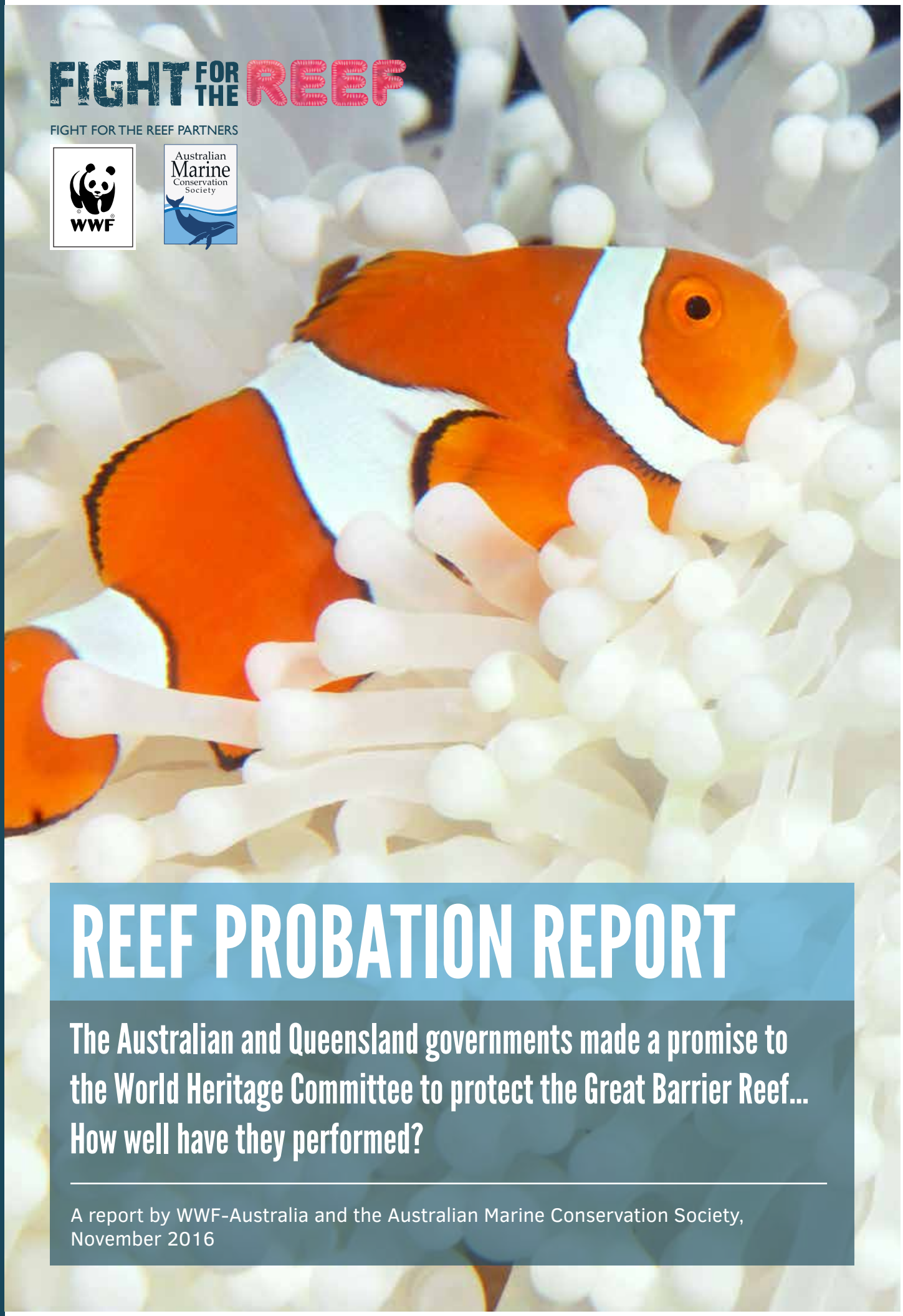


FIGHT FOR THE REEF

FIGHT FOR THE REEF PARTNERS

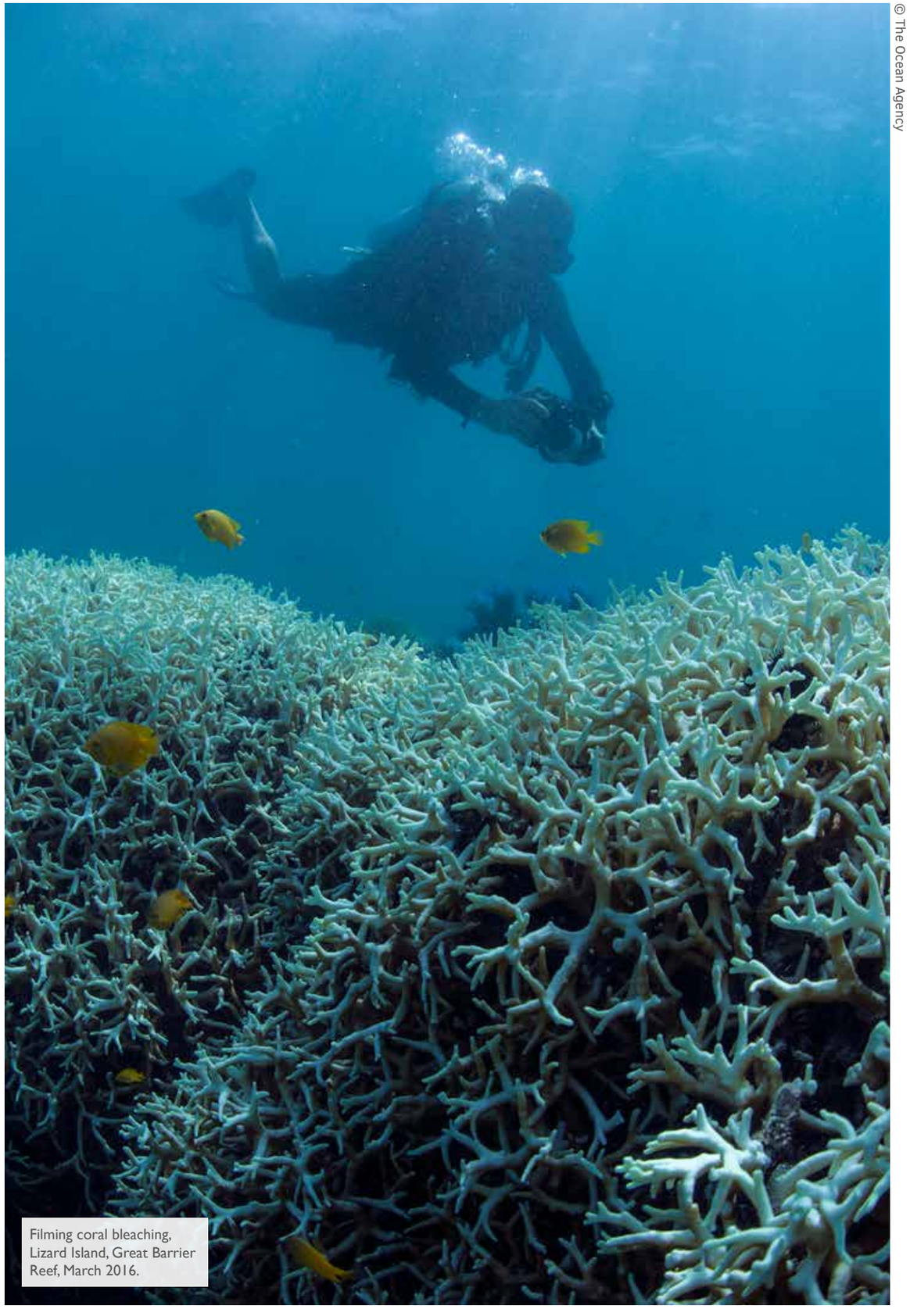
WWF

Australian Marine Conservation Society

REEF PROBATION REPORT

The Australian and Queensland governments made a promise to the World Heritage Committee to protect the Great Barrier Reef... How well have they performed?

