



Australian Government



Queensland  
Government

# HIGHLIGHTS

of the  
Reef 2050 Long-Term Sustainability Plan



# The Great Barrier Reef



AUSTRALIA

## AREA

348,400 km<sup>2</sup>

## LENGTH

2300 km long

70 million  
football fields

Roughly the  
same area as...



ITALY



JAPAN



GERMANY



MALAYSIA

3000



coral reefs

1050



continental islands

1625



types of fish

133



varieties of  
sharks and rays

650



types of soft  
and hard corals





## Introduction

The Great Barrier Reef is one of the natural wonders of the world and a significant part of Australia's national identity.

It is also one of the best managed marine ecosystems in the world and we plan to keep it that way through strong legislative protection and targeted investment by the Australian and Queensland governments. This investment is projected to be more than \$A2 billion in the next decade.

The *Reef 2050 Long-Term Sustainability Plan* aims to ensure the Outstanding Universal Value of the Great Barrier Reef continues to improve each decade between now and 2050, ensuring the Reef remains a natural wonder for successive generations.

## Pressures and progress

As is the case for coral reefs worldwide, the Great Barrier Reef is under pressure, but we are making significant progress to ensure it retains the values for which it was listed as a World Heritage property in 1981. There is strong evidence that our efforts are paying off.

Our substantial investment in better land management is improving water quality entering the Reef from the catchment.

Just 18 months ago there were five major industrial ports proposing to dispose of capital dredged material in the Great Barrier Reef Marine Park. This has been reduced to zero.

The Australian and Queensland governments are placing a permanent ban on the disposal of dredge material in both the Great Barrier Reef Marine Park and the World Heritage Area from capital dredging projects.

The new Queensland Government will also legislate to restrict capital dredging for the development of new or expansion of existing port facilities to within the regulated port limits of Gladstone, Hay Point–Mackay, Abbot Point and Townsville.

## The Reef 2050 Plan in action

For the first time, the *Reef 2050 Long-Term Sustainability Plan* provides a shared pathway to the future by bringing together actions across government, industry, Traditional Owners, researchers and the community.

The Plan contains concrete targets, actions, objectives and outcomes along with defined areas of responsibility to comprehensively preserve the Reef's health and resilience while allowing ecologically sustainable use.

An important feature of the Plan is how we integrate different levels of monitoring and use our findings to demonstrate progress, target future management interventions and areas of investment.

## Our future path

Protecting the Reef requires long-term planning and commitment.

Actions under the Reef 2050 Plan will ensure the Great Barrier Reef continues to be among the world's best managed and protected World Heritage areas.

Actions under this Plan will ensure the Great Barrier Reef continues to be among the world's best managed and protected world heritage areas.



The Great Barrier Reef and its catchment



## Our management of the Reef

The Australian and Queensland governments have either completed, or are implementing, all of the World Heritage Committee recommendations about protection and management of the Great Barrier Reef, and in many cases have exceeded their expectations.

### Our actions

- Reduced in the past 18 months, five major industrial ports proposing to dump capital dredged material in the Great Barrier Reef Marine Park, to zero.
- Banning disposal in the Great Barrier Reef Marine Park and World Heritage Area of material from capital dredging projects.
- Prohibiting capital dredging for the development of new or expansion of existing port facilities to within the regulated port limits of Gladstone, Hay Point–Mackay, Abbot Point and Townsville.
- Further protected the Fitzroy Delta including Curtis Island and Keppel Bay.
- Conducted three independent reviews of Gladstone Harbour and created the Gladstone Healthy Harbour Partnership bringing together 25 partners from community, government, industry and research to monitor and where necessary improve the health of the harbour.
- Released the *North-East Shipping Management Plan*, in October 2014, to enhance ship safety and environmental protection.
- Halted and reversed the decline in water quality entering the Reef from agriculture — pesticide load has been reduced by 28 per cent, sediment load by 11 per cent, total nitrogen load by 10 per cent, and dissolved inorganic nitrogen by 16 per cent compared to a 2009 baseline.
- Provided extra protection to turtles and dugongs through tough new laws against poaching, improved sustainability agreements with Indigenous communities and local land managers and funding to help reduce marine debris.
- Appointed a Queensland Minister for the Great Barrier Reef.

