



Reef 2050 Water Quality Improvement Plan review

The Reef 2050 Water Quality Improvement Plan (Reef 2050 WQIP) aims to improve the quality of water flowing from the catchments adjacent to the Great Barrier Reef. It is a nested plan under the Reef 2050 Long-Term Sustainability Plan.

This joint Australian and Queensland government plan guides how industry, government and the community will work together to improve the quality of water flowing to the Reef. The plan builds on more than 20 years of effort by governments at all levels working in partnership with landholders, natural resource managers, industry, Traditional Owners, researchers and conservation groups.

The plan is underpinned by comprehensive research and science and supported by a robust monitoring and evaluation program. Nearly \$1 billion of Australian and Queensland government funding is allocated to delivering actions in the plan.

Five-yearly review

The plan is reviewed every five years with the current review due to be completed in 2023. It involves a staged process with key stakeholders consulted throughout.

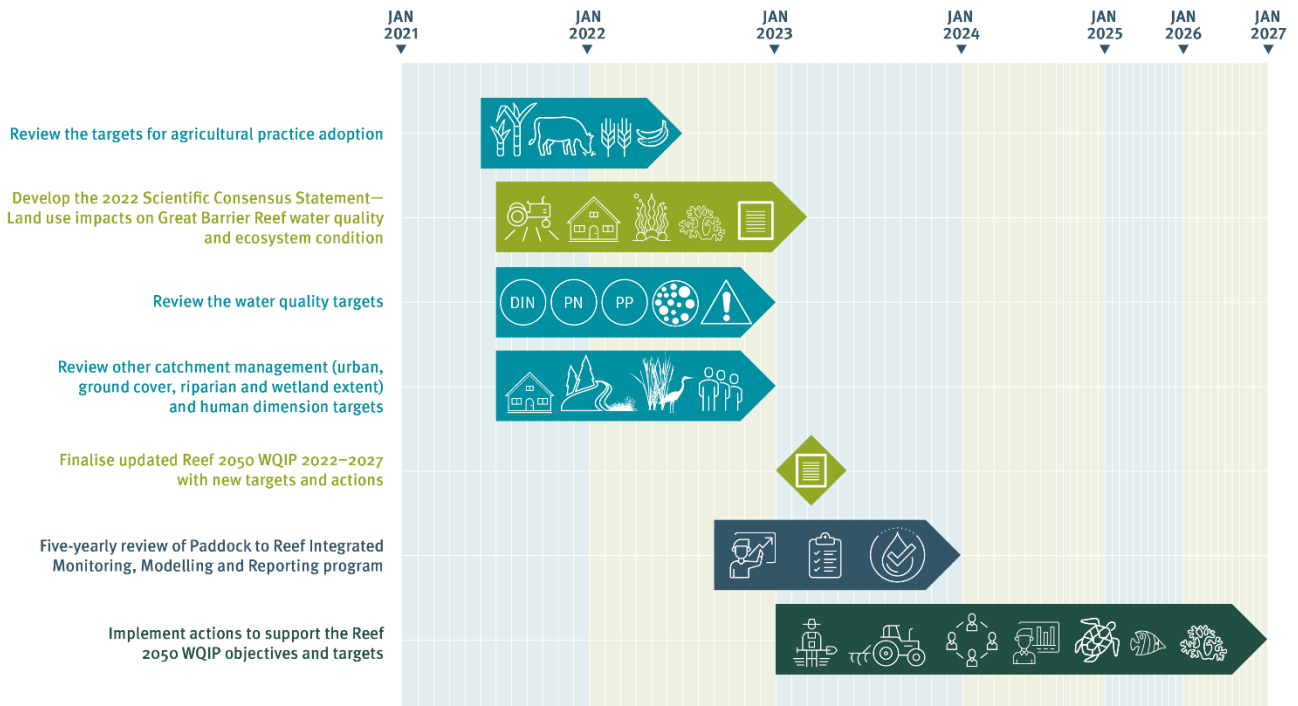
Components of the review include:

- Reviewing the **land management practice adoption targets** for agriculture.
- Developing the **2022 Scientific Consensus Statement**.
- Reviewing the **water quality** targets.
- Reviewing the **catchment management** and **human dimensions targets**.
- Updating the **Reef 2050 WQIP**.
- Reviewing the **Paddock to Reef Integrated Monitoring, Modelling and Reporting (Paddock to Reef) Program**.