A report by WWF-Australia and the Australian Marine Conservation Society, November 2016



Filming coral bleaching, Lizard Island, Great Barrier Reef, March 2016.

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COVER IMAGE: The devastating coral bleaching event that hit the Reef in 2016 affected all types of marine life. This photo shows a clownfish sheltering in a bleached sea anemone, Lizard Island, March 2016

© Vanessa Dale

This colourful protest at Airlie Beach in 2014 was part of an international community campaign calling on the World Heritage Committee to stand up for the Reef.

THE WORLD IS WATCHING

Australia must keep its promises to protect the Great Barrier Reef or risk being called to front the World Heritage Committee again in 2017.

The Great Barrier Reef is one of the most well-known, valuable and loved World Heritage areas on the planet, but its health is in decline, and it faces growing threats.[1] Almost every year since 2011 the health of the Reef, and Australia's management of this global treasure, have been put in the spotlight at annual meetings of the UN's World Heritage Committee. Several times the Committee considered placing the Reef on the list of World Heritage sites "in-danger", which would have caused great damage to Australia's international reputation.

In 2015 Australia presented a rescue plan dubbed the 'Reef 2050 Plan' that included a long list of promised actions to turn around the health of the Reef, and preserve it for future generations.

On the strength of these promises, the World Heritage Committee voted to place Australia 'on probation' – giving the Australian and Queensland governments another chance to prove that they would implement their promises to turn around the health of the world's greatest coral reef.

The first condition of the Committee's probationary ruling was that Australia must report to UNESCO by 1 December 2016 on progress in implementing its promises. The Committee warned that "if in their assessment the anticipated progress is not being made" the issue could be placed on the agenda "for consideration at the subsequent session of the World Heritage Committee in 2017".[2]

They also gave Australia a deadline of December 2019 to demonstrate it has halted the decline of the Reef's health, or once again put the Reef at risk of an 'in-danger' listing in 2020.

WWF-Australia and the Australian Marine Conservation Society are very supportive of the renewed efforts to protect the Reef that have been triggered by the World Heritage Committee's concerns. However there are some key areas where Australia is failing to live up to its promises. This report details those and highlights the damage done by the recent coral bleaching event, showing it is more important than ever for the world to keep watch over the Great Barrier Reef.

The World Heritage Committee "requests [Australia] to rigorously implement all of its commitments including where necessary through their inclusion in legislation, in order to halt the current documented declines in the property [the Great Barrier Reef]".[3]

PROMISE

"The [Reef 2050] Plan changes the path for the future… This Plan will work. The commitment is absolute." - Greg Hunt, Australian Minister for the Environment and Stephen Miles, Queensland Minister for the Great Barrier Reef, 2015.[4]

REALITY

This report outlines four major areas where Australia is currently not living up to its promises to the World Heritage Committee to protect the Great Barrier Reef: water pollution, tree-clearing, investment in Reef repair, and responding to coral bleaching. The report recognises the welcome action by the state and federal governments to fulfil their promise to ban sea-dumping of industrial dredge spoil, and explains the rapid changes needed from both governments to get back on track to meet all our promises and protect the Reef for future generations.

1. GBRMPA Great Barrier Reef Outlook Report 2014 2. World Heritage Committee Decision: 39 COM 7B.7 3. World Heritage Committee Decision: 39 COM 4. Reef 2050 Plan p.iv 7B.7

© WWF / Geza Aschoff

Dermot O'Gorman CEO of WWF-Australia and Christoph Heinrich, Conservation Director WWF-Germany handing over the Reef petition to Maria Böhmer, German Head of State and Chair of the 2015 UNESCO Meeting. The petition was signed by 563480 supporters to Draw The Line on the destruction of the Great Barrier Reef.

AUSTRALIA'S PROMISES TO THE WORLD COMMUNITY

At the World Heritage Committee meeting in Germany in 2015, Australia promised to lift its game and protect the Reef for future generations. Key promises made by the Australian and Queensland governments include:

- Strengthen laws to stop the destruction of trees in Reef catchments – a leading cause of erosion and sediment pollution in Reef waters[5]
- Cut farm pollution from fertilisers by 50% and sediment pollution by 20% in priority catchments by 2018 as a first step toward the new 2025 clean water targets[6]
- Provide 'adequate and sustained financing' to ensure the Reef 2050 Plan can be implemented, and meet its targets for Reef repair.[7]
- Ban sea-dumping of industrial dredge-spoil and restrict port development in the World Heritage Area[8]

THE CHOICE FACING THE WORLD HERITAGE COMMITTEE IN 2017

Early in 2017, experts at the UN's environment agency, UNESCO, will assess whether Australia is living up to its promises, and make a recommendation to the World Heritage Committee. Should they:

- Keep Australia on probation for another three years?

OR

- Include Australia's management of the Great Barrier Reef on the agenda for the World Heritage Committee meeting in Poland in July 2017?

5. Reef 2050 Plan Actions EHA20 and EHT3 6. Reef 2050 Plan Target WQT1 7. World Heritage Committee Decision: 39 COM 7B.7
8. Reef 2050 Plan Actions WQA18 and WQA14

CORAL BLEACHING DISASTER HITS GREAT BARRIER REEF

The coral bleaching event that hit the Reef in early 2016 was a major environmental disaster caused by global warming. It killed at least 22% of the Reef's corals and seriously damaged the region's World Heritage values. Despite this, Australia is not doing its fair share to tackle climate change and prevent coral bleaching events becoming more frequent.

Australia's rescue plan for the Great Barrier Reef, - the 'Reef 2050 Plan', - acknowledges that climate change is the biggest threat facing the Reef, but doesn't include any new actions or targets to address the problem. The Australian Government says that's because climate change is a global problem that needs a global solution. But rather than lead the charge to protect the Reef, Australia's emission reductions targets put us at the back of the pack.

