective:

Investment should be targeted at the most cost-effective on-ground practices and monitoring approaches that deliver the greatest benefit for water quality.

Targeted:

Investment should be targeted to maximise outcomes for reef water quality by focusing on the highest risk pollutants in the highest risk areas and monitoring.

Coordinated:

Investment should be coordinated and integrated wherever possible to avoid duplication and help leverage resources.

Adaptable:

Prioritisation of investment should be based on the best, most up-to-date information.

Continuously reviewed:

Investment should be flexible and regularly reviewed to encourage adaptive management based on the latest emerging information.

Collaborative:

Opportunities to pool resources and invest more strategically should be explored and adopted where advantageous.

Investment across key work areas

Three priority work areas have been established to improve water quality outcomes for the Great Barrier Reef:

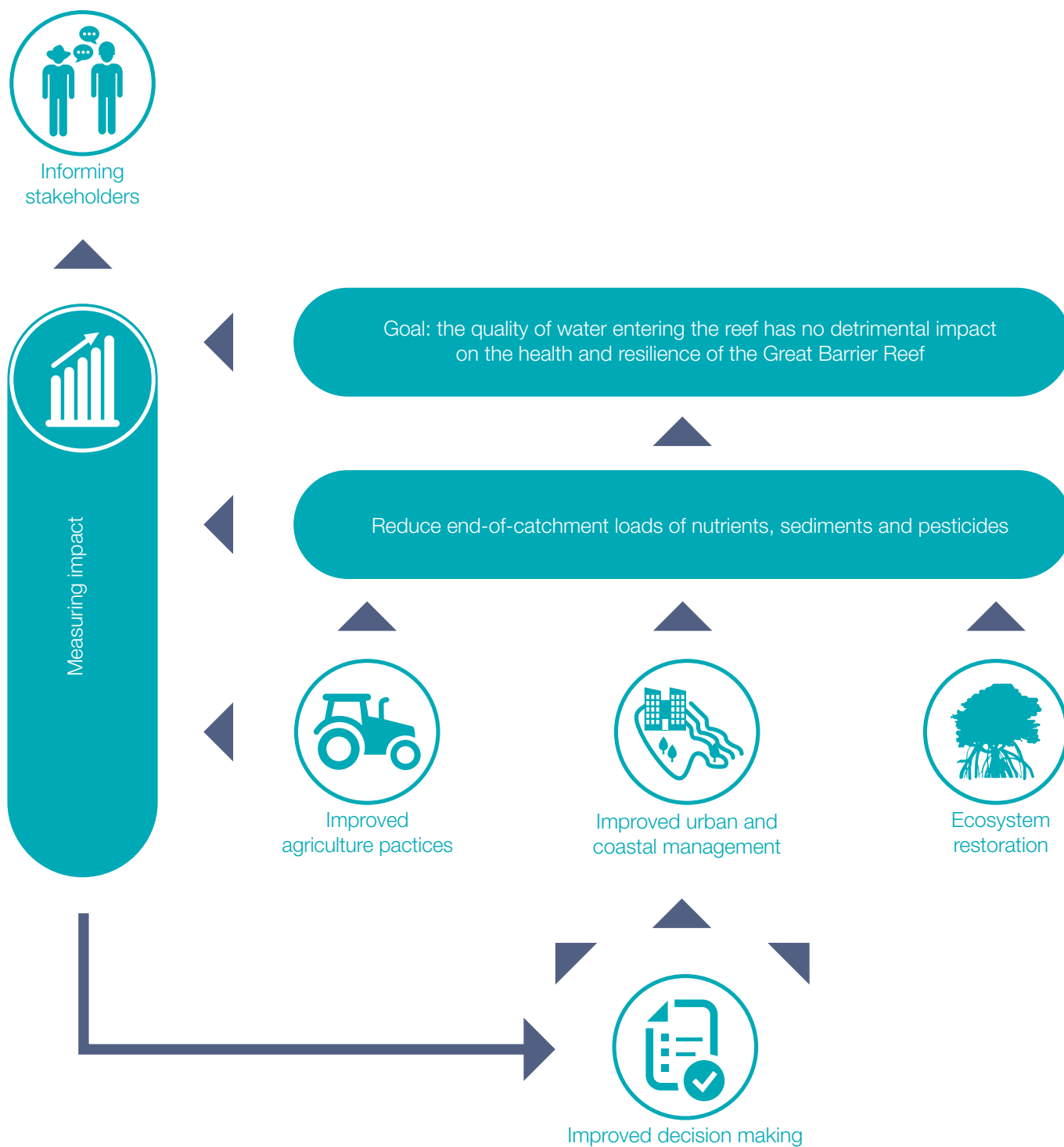
- 1. Prioritising investment and knowledge**
 - a. Coordination and governance
 - b. Research and development/science/innovation
 - c. Prioritisation/cost-effectiveness
 - d. Investment planning.
- 2. Responding to the challenge**
 - a. Policy/planning
 - b. Regulation/compliance
 - c. Partnerships
 - d. Best Management Practice
 - e. Extension
 - f. Communication/behaviour change
 - g. Grants—on-ground projects and systems repair.
- 3. Evaluating performance**
 - a. Monitoring, modelling and data management
 - b. Report cards and evaluation.