Stages of the five-yearly review of the Reef 2050 Water Quality Improvement Plan (Reef 2050 WQIP)

Stages and timing for updating the targets and associated actions to improve the quality of water flowing to the Great Barrier Reef. This includes reviewing the supporting science and the monitoring and reporting program.



Land management practice adoption targets

The review has started with an independent review of the land management practice adoption target for agriculture.

The target was originally established in the Reef Water Quality Protection Plan 2013. With the introduction of finer scale water quality targets and increased knowledge, it's timely to undertake a review.

Targets are proposed to be set for each industry (e.g. sugarcane, grazing, bananas, horticulture and grains production and at a finer spatial scale (e.g. regional or catchment).

They will more directly align with what is needed to achieve the water quality targets which vary across catchments.

The independent review will consider:

- what the targets focus on (e.g. a suite of practices or the most influential practices that affect water quality)
- achievability, profitability and productivity of land management changes
- the five-year timeframe
- other existing practice change instruments.

The review is being delivered by a consortium of specialists. Stakeholders and commodity-specific technical experts will be consulted. A Stakeholder Partnership Group, involving industry, conservation groups, natural resource management organisations and government representatives, is providing input into the review.

Scientific Consensus Statement

The Scientific Consensus Statement, a major review of land-based impacts on Reef water quality and ecosystem condition, is updated every five years to inform the review of the Reef 2050 WQIP.

Experts in Great Barrier Reef water quality science and management will review and synthesise the scientific evidence of water quality issues relating to the Reef. A spatial management prioritisation will incorporate the latest modelling and monitoring information to quantitatively assess water quality risks to key coastal and marine ecosystems at a catchment scale, integrated with a social and economic assessment.

The multidisciplinary group of scientists, with oversight from the Reef Water Quality Independent Science Panel, will compile the evidence and form a consensus on the current understanding of the system, ensuring Reef policy and management remain up-to-date and based on the best available scientific evidence.

Water quality targets

Water quality targets are developed for the five main pollutants that impact the Reef – sediment (especially fine sediment), dissolved inorganic nitrogen, particulate nitrogen, particulate phosphorus and pesticides.

The targets for sediment, particulate nutrients and dissolved inorganic nitrogen are based on the quality of water that corals and seagrass need to be healthy. They are calculated as reductions in anthropogenic loads – the pollutant load from human activities.

The pesticide target is based on the concentrations required to protect 99 percent of aquatic species at the river mouth. This reflects the fact that impacts from pesticides are more related to concentrations than loads.

The water quality targets will be reviewed based on the best available scientific and technical knowledge to inform the updated Reef 2050 WQIP. The focus will be on developing targets for the Black and Ross catchments in the Burdekin region as there was limited technical information to set these targets previously. The Cape York and Burnett Mary targets will also be re-examined as eReefs marine modelling is now available for these areas. Other targets will be checked against latest available science.

Catchment management and human dimensions targets

Catchment management targets are set for ground cover, riparian extent and wetland extent. Good ground cover and riparian vegetation help to minimise erosion. Wetlands connect catchments to the Reef, reduce the impacts of floods and help to filter catchment run-off. Ground cover is assessed annually during the late dry season. Riparian and wetland extent change more slowly so are assessed every four years. These targets will be reviewed based on the latest available science including new, higher resolution satellite data.

The urban and human dimensions targets are a key area for review to inform the next Reef 2050 WQIP. An Urban Water Stewardship Framework has been developed, trialled with local governments and will form the basis of future reporting.

Human dimensions are defined as the human factors that play a role in shaping social, economic, cultural, and environmental outcomes associated with the Great Barrier Reef. These range from the aspirations and capacities of landholders, industries and communities, to their stewardship practices, as well as broader governance. The human dimensions target recognises that actively engaging communities and land managers in programs to improve water quality is critical to support progress towards the land and catchment management targets.

Paddock to Reef program

The five-yearly review of the Paddock to Reef program will follow the update of the Reef 2050 WQIP.

The Paddock to Reef program provides the framework for reporting progress towards the plan's targets and objectives, and provides information to help prioritise, target and manage water quality improvement projects. This review will also consider how progress is presented in Reef water quality report cards. Stakeholders will be engaged in the review.

More information

Visit www.reefplan.qld.gov.au or email officeofthegbr@des.qld.gov.au