The Paris Agreement on climate change, which Australian has ratified, sets a goal of limiting global warming to well below 2 degrees C and to pursue efforts to limit warming to 1.5 degrees C. Experts tell us that to preserve the Great Barrier Reef – and all coral reefs – for future generations we must go even further.[9] This means all countries around the world must urgently work together to decarbonise their economies, including moving away from polluting fossil fuels towards 100% renewable energy. As guardians of the Great Barrier Reef, you'd think Australia would lead the way by doing its fair share.

In the lead up to the Paris Agreement, the government's own Climate Change Authority recommended Australia set a 2030 emissions reduction target of between 45-65% below 2005 levels, to meet Australia's fair share of the global carbon budget to limit warming to 2 degrees C.[10] Instead, the federal government adopted a target of only 26-28% emission reduction by 2030, far less than what's needed to save the Reef. The Paris Agreement will require Australia to do even more than the Climate Change Authority's earlier recommendation. What's more, Australia's current climate policies are unlikely to meet its current woefully inadequate target.[11] To have a chance of avoiding dangerous climate change, the Australian Government needs to reduce emissions by 65-85% (on 2005 levels) by 2030.[12]

Australia is also a large exporter of coal to other countries and the Queensland and Australian governments continue to approve and support the development of large thermal coal mines despite the climate crisis we are facing. For example, the recently approved Carmichael mine in the Galilee Basin will be one of the largest coal mines in the world and the mining and burning of coal from this mine will generate an estimated 4.7 billion tonnes of greenhouse gas emissions.[13] The coal from the mine will be exported for the next 60 years from an expanded port at Abbot Point and shipped out through the Great Barrier Reef.

If Australia wants to convince the world we're serious about tackling climate change to save the Reef, we need to step up and become global leaders, not laggards.

"Australia argued to UNESCO that the outstanding universal value of the World Heritage area is intact because we have this northern 30% of the Reef where everything is hunky dory. That is no longer the case. In the space of a month or two, the northern third is now more degraded than the southern two thirds."[14] *Professor Terry Hughes, James Cook University*

9. GBRMPA (2015) Submission on Australia's post-2020 greenhouse gas emissions reduction target https://www.dpmc.gov.au/taskforces/unfccc/public-submissions/great-barrier-reef-marine-park-authority ; ISRS (2015) Consensus Statement on Climate Change and Coral Bleaching http://www.gci.uq.edu.au/climate-change-threatens-survival-of-coral-reefs 10. Climate Change Authority (2014) Targets and Progress Review, Recc 9 p.126 http://www.climatechangeauthority.gov.au/reviews/targets-and-progress-review-3 11. Climate Action Tracker assessment, Nov 2016 12. WWF(2015) Submission to Climate Change Authority Special review: Australia's Greenhouse Gas Emissions Reduction Goals http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20Australia.pdf TCI (2015) The Paris Climate agreement and Implications for Australia. http://www.climateinstitute.org.au/verve/_resources/Post-Paris-Brief-16122015.pdf 13. Taylor & Meinshausen (2014) Joint Report to the Land Court of Queensland on "Climate Change – Emissions" http://envlaw.com.au/wp-content/uploads/carmichael14.pdf 14. Chandler, J. (2016) Grave Barrier Reef, The Monthly Magazine https://www.themonthly.com.au/issue/2016/june/1464703200/jo-chandler/grave-barrier-reef

Coral bleaching, Lizard Island, Great Barrier Reef, March 2016.

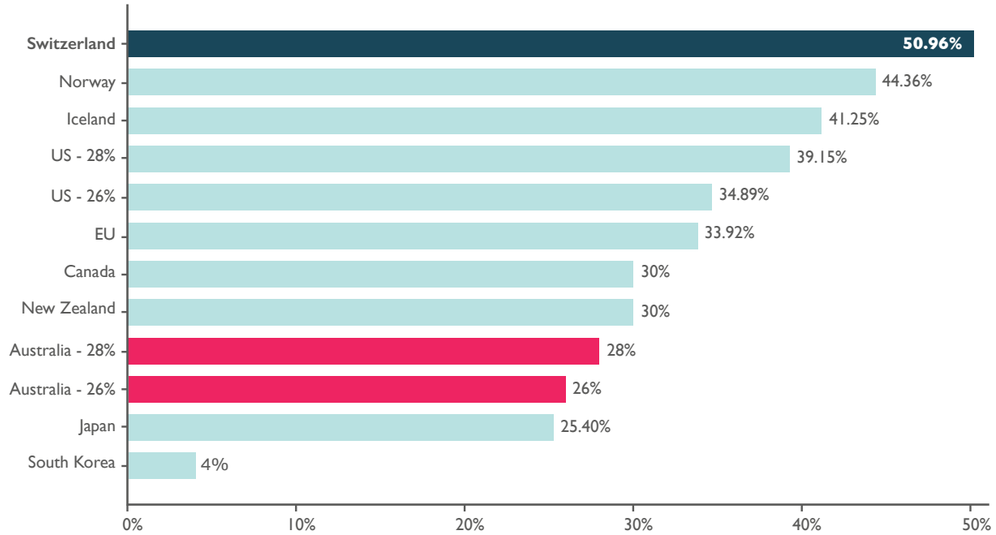
PROMISE

"This [Reef 2050] Plan will provide the best insurance for the Great Barrier Reef against climate change by reducing direct and indirect threats and therefore increasing its resilience."[16]

REALITY

In 2016 at least 22% of the Reef's corals were killed during the worst ever coral bleaching event to hit the Great Barrier Reef. Unless the Paris targets are met, climate change will cause more bleaching events.

Australia's Paris Agreement targets compared to other countries



2030 emissions reductions targets on 2005 levels. Source: *ABC Fact Check 2016*[24]

PROMISE

"Australia is committed to taking strong domestic and international action on climate change."[17]
Under the Paris Agreement on climate change Australia has committed to reduce our greenhouse emissions by:

- five percent below 2000 levels by 2020.[18]
- 26-28% below 2005 levels by 2030.[19]

REALITY

- Australia's climate targets are less than our fair share of the global effort needed to keep global warming below the dangerous threshold of 2 °C, or work towards the Paris Agreement limit of 1.5 degrees C
- Australia's greenhouse emissions are now 3 per cent above 2000 levels.[20]
- Expert analysis shows Australia's current policies will fall well short of meeting our promise under the Paris Agreement. Without major policy changes, Australia's emissions are set to increase to more than 21% above 2005 levels by 2030.[21]
- In 2017 construction is due to begin on a massive new coal mine in Queensland's Galilee Basin, with the coal to be shipped out across the Great Barrier Reef.