Pathway to impact

Programs contribute to the overall goal of improving reef water quality in different ways. To highlight this, pathways to impact are identified in Figure 3.

Details about which programs contribute to each of the work areas are identified—with feature boxes highlighting increased actions in response to the recommendations of the Great Barrier Reef Water Science Taskforce.

Figure 3: Pathways to impact show how different programs contribute to improving reef water quality.





1. Prioritising investment and knowledge

1a Coordination and governance

The Queensland Government undertakes a range of coordination and governance activities to ensure the efficient implementation and oversight of various plans and programs for the Great Barrier Reef.

The Office of the Great Barrier Reef within the Department of Environment and Heritage Protection coordinates implementation of the **Reef 2050 Plan, Reef Water Quality Protection Plan, and Queensland Reef Water Quality Program**. This includes coordinating the development of the Scientific Consensus Statement and review of the Government's water quality targets as well as the policy and investment planning required to implement both plans.

The Department of Science, Information Technology and Innovation provides oversight of reef science programs through **Reef science coordination and reporting**.

The Department of Natural Resources and Mines administers the **Regional Natural Resource Management Program**.

As part of the Taskforce's recommendation to simplify and strengthen governance, an **annual governance 'health check'** will be conducted. This will include a forum with the Australian Government regarding critical delivery systems and opportunities. Improved alignment, simplification and coordination of effort across the system will contribute to improved water quality outcomes.

1b Research, development, science and innovation

The Department of Environment and Heritage Protection's **Reef Water Quality Research and Development Program** supports projects in line with the Reef Water Quality Protection Plan Research, Development and Innovation Strategy 2013-2018. The strategy covers all biophysical and socio-economic research, development and innovation related to the effects of broadscale land use on water quality and reef health.

The Department of Agriculture and Fisheries provides funding to **Sugar Research Australia** for research, development and innovation to address industry research priorities that deliver a water quality outcome.

As part of the Taskforce's recommendation to substantially improve communication, funding was allocated for an annual **Great Barrier Reef Synthesis Workshop** and the development of products to better communicate research outcomes. The workshop will be led by the Independent Science Panel to help bridge the gap between scientists, stakeholders and policy makers by bringing them together to ensure the science is comprehensive and relevant to management and captures the complex interaction of Great Barrier Reef ecosystems.

1c Prioritisation and cost effectiveness

To support the work of the Taskforce, a consortium of economic and water quality experts was engaged in a **costings project** to determine the total costs of achieving the water quality targets as set out in the Reef 2050 Plan. The project considered the cost of interventions such as land practice change, improved irrigation practices, systems repair and urban stormwater management. The report, 'Costs of achieving the water quality targets for the Great Barrier Reef', is informing decision-making and investment priorities.

1d Investment planning

To leverage private investment, the Office of the Great Barrier Reef is exploring **innovative financing mechanisms** to broaden the investment base and developing opportunities for public-private partnerships.

2. Responding to the challenge

2a Policy and planning

The Queensland Government undertakes a range of policy and planning activities to protect the environment and ensure reef and water quality outcomes are protected. Some activities are solely related to the Great Barrier Reef such as **reef water quality offsets** and some activities are part of broader state-wide programs but have a discrete reef component such as **wetlands management**. Other planning and policy activities are relevant state-wide, such as **catchment and regional planning** and **coastal planning**, and the reef proportion of funding is estimated.

