Great Barrier Reef
Water Science Taskforce

Final Report
Frequently Asked Questions

Q. Why was the Taskforce established?
The Great Barrier Reef Water Science Taskforce was established in May 2015 to provide independent advice to the government about how its ambitious water quality targets to achieve up to an 80 per cent reduction in nitrogen runoff and up to a 50 per cent reduction in sediment runoff from key catchments by 2025 can be met. It also provided advice on the priority areas for investing an additional $90 million in Queensland Government funding. The key objective for the Taskforce was to provide advice to the Queensland Government on how to help ensure that clean water flows from the rivers to the sea to protect the Reef for future generations.

Q. What is the purpose of the Final Report?
The Final Report outlines the final recommendations of the Taskforce in terms of identifying where we are now, where we want to be and how to get there. It acknowledges that whilst there have been significant efforts to improve reef water quality; the changes have not been rapid or widespread enough. Transformational change – and a fundamental shift in the way land is managed – will be required. To achieve a healthy and resilient Great Barrier Reef, everyone – including farmers, graziers, developers, the resources sector, community members, traditional owners and tourism operators – must be part of the solution.

The Final Report makes 10 recommendations including enhanced communication, increased levels of agricultural extension and innovation, expanded monitoring, financial and other incentives, and staged and targeted regulations. The 10 recommendations are:

1. Review the Reef water quality targets in 2016 to feed into the review of the Reef Water Quality Protection Plan
2. Substantially improve communication and information to build understanding of the pressures on the Reef and to support management practice and social change.
3. Invest in more effective, targeted and coordinated extension to support large scale land management practice change.
4. Establish greater use of incentives and market approaches to support water quality improvements.
5. Implement staged regulations to reduce water pollution throughout the Reef regions.
6. Better align science and fund development of new ideas and solutions.
7. Fund additional long-term and finer scale catchment monitoring, modelling and reporting for improved decision making and adaptive management.
8. Implement two well facilitated major integrated projects in pollutant ‘hot spot’ areas to evaluate the most effective combination of tools to inform the design of future programs.
9. Develop a strategic investment plan and establish Reef-friendly public-private partnerships.
10. Simplify and strengthen governance and clarify roles and responsibilities within and between the Queensland and Australian governments.

The Executive Summary and Full Final Report are available at http://www.gbr.qld.gov.au/taskforce/final-report/

Q. When will the government respond to (and/or implement) the Taskforce final recommendations?
The Final Report was delivered to the Queensland Government on 25 May 2016. The Queensland Government will immediately implement a number of the recommendations, while the formal response is being finalised. These include providing:

- Up to $33.5 million for two major integrated projects– one focussed on cane in the Wet Tropics and the other on grazing in the Burdekin
- $9 million to innovation, knowledge and science that will support the development, scaling up and roll-out of new technologies and approaches
- an additional $9 million to ramp up existing Reef-wide monitoring efforts to provide more comprehensive information to farmers

Q. What was the purpose of the Interim Report and how did it influence the Final Report?
Prior to delivering its Final Report in May 2016, the Great Barrier Reef Water Science Taskforce released an Interim Report for public consultation in December 2015 with consultation closing in February 2016. The Interim Report outlined the initial findings of the Taskforce and contained a series of preliminary conclusions and recommendations on how to deliver substantial reef water quality improvements. The Taskforce considered the responses received, gathering views on what management approaches have worked well and what haven't, the investment priorities and how to meet the water quality targets. The Interim Report and a summary of the consultation feedback is available at http://www.gbr.qld.gov.au/taskforce/interim-report/

Q. What are the main pollutants impacting the Reef?
The main pollutants of concern impacting on water quality in the Reef are sediment, nutrients and pesticides.

Q. What percentage of the pollutant loads come from farms as opposed to other sources?
Scientific evidence shows that more than 90 per cent of pollutant loads are from broad-scale agriculture (the most dominant land use in the catchments).

Q. Why is there such a strong focus on sugarcane and grazing?
The 2013 Scientific Consensus Statement found the main land uses contributing pollutant loads are:

- grazing for sediment,
- grazing and sugarcane for total nitrogen and total phosphorus, and
- sugarcane for pesticides.

Grazing is the dominant agricultural land use in the Great Barrier Reef catchments (77 per cent), particularly in the Burdekin and Fitzroy regions. Sugarcane (1.4 per cent) is more prevalent on the coastal floodplain.

Q. Has the Taskforce considered the cumulative impacts on the Reef of agriculture, urban development, mining and ports?
The Taskforce considered all sources of pollution to the Reef. Agricultural land uses are the main source of nitrogen, sediment and pesticides to the Reef and its ecosystems. Other land uses, such as industrial mining, port development, dredging and urban development contribute relatively small loads of pollutants to the Reef but can be locally significant (e.g. around population centres). These industries are generally more heavily regulated than agriculture.