15. Climate Action Tracker assessment, Nov 2016 16. Reef 2050 Plan p.22 17. Department of Environment and Energy, Australia and the Paris Agreement https://www.environment.gov.au/climate-change/international/paris-agreement 18. Reef 2050 Plan p.22 19. Department of Environment and Energy, Australia and the Paris Agreement https://www.environment.gov.au/climate-change/international/paris-agreement 20. Reputex (2016) Media Release: Australian greenhouse gas emissions rise to 3% above 2000 levels analysis of 2015 http://www.reputex.com/media-releases/testing-media-release/
21. Climate Action Tracker assessment, Nov 2016 24. ABC Fact Check March 2016 How do Australia's carbon emissions targets compare? http://www.abc.net.au/news/2015-12-01/australias-carbon-emissions-targets-compare-paris-2015/6938844

© The Ocean Agency

Before (March - left) and after (May - right) images of bleached coral, Lizard Island, Great Barrier Reef, Queensland. In March 2016 WWF in conjunction with XL Catlin Seaview Survey photographed coral bleaching along the Lizard Island reef. A few months later, in May, the group returned to film the coral and document its progress. They found the dead coral skeletons were covered in turf-algae and the soft coral was decomposing and detaching from the reef structure.

CORAL BLEACHING DEATH TOLL

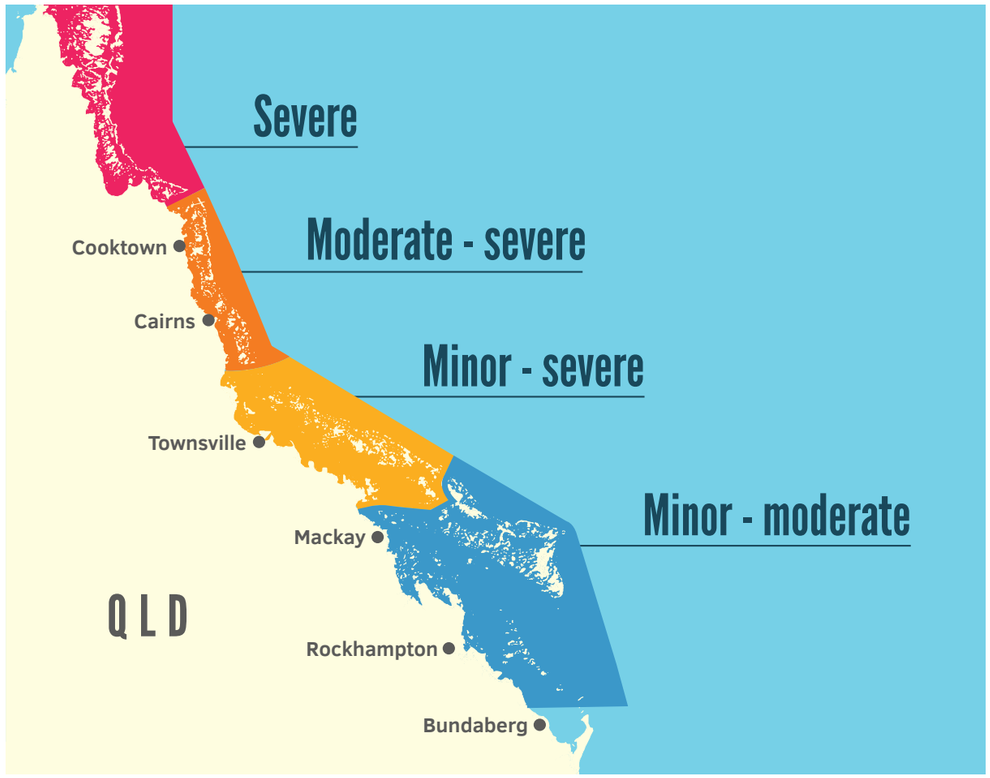
The coral bleaching event that hit the Great Barrier Reef in early 2016 was the worst we've ever seen.[22] Climate scientists and GBRMPA have confirmed that the unprecedented underwater heatwave that caused the bleaching was triggered by record-breaking sea surface temperatures caused by climate change and amplified by a strong El Niño weather season.[23] The worst bleaching was in the far north, with the southern Reef less seriously affected.

Region	Average coral death, June 2016
Far North (Cape York)	50% of corals dead
Cooktown to Cairns	16% of corals dead
Townsville to Whitsundays	3% of corals dead
Mackay to Yeppoon	0% of corals dead
Overall mortality	22% of corals dead

Note: this death toll is expected to rise once the results of final mortality surveys in Oct-Nov 2016 are available. Source: *Great Barrier Reef Marine Park Authority*

22. GBRMPA Interim Bleaching Report 2016 p.iv 23. GBRMPA Interim Bleaching Report 2016 p.iv

Observed bleaching as at 13 June 2016



Source: *Australian Government, Great Barrier Reef Marine Park Authority - Bleaching Status June 2016*

GBR Legacy's video of John Rumney diving the Monolith – an ancient coral killed by bleaching

Source: *www.youtube.com/watch?v=jf1h7_dibuM*

TREE-CLEARING CRISIS CONTINUES

Australia is failing to meet its promise to control tree-clearing in Reef catchments, a major source of sediment pollution.

Native bushland is vital for the health of the Reef because trees and other vegetation hold riverbanks together, prevent erosion and stop sediment from being flushed down-river onto the Reef.[25] Bulldozing trees disturbs soils and increases run-off, leading to spikes of soil erosion.[26] Eroded soil washes downstream where it smothers and kills seagrass beds and corals.

In 2013 the previous state government weakened the laws that controlled tree-clearing in Queensland, and since then the bulldozing of native bushland has skyrocketed. Latest government figures show that 108,000 hectares of bushland was cleared in Great Barrier Reef catchments in 2014-15, an increase of 46 per cent since 2011-2012.[27]

The Reef 2050 Plan includes a promise to strengthen laws to protect bushland in Reef catchments, and ensure there is no net loss of wetlands and riverside vegetation.[28] This was one of the key pledges that convinced the World Heritage Committee not to place the Reef on the 'in-danger' list in 2015.

Earlier this year the Queensland Government introduced draft laws to State Parliament that would have gone a long way toward implementing the promise to control tree-clearing. However the hung parliament voted down the changes – so Queensland's tree-clearing crisis continues unabated and the promise by the Queensland Government to strengthen laws to protect bushland in Reef catchments has failed.

As well as controls at a state level, the Australian Government can use the national environmental law to control large-scale tree-clearing in Reef catchments. However, with two exceptions (out of at least 200 instances), the federal government is failing to use national environmental law to help fulfil this vital promise to the international community.

THE AUSTRALIAN GOVERNMENT IS FAILING TO USE NATIONAL ENVIRONMENTAL LAWS TO PROTECT AND CONSERVE NATIONALLY THREATENED PLANTS, ANIMALS AND ECOSYSTEMS AND OTHER MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Under national environment laws, any activity that could have a significant impact on a nationally threatened plant, animal or vegetation community must be referred to the federal environment department for assessment and approval. At least that's how the system is supposed to work!