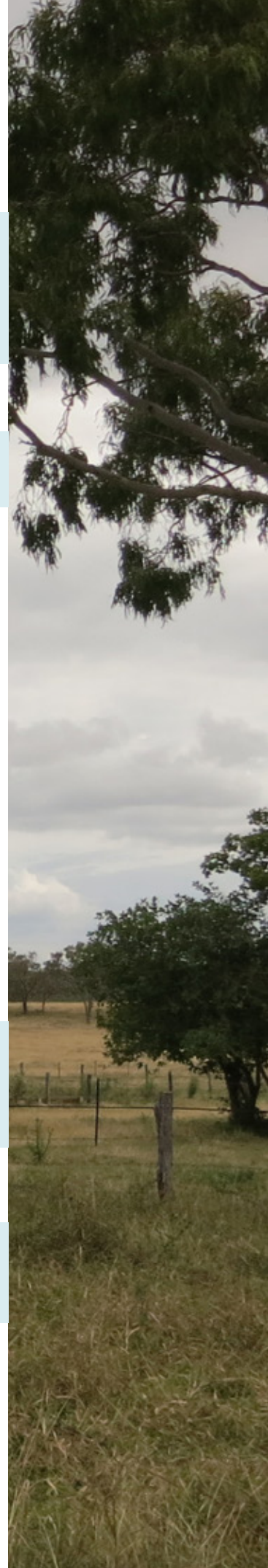
The Department of Environment and Heritage Protection consults with local communities to determine the environmental values the community requires from its waterways. By assessing historical water quality information, **water quality objectives** are set to provide locally relevant water quality guidelines which inform planning, decision-making and monitoring program assessments.

2b Regulation and compliance

The Taskforce recommended implementing staged regulations to reduce water pollution throughout the reef regions. Work has started with the formation of an agricultural stakeholder group to advise on the **development** and roll-out of **regulation**, increased **compliance** capacity and funding for an **urban stormwater program**.

2c Partnerships

Funding has been allocated to a number of organisations to develop partnerships to deliver gully remediation projects. This includes **matched funding arrangements** with the Great Barrier Reef Foundation and Greening Australia.





2d Best Management Practice

The Department of Environment and Heritage Protection provides funding for agricultural **Best Management Practice (BMP)** programs. BMP programs focus primarily on the two major agricultural industries of grazing and sugarcane and also include grains, bananas and other horticulture. Delivered in partnership with industry, natural resource management groups and the Department of Agriculture and Fisheries, BMP programs provide an opportunity for landholders to assess their practices against a water quality risk framework to identify opportunities to improve practices and deliver an improved water quality outcome.

2e Extension

Extension and education services assist industry to adopt improve practices identified through BMP programs. The Department of Environment and Heritage Protection's **Reef Protection Program** provides funding for extension and education.

The Department of Agriculture and Fisheries leverages these funds and provides **extension, economic and education services** to support landholders to adopt management practices that improve reef water quality while maintaining enterprise viability and productivity.

The Department of Natural Resources and Mines provides resources, extension and training for **managing wetlands in agriculture**.

2f Communication and behaviour change

In response to the Taskforce's recommendation to invest in more effective, targeted and coordinated extension, the Department of Agriculture and Fisheries is reviewing extension and education gaps, priorities and implementation strategies. The review will provide direction into a **significant expansion of extension programs in future years**.

2g Grants—On-ground projects and system repair

In response to the Taskforce's recommendation to substantially improve communication, the Department of Environment and Heritage Protection will develop and implement an overarching **Queensland Great Barrier Reef communications strategy**.

The department will also partner with industry to develop a large-scale **social change program** to better understand motivations and associated benefits of behaviour change and to encourage farmers to adopt actions that will improve their impact on water quality. Work has already begun with the CaneChanger project targeting cane farmers.

In addition, the program is funding a joint Reef 2050 Communications Network with members from government, industry and various stakeholder groups. It will also provide resources to improve the Queensland Government's Great Barrier Reef online content and funds for other communication activities to support the Scientific Consensus Statement, Major Integrated Projects and Great Barrier Reef Innovation Fund.

The Department of Natural Resources and Mines manages the **Regional Natural Resource Management (NRM) Program**. The program provides funding for a number of local and state strategic projects across Queensland. For local projects, funding is provided to regional natural resource management bodies to undertake on-ground projects that deliver water quality outcomes.

As a part of the NRM program, the Department of Natural Resources and Mines provides funding to **River Improvement Trusts** to undertake river improvement works, such as:

- stream bank/bed stabilisation via appropriate revegetation
- reinstating natural stream roughness
- afforestation of riparian zones
- fencing riparian zones linked to controlled grazing management
- provision of off-stream watering points for grazing lands
- remediating gullies
- catchment activities to slow and disperse overland flow
- wetland restoration.