Point-source industrial activities (such as sewage treatment plans, aquaculture facilities, mining, dredging and quarrying) must meet water quality discharge requirements through a licence (environmental authority) under the *Environmental Protection Act 1994.* Urban development is required to be consistent

with State and local planning instruments under the *Sustainable Planning Act 2009* and other regulation dependent on the nature of the development.

The Taskforce has recommended a staged regulatory approach for sugarcane production and grazing. It has also recommended existing minimum regulatory standards and compliance capacity for point source pollution and stormwater, erosion and sediment control in urban and industrial areas be improved in consultation with affected industries.

Q. Does the Taskforce address climate change?
The main focus for the Taskforce was identifying how the government could deliver substantial Reef water quality improvements.

However, the Taskforce acknowledges that climate change is the single biggest threat to the Reef. The climate change risks of most concern are ocean warming and acidification, and the increased intensity of storm events. Dual action on climate change and water quality improvement will be critical for the long-term health of the Reef.

The Taskforce recognises that to protect and maintain the health of the Great Barrier Reef in the long term, two things should be done:

1. Reduce emissions to keep average global surface temperature increases to below 2.0°C and hopefully 1.5°C over the long term. This means adopting a pathway to reduce greenhouse gas emissions over the next few decades consistent with international agreements to which Australia has committed to.
2. Build resilience by reducing all other stressors as much as possible including poor water quality, crown-of-thorns starfish and other direct impacts like fishing.

Q. How does the Taskforce and their recommendations relate to the existing Reef Protection regulations?
The Taskforce concluded that a staged regulatory pathway supported by extension, incentives, compliance, modelling and monitoring was needed to meet Reef outcomes. The Regulations should apply to agricultural, urban and industrial activities within Reef catchments to meet minimum standards.

Regulation of both future development and the intensification of existing development were important to ensure continuous improvement in water quality. Any regulatory regime needs to be clear, tailored to individual needs, easily measured and developed consultatively.

It is recognised that there are existing reef protection regulations in place that were not actively enforced by the previous government. While the government considers its response to the Taskforce recommendations, the Department of Environment and Heritage Protection has a renewed compliance program in relation to reef protection regulations in the high priority catchments of the Wet Tropics, Burdekin and Mackay-Whitsundays. Departmental officers are undertaking property visits to provide information and education on best practice and reef protection regulations with a focus on the application of nitrogen, phosphorus and chemicals (pesticides).

Q. Why has the Taskforce not supported a 'cap and trade system' for nutrients?
The Taskforce considered a market based cap and trade scheme for nutrient outputs. It concluded that such approaches are not feasible in the short-to-medium term due to the insufficiency of data and the necessary tools to set up a trading scheme.

However, the recommendations about catchment pollutant load limits and the collection of data and development of farm based tools would provide the underpinning for a cap and trade scheme for the future, should other approaches be unsuccessful .

To advance to a cap and trade scheme it would be necessary to allocate an amount of nutrient output for each source (i.e. farm and point source) within the context of the catchment pollutant load limits. This would require the development of sophisticated tools, including a farm nutrient budgeting tool.

Where adequate progress has not been made in reducing off farm nutrient losses through the staged regulatory approach for sugarcane production within five years, the Taskforce has recommended the government consider the introduction of measures to cap nutrient use at the farm level.

Q. How does the Taskforce suggest communication be improved?
The Taskforce has recommended substantially improved communication and information to build understanding of the pressures on the Reef and to support management practice and social change.

The proposal includes developing a collaborative communication approach with stakeholders to ensure everyone in the community understand how they can be part of the solution and contribute to improving Reef health. There would be consistent communication and messaging on Reef matters across governments and with partners. An annual science synthesis workshop would generate new knowledge, better communicate science and inform policy, management practices and research priorities.

Q. How do the Taskforce recommendations relate to the industry led Best Management Practice (BMP) programs?
The SmartcaneBMP and GrazingBMP are important tools to engage farmers and graziers about best practice. The Taskforce has recommended a mix of tools will be needed, including programs such as BMP, but should also be supported with regulations for those who aren't achieving the appropriate standards, and be provided with support through extension and incentives, amongst other things.

Q. Will the current investment be enough to achieve the targets by 2025?
Understanding the costs and effectiveness of interventions to improve water quality is essential to inform investment priorities. However, there has been little analysis of the cost effectiveness of past investments in Reef catchments in terms of water quality outcomes.