In reality, WWF has uncovered hundreds of examples where bushland mapped as habitat for nationally protected species has been bulldozed without seeking an approval from the federal government. WWF's analysis of the latest government data shows:[29]

- Number of properties with more than 100 hectares of recent or planned bulldozing of nationally protected habitat: **213**
- Area of nationally protected habitat that has been, or will be bulldozed on these properties: **156,000** hectares (that's equivalent to 185,000 football fields)
- Number of these properties that have applied for a federal environment approval: **0**
- Number of stop work orders or voluntary suspensions issued by the federal government: **2**
- Number of prosecutions: **0**

25. Concerned group of senior Queensland environmental scientists (2016) Submission to Qld Parliament VMOLA Bill Inquiry https://www.parliament.qld.gov.au/documents/committees/AEC/2016/11-VegetationMangt/submissions/504.pdf 26. Thornton et al. (2007) The Brigalow Catchment Study: II. Clearing brigalow (Acacia harpophylla) for cropping or pasture increases runoff. Soil Research 45, 496–511. Cited in WWF Submission to VMROLA 27. Qld Govt (2016) Land cover change in Queensland 2014–15, p.27 28. Reef 2050 Plan Action EHA20 and Target EHT3
29. WWF Analysis based on government data – methodology available on request. A map of these properties, including those outside of Reef catchments, is available online https://fusiontables.google.com/DataSource?docid=1Z1eCiFzpof9UwuokJ8T558yvqUlfKBjGTdyTCRh#map:id=3

PROMISE

Strengthen Queensland laws to control tree-clearing in Reef catchments.[30]

REALITY

This promise has not been met. Queensland's tree-clearing crisis continues, with 108,000 hectares of bushland lost in Reef catchments alone in 2014-15. Queensland Parliament blocked a government bill to strengthen tree-clearing controls, and other existing state and federal laws are not being used to control tree-clearing.

© Barry Traill

Queensland's tree-clearing crisis continues. Here a poplar box tree is culled in Augathella.

PROMISE

No net loss of wetlands and riverside vegetation in Reef catchments.[31]

REALITY

Latest government figures show that in 2014-15 almost 15,000 hectares of riverside vegetation was bulldozed in Reef catchments, that's over 1,300 kilometres of riverbank left vulnerable to soil erosion.[32]

"The government has committed hundreds of millions of dollars to improve Reef water quality. Yet ongoing land clearing in Reef catchments will reverse many of the gains these programs aim to achieve."[33]

Group of concerned senior environmental scientists, 2016.[34]

30. Reef 2050 Plan Action EHA20 31. Reef 2050 Plan Target EHT3 32. WWF Analysis based on government data – methodology available on request 33. Maron et al (2016) Queensland land clearing is undermining Australia's environmental progress, The Conversation http://theconversation.com/queensland-land-clearing-is-undermining-australias-environmental-progress-54882 34. Concerned group of senior Queensland environmental scientists (2016) Submission to Qld Parliament VMOLA Bill Inquiry https://www.parliament.qld.gov.au/documents/committees/AEC/2016/11-VegetationMangt/submissions/504.pdf

POLLUTION IS SMOTHERING THE REEF

In the Reef 2050 Plan, Australia promised bold new targets to cut farm pollution and give the Reef the clean water it needs to survive. However, we're a long way behind our 2018 pollution reduction targets, and will urgently need to raise our game in order to meet the targets for 2025. The good news is we still have time to turn things around but we have to act fast.

The Great Barrier Reef needs clean water to survive, but for decades sediment and fertiliser run-off from farms along the coast has been polluting the Reef's waters.

Farm pollution is one of the major drivers of the Reef's decline – it smothers and blocks sunlight from corals and seagrass, it drives outbreaks of the coral-eating crown-of-thorn starfish, and it makes it harder for coral to recover from impacts like coral bleaching.

As part of the Reef 2050 Plan, the Australian and Queensland governments committed to science-based targets to reduce farm pollution and give the Reef the clean water it needs to recover by 2025.

An expert advisory group, the Great Barrier Reef Water Science Taskforce, was established by the Queensland Government to identify the most effective actions and investments to achieve the Reef 2025 water pollution targets.

After months of work, the 22 scientists and experts on the Taskforce released their final report in May this year. They welcomed the efforts so far by farmers and land managers to reduce water pollution, but concluded that "the resulting changes have not been rapid or widespread enough to improve or even maintain water quality on the Reef".[35] They said "transformational change is needed over the next 5-10 years if the targets have any chance of being achieved".[36]

The Water Science Taskforce also came up with a comprehensive set of actions that are needed to fix the problem, and which urgently need to be actioned, including:

- strengthening regulations to limit pollution;
- increased funding for catchment repair and improved farming practices;
- an education program for farmers to get widespread adoption of profitable pollution-cutting practices.

Australia is well behind in meeting its 2018 pollution targets, and unless there is a rapid scaling-up, we are highly unlikely to meet a key promise to the world community. The latest government Reef Report Card showed only moderate progress has been made on pesticide and sediment reduction; for nitrogen fertiliser pollution the assessment is very poor. This means that currently we are also way off track to achieve the more challenging 2025 targets.

Whilst some farmers are moving to best practice we need laws to ensure everyone plays their part to cut pollution. There are insufficient levels of compliance with current regulations, and the current legal standards are too low to achieve necessary pollution reductions. We need to rapidly implement the Reef Taskforce recommendations including: new regulations to limit pollution; proper enforcement; and a major new investment package, so we can clean up Reef waters and help save this global treasure.

So far the Queensland Government has endorsed the solutions put forward by the expert Taskforce but implementation is in its early stages and needs to be sped up. Cooperation by both levels of government is essential to implement the Taskforce recommendations, and meet Australia's promise to the World Heritage Committee to deliver clean water for the Reef.

35. Qld DEHP (2016) GBR Water Science Taskforce Final Report p.23 36. Qld DEHP (2016) GBR Water Science Taskforce Final Report