### Our investment

- Projected investment in the coming decade for research and management activities on the Reef and in the adjoining catchments along the coast is more than \$A2 billion.
- The Australian Government has established a new \$A40 million Reef Trust to provide innovative targeted investment towards improving water quality.
- In addition to maintaining its \$A35 million expenditure contributing to improved water quality, the new Queensland Government has committed an additional \$A100 million over five years towards water quality initiatives, scientific research and helping business transition to better environmental practices in primary production and fishing industries.

### Our science

- The *Great Barrier Reef Outlook Report 2014* found that the property continues to meet all the World Heritage criteria for which it was listed.
- The Outlook Report 2014 and a two year strategic assessment of the Great Barrier Reef World Heritage Area vastly improved our understanding of the challenges facing the Reef and actions necessary for the future.
- The northern areas remain in pristine condition, while the inshore areas in the southern two-thirds face the greatest challenges.
- Climate change, poor water quality from land-based run-off, impacts from coastal development and some fishing impacts such as illegal fishing are the major challenges.
- These are being tackled as part of the National Environmental Science Programme, with funding of nearly \$A32 million for a new Tropical Water Quality hub, to research coastal water quality and coastal management focused on the Great Barrier Reef.

# A Reef under pressure — Outlook Report 2014

The Great Barrier Reef Marine Park Authority publishes an Outlook Report every five years that examines the Great Barrier Reef's health, pressures and likely future.

The Outlook Report 2014 concludes:

*The system as a whole retains the qualities contributing to its Outstanding Universal Value as recognised in its listing as a world heritage property. The assessments of biodiversity and ecosystem health show that the northern third of the Great Barrier Reef Region has good water quality and its ecosystem is in good condition. In contrast, key habitats, species and ecosystem processes in central and southern inshore areas have continued to deteriorate from the cumulative effects of impacts.*

Outlook Report 2014 found climate change, land-based run-off, coastal land-use change, and some residual impacts of fishing remain the major threats to the future vitality of the Great Barrier Reef.

The report acknowledged there had been a range of positive actions since 2009, including progress in reducing pollutants entering the Reef and work with Traditional Owners on sea country management.

# Reef 2050 Long-Term Sustainability Plan

The Reef 2050 Plan responds to the World Heritage Committee's recommendation that Australia develop a long-term plan for sustainable development to protect the Outstanding Universal Value of the Reef.

The Plan is informed by both the Outlook Report 2014 and the comprehensive two-year strategic assessment of the region — the most complex and comprehensive analysis of environmental management arrangements ever undertaken in Australia.

With input from scientists, communities, Traditional Owners, industry and non-government organisations, a key principle of the Plan is developing Reef resilience in the face of a variable and changing climate. By improving water quality, maintaining biodiversity and ensuring port development and shipping have minimal impact on the Reef, we are targeting activities over which we have most control.

The Plan has seven overarching themes reflecting the priorities for action — ecosystem health, biodiversity, heritage, water quality, community benefits, economic benefits and governance.



## Understanding Outstanding Universal Value

World heritage sites are places that are important to everyone, regardless of where they are located. They are irreplaceable places that the global community has decided to protect for the future.

The Great Barrier Reef was inscribed on the World Heritage List in 1981 in recognition of its Outstanding Universal Value.

The Great Barrier Reef was inscribed for all four of the natural criteria specified in the Convention Concerning the Protection of the World Cultural and Natural Heritage. In summary, these criteria are:

- superlative natural beauty
- outstanding geological, geomorphic or physiographic features
- outstanding examples of ecological and biological processes
- the most important and significant natural habitats for biological diversity.

The Great Barrier Reef World Heritage Area also meets the requirements for integrity, meaning that its natural attributes are considered to be whole and intact. The world heritage values of the Great Barrier Reef are protected under national environmental law.

## Building resilience to a changing climate

Climate change is the most significant threat to the future of coral reefs worldwide, especially through ocean acidification and increased temperatures.

Australia's 2020 target will be delivered through a \$A2.55 billion emissions reduction fund

International efforts to reduce global climate change, combined with action at national and local levels to build the resilience of the Reef by reducing impacts, is the best insurance for protecting the Reef.

We are tackling climate change through national direct action and international engagement. Australia is committed to reducing its emissions to five per cent below 2000 levels by 2020 – this represents a reduction of 19 per cent from business-as-usual levels. We have

more than met our emission reductions target for the first commitment period of the Kyoto Protocol. Australia has in place a \$A2.55 billion emissions reduction fund to support businesses and households in reducing emissions.