The Taskforce has acknowledged that the investment needed to achieve the targets in the timescale proposed is likely to be well beyond the funds currently allocated by the Queensland and Australian governments.

A consortium of economic and water quality experts is continuing to assess the costs and effectiveness of various solutions to identify the total investment that may be required to meet the targets. This project is leading edge and has never been done at this scale.

The policy solutions being assessed include improved land management practice for cane and grazing, improved cane irrigation practices, the use of constructed wetlands/pollutant traps in cane growing areas, reduced gully erosion, remediating streambanks, voluntary changes in land use to less polluting activities and improved urban stormwater management.

The work aims to be completed by July 2016. Once completed and peer reviewed, the report will be available on the Queensland Government Great Barrier Reef Living Wonder website – www.gbr.qld.gov.au

Q. What stakeholders did the Taskforce meet with in developing their final report?
The Taskforce engaged with peak stakeholder groups as part of their deliberations, particularly through the Reef 2050 Reef Advisory Committee. Taskforce members also met with industry and regional groups as well as visiting local communities and talking with landholders. Stakeholders include, but are not limited to:

- Canegrowers
- AgForce
- Queensland Farmers' Federation

- World Wildlife Fund
- Local Government Association of Queensland

An expert Review Group has also provided peer review to the work of the Taskforce and its outputs.

Q. How were the members chosen?
The members of the Great Barrier Reef Water Science Taskforce were appointed by the Minister. The Taskforce had expertise-based membership from industry, conservation, science and government sectors, including:

- Grazing
- Agriculture (cane)
- Tourism
- Resources
- Conservation planning / environmental decision-making
- Regional communities
- Community engagement and partnerships
- Water quality improvement planning
- Economics
- Water quality
- Land management

Q. How did the work of the Taskforce fit in with the Reef 2050 Plan and the Reef Water Quality Protection Plan?
The work of the Taskforce relates to the water quality and ecosystem health themes of the Reef 2050 Long-Term Sustainability Plan (Reef 2050 Plan), which also builds on and encompasses the Reef Water Quality Protection Plan 2013. It looks past the 2020 goal of the Reef Water Quality Protection Plan, with a particular focus on 2025 but also considers the longer-term 2050 aspirations.

The Reef 2050 Plan is a joint Queensland and Australian government plan for protecting and managing the Great Barrier Reef from 2015 to 2050. It outlines ambitious targets and actions across seven key areas—biodiversity, ecosystem health, water quality, heritage, community benefits, economic benefits and governance.

The Reef Water Quality Protection Plan's primary focus is to continue addressing diffuse source pollution from broadscale land use. The Reef Water Quality Protection Plan will be updated by June 2017 and the Taskforce recommendations will be considered for adoption through that process, subject to government agreement.

Q. What are the targets for managing water quality pollution for the Great Barrier Reef?
The Queensland Government targets are:

- reduce nitrogen runoff by up to 80 per cent in key catchments such as the Wet Tropics and the Burdekin by 2025
- reduce total suspended sediment runoff by up to 50 per cent in key catchments such as the Burdekin by 2025

The Taskforce concluded that the water quality targets are ambitious and the focus should be on accelerating progress towards the targets. The Taskforce has recommended reviewing the targets in 2016 to feed into the review of the Reef Water Quality Protection Plan. This will include establishing regional (and basin scale) targets for priority pollutants linked to Reef health.

Q. Why did the Taskforce focus on $90 million of spending when the election commitment was for $100 million?
The Queensland Government made an election commitment of $100 million of which $10 million was allocated to establishment of three net-free fishing zones in Cairns, Mackay and Rockhampton. The Taskforce focussed on what could be achieved with remaining $90 million.

Q. How will you know if the recommendations are delivering the intended outcomes and having a positive impact on the Reef?
Monitoring and modelling of management practices and water quality is critical to measuring success of the interventions. The Taskforce concluded current investment in monitoring and modelling was not enough to adequate measure Reef-wide water quality status and trends for both catchment and marine systems.

As a result, the Taskforce has recommended funding additional long-term and finer scale catchment monitoring, modelling and reporting for improved decision-making and adaptive management. This includes filling information gaps, improving evaluation of management practice effectiveness and undertaking finer scale water quality monitoring in priority areas. Regular and clear reporting on progress is vital and should be part of the broader reporting for the Reef 2050 Plan and Reef Water Quality Protection Plan (for example through Reef Outlook reporting and annual Reef Report Cards).

Q. What will happen if the outcomes are not delivering progress towards the targets?
The Taskforce supported an adaptive management approach to water quality improvement, with feedback from monitoring informing future management changes. For example, the Taskforce recommended a staged approach to implementation of regulations, with stronger standards implemented over time if water quality does not improve.