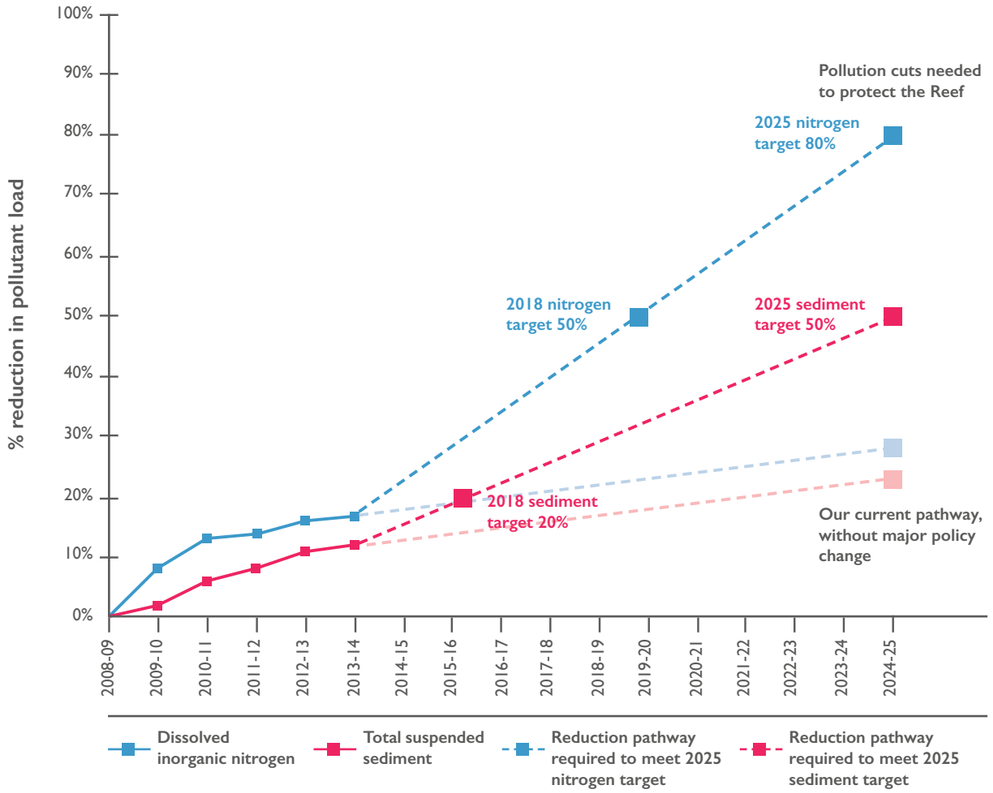
© Lee Middleton

Karen Middleton (nee Holst) viewing coral on what was locally known as "Coral Gardens" early 1950's located opposite the old Sugar Wharf in Dickson Inlet, Port Douglas.

Coral rubble, silt and algae inshore off Port Douglas, 2016.

Sugar-wharf building location

Nitrogen and Sediment load reductions required to meet 2025 targets



This graph from the Final Report of the GBR Water Science Taskforce shows that improvements are occurring but that rapid scaling-up is urgently needed in order to meet either the 2018 or 2025 water quality improvement targets.[37]

PROMISE

- By 2018 cut farm pollution from nitrogen fertilisers by at least 50% and from sediment by 20% in priority catchments
- By 2025 cut farm pollution from nitrogen fertilisers by up to 80% and from sediment by up to 50% in priority catchments[38]

REALITY

Water pollution is still high and it's damaging the Reef. Annual Reef Report Cards show that currently not enough is being done to cut farm pollution. However, if we rapidly implement the Reef Taskforce Recommendations and urgently ramp up actions we can achieve the transformational change needed to give the Reef clean water.

Australia's promise: 2018 targets	Reef Report Card Results for 2015
50% reduction in fertiliser pollution	Very Poor 'E' – 18%
20% reduction in sediment pollution	Moderate 'C' – 12%
90% of sugarcane lands managed to best practice standard	Poor 'D' – 23%
90% of cattle grazing land managed to best practice standard	Poor 'D' – 36%

37. Adapted from Qld DEHP (2016) GBR Water Science Taskforce Final Report 38. Reef 2050 Plan Target WQT1

PROMISE

In the Reef 2050 Plan the Queensland Government promised to ensure agricultural businesses would have an accredited best management practice (BMP) program in place or operate under a regulated management plan for pollution[39]

REALITY

Although farmers are starting to get involved in best management practice programs, not nearly enough have accredited BMP plans in place:

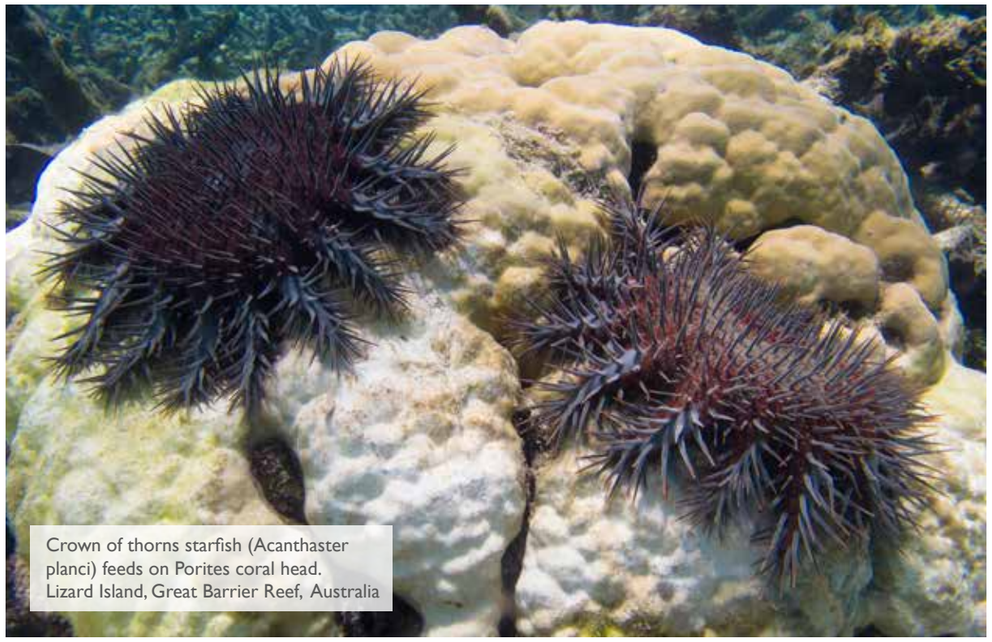
- There are 836 sugarcane farmers engaged in BMP programs (out of over 3700 properties) including 86 farmers with an accredited BMP[40]
- There are 402 graziers engaged in BMP programs (out of over 8500 properties) including 27 graziers with an accredited BMP[41]

Recently the Queensland Government recommenced enforcement of pollution regulations but there are no regulated farm management plans, and compliance with regulated standards is low.

"If we carry on as we are with poor water quality, we are stuffed with a capital S" *Prof Geoff Garrett, Queensland's Chief Scientist*[42]

THE STARFISH THAT EAT THE REEF

Right now, there are millions of crown of thorns starfish eating their way through the Reef. One adult starfish can eat a dinner plate-sized patch of coral every day. Crown of thorns starfish are a natural part of the marine ecosystem, but when too much nitrogen runs off farms it leads to algal blooms in Reef waters, which juvenile starfish feed on, allowing them to survive in unnatural numbers and eat vast areas of coral. Outbreaks of these destructive pests are a major reason we lost half the Reef's coral cover in just 27 years.[43] To prevent starfish plagues, we have to clean up farm pollution.



Crown of thorns starfish (Acanthaster planci) feeds on Porites coral head. Lizard Island, Great Barrier Reef, Australia

© Lisa Bostrom Einarsson / WWF-Aus

39. Reef 2050 Plan Action WQA 3 40 GBR Water Science Taskforce Report May 2016 and Reef Report Card 2015 41. GBR Water Science Taskforce Report May 2016 and Reef Report Card 2015 42. Sydney Morning Herald 25 May 2016, http://www.smh.com.au/environment/great-barrier-reef-stuffed-with-a-capital-s-if-we-dont-act-chief-scientist-20160525-gp3f63.html 43. De'ath et al (2012) The 27–year decline of coral cover on the Great Barrier Reef and its causes, PNAS journal http://www.pnas.org/content/109/44/17995.full

MASSIVE FUNDING SHORTFALL PUTS REEF IN PERIL

The Great Barrier Reef is an irreplaceable natural treasure, and it's also vital for our economy. So far Australia has not committed anywhere near enough funds to meet our promise to the World Heritage Committee to protect the Reef for future generations.