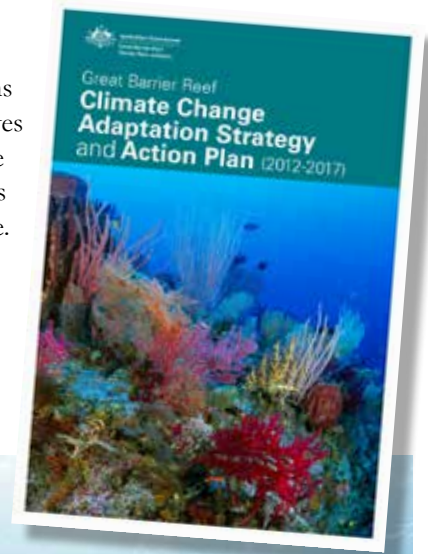
The Great Barrier Reef Marine Park Authority's Great Barrier Reef Climate Change Action Plan (2012–2017)

focuses on a range of activities to help the Reef, its industries and communities adjust to a changing climate.

The Reef 2050 Plan addresses climate change threats by improving the condition and resilience of the Reef at local, regional and Reef-wide scales. It supports best practice community stewardship activities that contribute to Reef health and resilience.

There will be a focus on improving connectivity through protection, restoration and management of priority coastal ecosystems. Queensland coastal planning laws will be adopted which take into account the predicted effects of climate change.

A number of Queensland local governments are already preparing coastal hazard management plans and other initiatives in response to the anticipated effects of climate change.







## Improving water quality

Since 2003, significant efforts have been made to improve the quality of water entering the Reef through implementing the Reef Water Quality Protection Plan.

River discharges are the single biggest source of pollutants entering inshore areas of the Great Barrier Reef World Heritage Area. The Reef receives run-off from 35 major basins which drain 424 000 square kilometres of coastal Queensland.

**The Plan sets out ambitious targets for reducing sediment, nitrogen and pesticide loads and actions to achieve them.**

Landholders, regional natural resource management organisations, agricultural industry bodies, conservation groups and government agencies continue to work on reducing pollutants in land-based run-off.

This work will help build the resilience of inshore coastal and seagrass areas which support

marine biodiversity including turtles and dugongs, and drive fisheries productivity. It will also help prevent crown-of-thorns starfish outbreaks.

The good news is that the quality of water entering the Reef from agriculture is improving. The pesticide load has been reduced by 28 per cent, sediment load by 11 per cent and total nitrogen load by 10 per cent compared to a 2009 baseline.

There was also a 16 per cent reduction in dissolved inorganic nitrogen, the key pollutant linked to crown-of-thorns starfish outbreaks. As well, a recent scientific breakthrough in the crown-of-thorns starfish program controls the coral eating starfish with a single injection instead of the 10 to 25 injections previously needed.

While pollutant loads are declining, it will take time to see results in the marine environment from action on the land.

The Plan sets out ambitious targets for reducing sediment, nitrogen and pesticide loads.

Based on a 2009 baseline, the 2018 targets are:

- reducing dissolved nitrogen loads by at least 50 per cent in priority areas, on the way to achieving up to an 80 per cent reduction by 2025

- reducing sediment loads by at least 20 per cent in priority areas, on the way to achieving up to 50 per cent reduction by 2025
- reducing end-of-catchment particulate nutrient loads by at least 20 per cent in priority areas
- reducing end-of-catchment pesticide loads by at least 60 per cent in priority areas.

As well as continuing to implement the Reef Water Quality Protection Plan, the Reef 2050 Plan sets out a number of actions including:

- working with industries to measure management efforts to achieve best practice water quality management
- pending a Queensland Government review of regulation and market-based mechanisms to improve water quality, requiring farmers to be accredited to best management practice guidelines or to operate under an environmental risk management plan
- building the capacity for local government and industry to improve water quality management in urban areas
- reviewing and developing water quality objectives, targets and standards across the region
- strengthening protection of natural wetlands and riparian vegetation.



New initiatives, such as the Reef Trust and an additional \$A100 million from the Queensland Government, will focus on extra improvements in Reef water quality and coastal habitat condition, and enhance species protection.

## Carefully managing coastal land use – Ports and dredging

As an island nation, Australia relies heavily on its maritime links, with approximately 30 per cent of its gross domestic product generated by seaborne trade.