The Department of Natural Resources and Mines provides funding for the **Rural Water Use Efficiency Program** as a partnership with rural industries through the NRM program. The rural water use efficiency—irrigation futures initiative helps irrigators make better use of their on-farm water supplies through efficient irrigation system design and management. Water quality improvement is a secondary benefit of this program by reducing water use and associated run-off. Work began in 2015 to elevate the consideration of water quality benefits in the roll out of this program, particularly in areas of irrigated cane such as the Burdekin, where improved irrigation practices can considerably reduce nutrient run-off.

In response to the Taskforce's recommendation to better align science and fund the development of new ideas and solutions, the Queensland Government has established a **Great Barrier Reef Innovation Fund**. The fund will support the development, trial and implementation of innovation in four major streams:

- agricultural management practices
- water quality monitoring
- water treatment systems
- restoration of environmental function.

The Great Barrier Reef Innovation Fund aims to leverage further investment for the reef from private and philanthropic sources.

The Taskforce also recommended the implementation of two **major integrated projects** in pollutant 'hot spots' to evaluate the most effective combination of tools to inform the design of future programs. In 2016-2017 funding has been allocated for program design and the contracting of regional delivery agents to establish these projects.





3. Evaluating performance

3a Monitoring, modelling and data management

The Paddock to Reef Integrated Monitoring, Modelling and Reporting Program is the primary vehicle for monitoring, modeling and evaluation. Water quality monitoring and modelling is used to estimate the water quality in waterways and the reef.

The Department of Natural Resources and Mines funds a range of monitoring and modelling activities to contribute to the Great Barrier Reef Report Card including **paddock monitoring and modelling** along with **catchment loads modelling, groundcover, vegetation, riparian and wetland extent mapping**, and maintains the **data management system**. The department also undertakes **ambient water monitoring** which is required for validating water quality models. The department contributes funding to the annual **Reef Blitz event**, managed by the Great Barrier Reef Foundation, which involves the community in citizen science and reef clean-up programs.

The Department of Agriculture and Fisheries provides funding to collect and report **management practice adoption** for the reef report cards.

The Department of Science, Information Technology and Innovation undertakes the **catchment loads monitoring program, water quality modelling, remote sensing satellite imagery for landscape monitoring and the wetlands assessment** for the Great Barrier Reef Report Card.

Funding from the Queensland Reef Water Quality Program will assist in filling gaps in current monitoring and modelling programs and allow better evaluation of performance against the water quality targets. In 2016-2017, the funding will be used to **expand catchment pollution load monitoring, increase modelling support to undertake policy scenario analysis, enhance wetland condition monitoring, undertake land use mapping for priority catchments, improve verification and management of land practice change data** and support the **eReefs** program.

Monitoring and evaluation for the two **Major Integrated Projects** will also be funded in 2016-2017 in order to track the success of projects in reducing water pollution in the catchments.

3b Report cards and evaluation







The **Great Barrier Reef Report Card** reports on the progress toward Reef Water Quality Protection Plan targets and the condition of the marine environment.

The annual report card is supported by more detailed reports that guide investment and program managers in targeting their activities.







The Great Barrier Reef Report Card is supported by regional waterway health report cards that provide information relevant to local communities on the health of their waterways providing a link between local decision-makers and the strategic reef environment. The Department of Environment and Heritage Protection provides funding to the **Gladstone Healthy Harbour Partnership**, the **Mackay-Whitsunday Healthy Rivers to Reef Partnership**, the **Wet Tropics Healthy Waterways Partnership** and is providing support to establish a report card partnership in Townsville.

The Department of Natural Resources and Mines provides funding for the **Fitzroy Partnership for River Health**.