PROMISE

"The Australian and Queensland governments will ensure sufficient financial and other resources are available to achieve the [Reef 2050] Plan's outcomes"[44]

REALITY

A government study shows there is a funding gap of at least $6 billion between what the Australian and Queensland governments have committed so far, and what's needed to save the Reef over the next ten years.[45]

The Reef generates $6 billion a year for the Australian economy and supports 70,000 jobs.[46] Despite this, governments have been reluctant to commit the real funds required to solve the problems that threaten our Great Barrier Reef.

The decision adopted by the World Heritage Committee in 2015 welcomed Australia's promise to fully fund the Reef 2050 Plan, saying "the proposed investment framework should be established as a matter of priority and should provide a convincing demonstration that the necessary investment to achieve the plan is being made and will be sustained".[47]

Since then, a new study commissioned by the Queensland Government has quantified how much it's likely to cost to reverse the problem of water pollution degrading the Reef. The report 'Costs of achieving the water quality targets for the Great Barrier Reef' found that meeting the 2025 clean water targets would cost more than $8 billion over ten years. That sounds like a huge sum, but the Reef is worth it.

As well as being an irreplaceable natural treasure, loved by all Australians, the Reef is likely to generate over $60 billion in fishing, tourism and other direct economic benefits over the next ten years. In these circumstances, the $800 million a year needed to protect the Reef is a sensible investment. However, current funding for water quality programs is only about $1 billion over 10 years.[49] Without a major increase in investment there will clearly be a significant shortfall in the funds necessary to deliver the promises Australia committed to in the Reef 2050 Plan.

The good news is, by making a down-payment now, and implementing the most cost-effective actions straight away, we can go a long way towards reaching our clean water targets over the next few years. For example, the main driver of crown-of-thorns starfish outbreaks is nitrogen pollution from fertiliser. The costing study calculates that with an investment of around $400 million, Australia could come close to meeting its promise to cut nitrogen pollution by up to 80%. That's good for the Reef and good for the tourism industry. Sediment pollution smothers seagrass and corals, but the report estimates that we could get half way to meeting the promised cuts in sediment pollution for around $530 million.

We can afford to save the Reef, and we must, for the sake of future generations and a sustainable economy. Australian governments must commit to fully fund the actions needed to fulfil the promises made in the Reef 2050 Plan, and make an immediate down-payment to get moving on the cost-effective actions recommended by experts as priorities for the next few years. This is the least they should do to secure the future of the Great Barrier Reef.

44. Reef 2050 Plan p.58 45. Alluvium (2016) Costs of achieving water quality targets for the GBR 46. Deloitte Access Economics (2013) Economic Contribution of the GBR, published by GBRMPA, Townsville 47. World Heritage Committee Decision : 39 COM 7B.7 48. Alluvium (2016) Costs of achieving water quality targets for the GBR. NOTE: This figure only includes achieving only around 75% of the targets in the high-priority Wet Tropics region so more investment will likely be needed. 49. GBR Water Science Taskforce Report May 2016

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Great Barrier Reef - June 2006 snorkelling at the Great Barrier Reef amongst the marine life and coral.

IS THE GOVERNMENT'S $1 BILLION REEF FUND JUST SMOKE AND MIRRORS?

During the recent federal election, the Australian Government announced a new $1 billion over 10 years Reef Fund[50] to provide loans to deliver clean energy, reduce emissions and improve water quality in Great Barrier Reef catchments. However, the money was already assigned to support clean energy projects and by requiring this money to be spent in Reef catchments the carbon reduction benefits will be no greater, at best. Investment in water quality is only optional and the amount of money that will go to water quality as well as the quantum of pollution reductions is unclear. As the money is a concessional loan, not a grant, the overall economic incentive provided to farmers to take actions to reduce pollution is likely small. This raises grave doubts about whether the fund will be effective in reducing Reef pollution.

50. The Coalition Policy Invest in Our Great Barrier Reef released 13 June 2016 https://www.liberal.org.au/coalitions-policy-invest-our-great-barrier-reef

BAN ON SEA-DUMPING A WELCOME WIN FOR THE REEF ... BUT FIGHT CONTINUES

Thanks to pressure from the world community, Australia has lived up to its promise to ban sea-dumping of industrial dredge spoil in the Reef World Heritage Area and limit port development. However, the fight continues to reduce risks to the Reef from millions of tonnes of dredging, increased ship traffic, and port expansions.

PROMISE

Ban sea-dumping of industrial dredge spoil within the Great Barrier Reef World Heritage Area[51]

REALITY

The Australian and Queensland governments worked together to impose an immediate ban on sea-dumping of dredge spoil from port developments across the whole World Heritage Area. Sea-dumping from other dredging operations is exempt.[52]

PROMISE

Protect greenfield areas by restricting new port development within and adjoining the World Heritage Area[53]

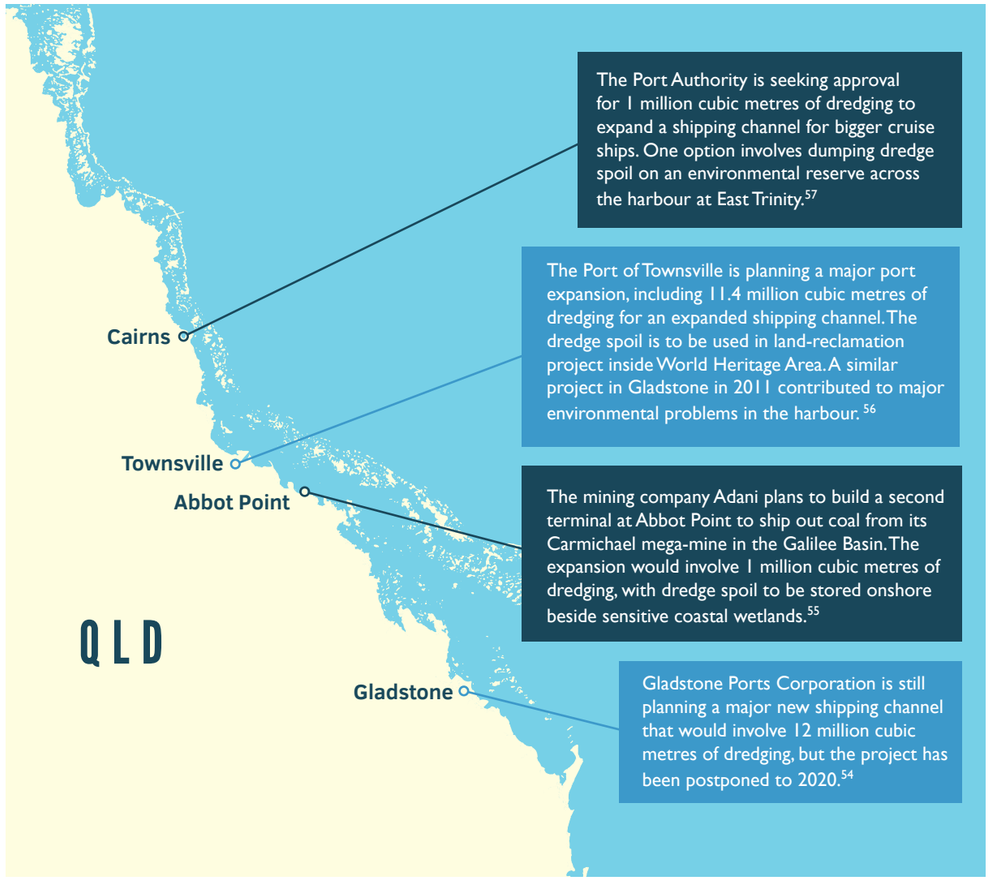
REALITY

Unspoiled parts of the Reef coast like the Fitzroy River Delta and Cape York are now protected from major port developments, but there are still plans to expand a number of existing ports on the Reef coast, including millions of tonnes of dredging.