Ports in and adjacent to the Great Barrier Reef World Heritage Area accounted for trade worth \$A40 billion in 2012–13. This is 20 per cent of the total throughput for all Australian ports combined.

While ports operated long before the listing of the Great Barrier Reef as a World Heritage area and were included within its boundaries, they make up less than 0.1 per cent of the World Heritage Area.

We are permanently banning sea-based disposal of material from port related capital dredging into the Great Barrier Reef World Heritage Area and Marine Park.

The importance of ensuring port activities are ecologically sustainable, particularly dredge projects and the disposal of dredge material, is recognised by all levels of government and by the ports industry.

The Australian Government will use its regulatory powers to permanently ban the disposal of capital dredge material in the Great Barrier Reef Marine Park.

In addition, through current and new legislation, the new Queensland Government will:

- protect greenfield areas by restricting new port development in and adjoining the Great Barrier Reef World Heritage Area to within current port limits. These port limits are long-established and fixed in regulations under the *Transport Infrastructure Act 1994* (Qld)
- restrict capital dredging for the development of new or expansion of existing port facilities to within the regulated port limits of Gladstone, Hay Point–Mackay, Abbot Point and Townsville
- ensure that any new development inside these port limits is also consistent with the Great Barrier Reef Marine Park Act, the Queensland Marine Parks Act, their regulations and zoning plans
- prohibit the sea-based disposal of material from port-related capital dredging into the Great Barrier Reef World Heritage Area
- mandate the beneficial reuse of port-related capital dredge spoil, such as land reclamation in port development areas, or disposal on land where it is environmentally safe to do so

- establish a maintenance dredging framework which identifies future dredging requirements, ascertains appropriate environmental windows to avoid coral spawning and protect seagrass, and examines opportunities for beneficial reuse of dredge material or on-land disposal where it is environmentally safe to do so
- require master plans at the major ports of Gladstone, Hay Point–Mackay, Abbot Point and Townsville which optimise infrastructure and address operational, economic, environmental and social relationships as well as supply chains and surrounding land uses
- support on-land disposal or land reclamation for capital dredge material at Abbot Point
- not support trans-shipping operations that adversely affect the Great Barrier Reef Marine Park
- further protect the Fitzroy Delta, including North Curtis Island and Keppel Bay which are clearly outside the Gladstone port area, through:
  - extension and strengthened conservation zoning in the Great Barrier Reef Coast Marine Park
  - extension of the existing fish habitat area
  - establishment of a new net-free zone under fisheries legislation
  - additional protections in associated intertidal and terrestrial areas.

Further port re-development other than capital dredging may occur at Port Alma subject to environmental assessment and appropriate conditions.

The new Queensland Government will require all proponents of new dredging works to demonstrate their project is commercially viable.

As a consequence of all of these actions, port development in the World Heritage Area and the adjacent coastal zone will be even more strictly controlled.

Just 18 months ago there were five major projects proposing to dispose of capital dredge material in the Marine Park. This is now zero.





## Shipping safely through Reef waters

The shipping industry in Australia is strictly regulated by international, Commonwealth and State and local regulations, and there are specific rules for the Great Barrier Reef.

Despite increasing ship movements, the frequency of shipping incidents has substantially reduced.

By global standards, shipping movements in the Great Barrier Reef are low. For example, on any given day there are 40 to 50 ships transiting through the 348 000 square kilometre Great Barrier Reef World Heritage Area.

By comparison, there are around 140 ship movements per day within 20 kilometres of the 11 434 square kilometre Wadden Sea World Heritage Area.

In October 2014, after two years of consultation, the Australian Government released its *North-East Shipping Management Plan* for safe shipping in the environmentally sensitive areas of the Great Barrier Reef, Torres Strait and Coral Sea.

The Reef 2050 Plan supports implementation of this shipping management plan, and actions include:

- focusing on pilotage requirements for the middle Inner Route (parallel to the Queensland coast between Cairns and Gladstone)
- increasing resources for State port control inspections and further focusing on areas related to navigational risk
- using emerging ship tracking technology to provide early alerting of ship breakdowns including a 'traffic organisation service'
- working with industry to introduce (ahead of international timelines) the need for ships trading to ports in the region to be equipped with electronic chart display and information systems and have bunker oil tanks fitted in protective locations.