Snapshot of investment 2016-2017








Funding categories	
R:	A discrete reef-specific program
S:	Part of a broader state program where funding can be clearly separated to reef regions
B:	Part of a broader state program where an approximate allocation is made for reef regions
Abbreviations	
DSITI	Department of Science, Information Technology and Innovation
DNRM	Department of Natural Resources and Mines
DAF	Department of Agriculture and Fisheries
EHP	Department of Environment and Heritage Protection
NRM Program	Natural Resource Management Program
OGBR	Office of the Great Barrier Reef
Pathway to impact	
	Improves decision making
	Improves agricultural practices
	Improves urban and coastal management
	Restores ecosystems
	Measures impact
	Informs stakeholders







Coloured rows highlight new funding through the Queensland Reef Water Quality Program in response to the recommendations of the Great Barrier Reef Water Science Taskforce.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
PRIORITISING INVESTMENT AND KNOWLEDGE						
Coordination and governance						
Reef science coordination and reporting	\$160,000	Base—DSITI	DSITI	R		Science programs contribute to on-ground improvements.
Reef 2050 Plan and Reef Water Quality Protection Plan implementation and governance	\$940,000	Reef implementation (limited life)—EHP	OGBR, EHP	R		Continued implementation of both plans. Progress towards targets.
Reef policy—management and planning	\$900,000	Base—EHP	OGBR, EHP	R		Continued improvement in reef health through policy management, planning and administration.
Administration of regional Natural Resource Management (NRM) program component for reef regions	\$600,000	NRM Program (limited life)—DNRM	DNRM	B		Protect, improve and restore waterways and rangelands to improve water quality.
Queensland Reef Water Quality Program management	\$1,500,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R		Accelerated progress against water quality target through successful project delivery of the Queensland Reef Water Quality program.
Annual governance health check	\$100,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP and Australian Government	R		Improve governance - include agreement on objectives, alignment of programs, clarity of roles, responsibilities and accountabilities.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
Research and development/science/innovation						
Reef water quality research and development	\$3,980,000	Reef Water Quality Science Program (limited life)—EHP	OGBR, EHP	R		Improved on-ground outcomes deriving from research and development.
Sugar Research Australia funding	\$880,000	Base—DAF	Sugar Research Australia	B		Improved nutrient management standards as a result of research.
Annual Great Barrier Reef synthesis workshop - science, management and policy	\$350,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R	  	Inform the development of the Scientific Consensus Statement, establishing effective dialogue between science and management and synthesising science to inform policy and future direction.
Prioritisation and cost-effectiveness						
Costings project	\$190,000	Queensland Reef Water Quality Program (limited life)—EHP	Alluvium	R		Costings information improves investment decisions.
Investment planning						
Explore innovative financing mechanisms	\$35,000	Queensland Reef Water Quality Program (limited life)—EHP	Consultant	R		Inform the uptake of conservation financing mechanisms.
Developing opportunities for public-private partnerships.	\$65,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R		Long-term continuity and strategic leveraging of government investment.
Total	\$9,700,000					









Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
RESPONDING TO THE CHALLENGE						
Policy and planning						
Water quality objectives	\$300,000	Base—EHP	EHP	B		Water quality objectives completed for all Great Barrier Reef catchments and reviewed every five years.
Reef water quality offsets	\$100,000	Base—EHP	EHP	S		Increase in proportion of offsets that are contributed to Reef Trust.
Catchment and regional planning	\$350,000	Base—DNRM	DNRM	B		Alignment of catchment and regional plans to Reef 2050 Plan objectives and accredited water quality improvement plans.
Wetlands management	\$200,000	NRM Program (limited life)—DNRM	EHP	S		Continued reduction in loss of wetlands.
	\$200,000	Base—EHP	EHP	S		Continued improvement in contribution of modified wetlands to ecosystem outcomes.
General Great Barrier Reef policy work	\$250,000	Base—DNRM	DNRM	R		Policy work contributes to reef improvements.
Coastal planning	\$200,000	Base—EHP	EHP	B		Planning decisions align with Reef 2050 Plan actions and reflect water quality outcomes.






Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
Regulation and compliance						
Development of regulation approaches	\$775,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R	 	Reduce catchment pollution loads through improved agricultural, urban and industrial activities.
Compliance program	\$1,000,000	Queensland Reef Water Quality Program (limited life)—EHP	EHP	R	 	Reduce catchment pollution loads through improved agricultural, urban and industrial activities.
Urban stormwater program	\$380,000	Queensland Reef Water Quality Program (limited life)—EHP	Reef Urban Stormwater Management Improvement Group	R		Reduce pollution loads flowing to the catchment through improved urban stormwater management.
Partnerships						
Partnership with the Great Barrier Reef Foundation	\$1,000,000	Queensland Reef Water Quality Program (limited life)—EHP	Great Barrier Reef Foundation	R		Through a matched funding project, reduce sediments flowing to the catchment and reef
Funding for emerging partnership opportunities and projects	\$4,130,000	Queensland Reef Water Quality Program (limited life)—EHP		R	N/A	
Best Management Practice (BMP)						
Best Management Practice (BMP)	\$5,840,000	Reef Water Quality Program (limited life)—EHP	Smartcane BMP Grazing BMP Banana BMP Grains BMP	R		Increase in the area of land managed under BMP. Increase in the number of farmers and graziers participating in the BMP. Increase in the number of farmers and graziers accredited for BMP.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
Extension						
Extension and training aligned to Best Management Programs and regional coordination of on-ground activities	\$1,340,000	Base—DAF	DAF	S		Increase adoption of improved land practices by farmers.
	\$1,050,000	Limited life—DAF	DAF	R		
	\$2,180,000	Limited life—EHP	DAF	R		
	\$100,000	NRM Program (limited life)—DNRM	DAF	B		
Development of expanded extension and education programs	\$200,000	Queensland Reef Water Quality Program (limited life)—EHP	EHP/DAF/industry	R		Undertake an assessment of extension and education activities and develop an implementation strategy for enhanced extension and education activities.
Communications and behaviour change						
Communication activities across the Great Barrier Reef	\$720,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R	 	Improved coordination and integration of communication activities and increased adoption of behaviours regarding improved water quality
Communication tools to support the Great Barrier Reef Innovation Fund Enhanced Efficiency Fertiliser project	\$100,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R	 	Stakeholders are informed of the Great Barrier Reef Innovation Fund project, and increased adoption of improved land practices by farmers.
Behaviour change projects	\$760,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR,EHP	R		Increase adoption of improved behaviours of targeted community groups.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
On ground: Grants and system repair						
River Improvement Trusts	\$400,000	NRM Program (Limited life)—DNRM	DNRM	S		Projects target water quality outcomes.
Regional Natural Resource Management groups—local projects	\$2,120,000	NRM Program (Limited life)—DNRM	Various regional bodies	S		Projects deliver ecosystem restoration and water quality outcomes for the reef.
Great Barrier Reef Innovation Fund:	\$10,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR/EHP/industry	R	 	Funding for information sharing forums on water treatment technology.
Great Barrier Reef Innovation Fund: Enhanced Efficiency Fertiliser Project	\$2,000,000	Queensland Reef Water Quality Program (limited life)—EHP	Reef Trust	R		Develop, trial and implement innovative approaches to improve reef water quality.
Great Barrier Reef Innovation Fund: Small Business Innovation Research Project	\$500,000	Queensland Reef Water Quality Program (limited life)—EHP	Advance Queensland	R		Develop and supply affordable fine scale monitoring sensors for deployment in reef catchments.
Great Barrier Reef Innovation Fund: Gully Remediation Project	\$750,000	Queensland Reef Water Quality Program (limited life)—EHP	Greening Australia	R		Develop, trial and implement innovative approaches to improve reef water quality.
Major Integrated Projects: Design, Development and Phase 1 Implementation	\$2,000,000	Queensland Reef Water Quality Program (limited life)—EHP	Regional delivery agents OGBR, EHP oversight	R	  	Demonstrate the impact of targeted integrated approaches to on-ground water quality improvement.
Rural Water Use Efficiency Program	\$1,280,000	NRM Program (Limited life)—DNRM	DNRM	S		Improved use of on-farm water supplies results in reducing water use and associated run-off.
Total	\$30,235,000					