## Ecologically sustainable fishing

The Reef 2050 Plan sets out actions to improve the ecological sustainability of fishing in the Great Barrier Reef, including:

- reviewing the regulatory structure of fishing to ensure the sustainability of Queensland's fisheries
- maximising the values of a sustainable fisheries catch by adopting a fisheries resources allocation policy
- the Queensland Government will establish new net-free zones and has allocated up to \$A10 million to buy-back fishing licences
- enhancing compliance with zoning plans and other regulations through improved enforcement and adoption of new technologies.

## Ensuring a diverse and healthy Reef

The Great Barrier Reef is one of the world's most diverse and remarkable ecosystems, with a wide range of habitats and many thousands of different species.

One of the important tenets of future management of the World Heritage Area is building its resilience in the face of current and future threats, for example climate change. This is reflected in many of the targets, actions and outcomes of the Plan.

Resilience refers to the capacity of an ecosystem to either resist (absorb) an impact or to recover from that impact.

**Projected investment in the coming decade for research and management activities on the Reef is more than \$A2 billion.**

Systems with a high level of integrity and diversity are more likely to have greater resilience and are therefore more likely to be able to resist and recover from impacts. Resilience is strongly linked to the scale and timing of adverse influences, as well as the degree of connectivity in the system. For example an individual reef could

be severely damaged, but as part of a connected and functional network, retain its capacity to recover.

The Reef 2050 Plan contains targets and actions specifically focused on maintaining and enhancing ecosystem health decades into the future, including: identifying key indicator species and populations to inform refinement of targets and monitoring; maintaining and enhancing marine animal stranding responses; and developing a net benefit policy to guide restoration of ecosystem health.

## Investing in the Great Barrier Reef

The Australian and Queensland governments have a long history of investment in managing and protecting the Reef.

More than \$A2 billion is projected to be invested in research and management activities on the Reef and adjoining catchments over the coming decade.

A focus of the Reef 2050 Plan will be a framework to create opportunities for partnerships and private investment to work effectively alongside public investment.

The priority for governments is to ensure that financial and other resources are harnessed and directed to activities which support Plan outcomes.

There are scores of programmes, activities and actions underway in the management of the Great Barrier Reef, delivered by a wide range of people

including farmers, park managers and researchers.

The Reef 2050 Plan brings a strengthened cohesion to these activities and prioritising of actions will be critical to its success.



## Governance and implementing the Plan

The Great Barrier Reef is extensively protected through Commonwealth and State legislation.

The Australian Government, the Great Barrier Reef Marine Park Authority, and the Queensland Government will lead implementation of the Reef 2050 Plan to protect the Outstanding Universal Value of the Reef.

The Plan builds upon, and does not replace, the existing statutory and management arrangements for the World Heritage Area.

Oversight of the Plan's implementation will continue through the Great Barrier Reef Ministerial Forum, comprised of ministers from both the Australian and Queensland governments. An annual report on progress will be publicly available.

The Reef 2050 Plan will be a schedule to the Great Barrier Reef Intergovernmental Agreement signed by the Prime Minister of Australia and the Queensland Premier.

The Plan sets out a structure to oversee its implementation and engage with industry, science bodies and the community.

Five yearly revisions to the Plan, the first due in 2020, will be informed by the Outlook Report 2019. Each review cycle will be informed by improved scientific understanding and the incorporation of diverse knowledge systems and community views.

It is anticipated that targets, actions and priorities within the Plan could change following the review process.

## Applying diverse knowledge

Information critical to managing the Reef comes from a wide range of sources—research institutions, government agencies, universities, commercial companies and consultants, stakeholders, Traditional Owners and the community.

Recently, through its National Environmental Science Programme, the Australian Government contributed \$A31.98 million to the Tropical Water Quality Hub which will research coastal water quality and coastal

management focused on the Great Barrier Reef and other tropical waters.

The Reef 2050 Plan acknowledges the integral place of Traditional Owners and their cultural and ecological knowledge in delivering the Plan and in ensuring the health of the Great Barrier Reef World Heritage Area.

Science is also at the heart of our efforts to manage and protect the Reef. The more we learn about the Reef through our research, the better equipped we are to ensure it remains healthy for future generations.

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Collectively the actions outlined in this Plan will help us achieve our vision for the Great Barrier Reef World Heritage Area:

*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.*



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