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
EVALUATING PERFORMANCE						
Monitoring						
Catchment loads monitoring	\$730,000 \$500,000	Base—DSITI NRM Program (Limited life)—DNRM	DSITI DSITI	R		Monitoring data is used to measure catchment load pollutants within agreed timeframes.
Reef Blitz	\$40,000	NRM Program (Limited life)—DNRM	Great Barrier Reef Foundation	R		Monitoring data is used to measure reef condition.
Ambient water monitoring	\$4,800,000	Base—DNRM	DNRM	S		Water monitoring infrastructure within Great Barrier Reef catchment produces reliable data.
Landscape monitoring	\$950,000	Base—DSITI	DSITI	R		Monitoring contributes to Great Barrier Reef and regional report cards.
High resolution satellite imagery	\$1,250,000	Limited life—DNRM	DNRM	R		Monitoring contributes to Great Barrier Reef and regional report cards.
State Land and Tree Survey	\$210,000	Base—DSITI	DSITI	S		Monitoring contributes to Great Barrier Reef and regional report cards.
Satellite image archive, calibration and systems	\$340,000	Base—DSITI	DSITI	S		Monitoring contributes to Great Barrier Reef and regional report cards.
Groundcover and riparian mapping	\$100,000	NRM Program (limited life)—DNRM	DSITI	S		Monitoring contributes to Great Barrier Reef and regional report cards.
Monitoring wetland extent and condition - values assessment	\$300,000 \$150,000	Base - DSITI NRM Program (limited Life)—DNRM	DSITI DSITI	S		Monitoring contributes to Great Barrier Reef and regional report cards.
Management practice adoption	\$430,000	Limited Life—DAF	DAF	R		Development of new tools to better utilise practice information in investment decisions.
Management practice adoption support	\$150,000	Queensland Reef Water Quality Program (limited life)—EHP	DAF	R		Development of new tools to better utilise practice information in investment decisions.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
Expanded catchment pollution load monitoring	\$2,000,000	Queensland Reef Water Quality Program (limited life)—EHP	DSITI	R		The number of sites in the Great Barrier Reef that are monitored for catchment load data are increased.
Enhanced wetland condition monitoring	\$250,000	Queensland Reef Water Quality Program (limited life)—EHP	DSITI	R		Capacity for monitoring wetland condition is improved.
Major Integrated Projects: monitoring program	\$210,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP and Proponent	R		A monitoring and evaluation program for the major integrated projects is developed and implemented. Data is collected that can determine the success of projects in reducing water pollution.
Monitoring and evaluation program coordination	\$155,000	Queensland Reef Water Quality Program (limited life)—EHP	OGBR, EHP	R		Coordinated monitoring which contributes to Great Barrier Reef and regional report cards.
Modelling						
Catchment loads modelling	\$500,000	NRM Program (limited life)—DNRM	DNRM	R		Modelling data validated and provided within agreed timeframes.
	\$530,000	Base—DSITI	DSITI			
Modelling support for policy scenario analysis	\$350,000	Queensland Reef Water Quality Program (limited life) - EHP	DNRM	R		Modelling for policy scenario analysis contributes to policy and investment decisions.
Land use mapping for priority catchments	\$250,000	Queensland Reef Water Quality Program (limited life) - EHP	DSITI	R		Land use mapping for priority catchment is developed and able to inform modelling.
eReefs	\$1,000,000	Queensland Reef Water Quality Program (limited life) - EHP	Great Barrier Reef Foundation	R		Increase in capacity of eReefs.

Program	Investment	Funding source	Delivery agent	Funding category	Pathway to impact	Measuring outcomes
Data management						
Spatial and Scientific Information Management for Reef (SSIMR) data management for reef - maintenance	\$130,000	NRM Program (Limited life)—DNRM	DNRM	R		SSIMR data management meets the needs for reef management.
Verification and management of land practice change data	\$800,000	Queensland Reef Water Quality Program (limited life) - EHP	DNRM	R		Increased capacity to validate and manage land practice data.
Report cards						
Great Barrier Reef Report Card coordination and implementation	\$160,000	Reef implementation (Limited life)—EHP	OGBR, EHP	R	 	The Great Barrier Reef Report Card is delivered on time and is successful in communicating water quality target progress and marine condition to stakeholders.
Regional report card partnerships:						
Gladstone Healthy Harbour Partnership	\$1,500,000	Regional Report Cards (Limited life)—EHP	OGBR, EHP and various regional partnerships	R		Annual report card for each existing partnership is delivered on time and is successful in communicating water quality target progress and marine condition to stakeholders.
Mackay-Whitsunday Healthy Rivers to Reef Partnership						
Wet Tropics Healthy Waterways Partnership	\$610,000	Base—DSITI		R		New report card partnership established each financial year until there is full coverage of the Great Barrier Reef.
Fitzroy Partnership for River Health	\$120,000	Base—DNRM	Fitzroy Basin Association	R		Increasing efficiency and comparability between report cards.
Total	\$18,515,000					
GRAND TOTAL	\$58,450,000					

Annual investment report

To improve accountability around the management of the Queensland Government's contribution to improving Great Barrier Reef water quality, an annual investment report will be provided to the Minister for the Great Barrier Reef to be tabled in Parliament after the end of the financial year. The investment report will inform other reef related reporting including implementation of the Reef 2050 Plan to the Great Barrier Reef Ministerial Forum.