Abbot Point, Queensland - 16 September 2014

51. Reef 2050 Plan Action WQA18 52. Queensland Sustainable Ports Development Bill (2015) 53. Reef 2050 Plan Action WQA14

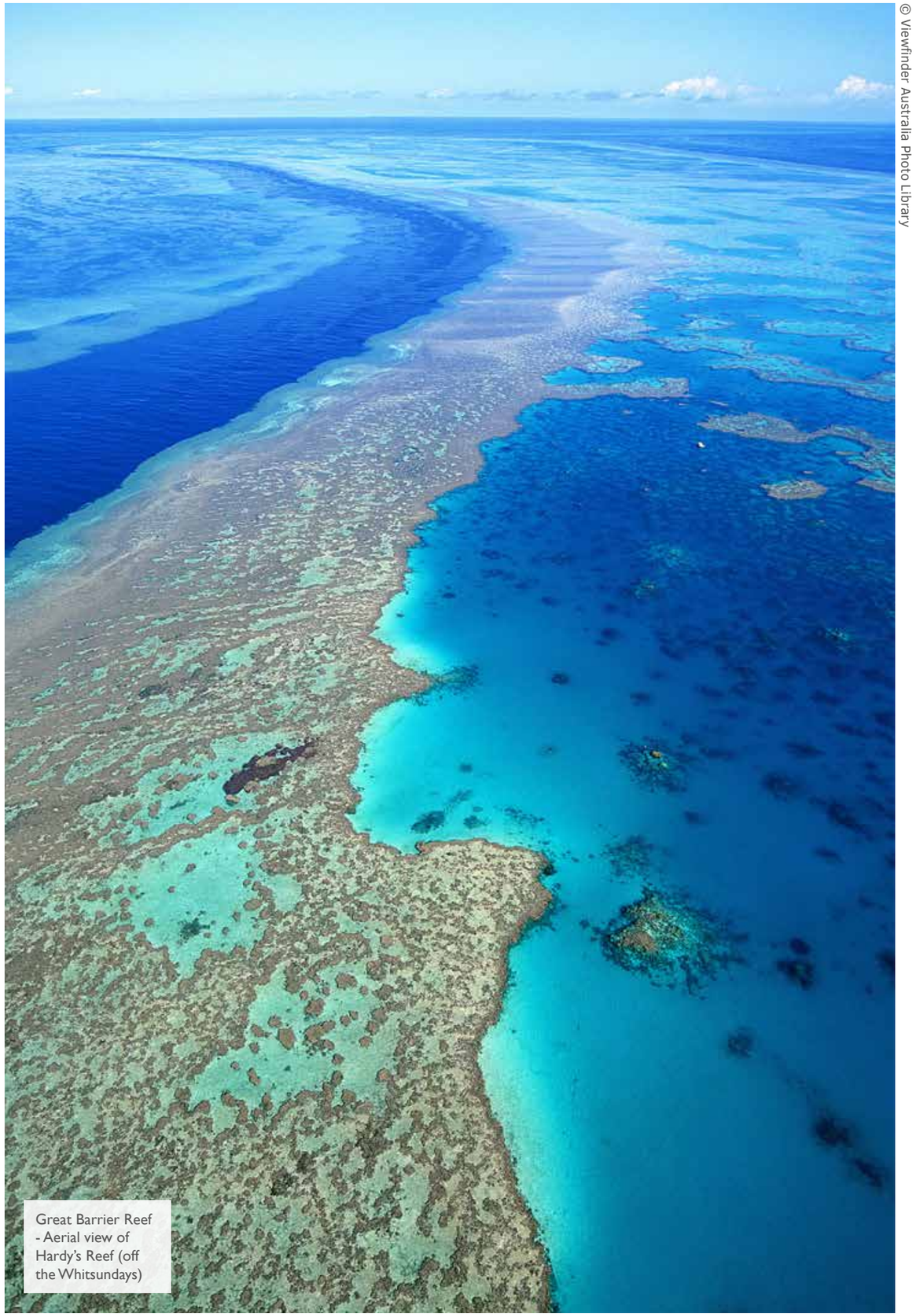
Expanding ports along the Reef coast



MAINTENANCE DREDGING

Did you know? On average around 1 million cubic metres of dredge spoil from 'maintenance' operations is still dumped in Reef waters every year.[58] Shipping channels gradually fill up with silt, and need regular maintenance dredging to keep them open. For example, in Cleveland Bay offshore of Townsville around 400,000 cubic metres of maintenance dredging occurs every year. Although maintenance dredging is necessary, sea-dumping of dredge spoil from maintenance operations should be phased out in the World Heritage Area. Dredge spoil can and does spread for tens of kilometres and smothers seagrass and corals.

54. Gladstone Ports Corporation Channel Duplication Project EIS http://www.gpcl.com.au/development/channel-duplication-project 55. North Queensland Bulk Ports, Abbot Point Terminal Zero and Growth Gateway projects http://www.nqbp.com.au/abbot-point/ 56. Townsville Port Expansion Project Supplementary EIS 2016 http://statedevelopment.qld.gov.au/assessments-and-approvals/townsville-port-expansion.html 57. Cairns Shipping Development Project Supplementary EIS 2016 http://statedevelopment.qld.gov.au/assessments-and-approvals/cairns-shipping-development-project.html 58. Based on figures for actual sea-disposal of dredge spoil 2000-2013, from GBRMPA (2014) Dredge Synthesis Report Appendix B http://hdl.handle.net/11017/2935



Great Barrier Reef - Aerial view of Hardy's Reef (off the Whitsundays)

THE SOLUTIONS ARE WITHIN OUR REACH...

Urgent action is needed from the Australian and Queensland governments to:

1. Control tree-clearing in Reef catchments
2. Stop farm pollution harming the Reef
3. Commit to fully fund the Reef 2050 Plan, and make a down-payment right now
4. Deliver a rapid shift to renewable energy and away from fossil fuels
5. Create a strong new champion for the Reef

1. CONTROL TREE-CLEARING IN REEF CATCHMENTS

There are many things the state and federal governments could do right now to protect native bushland in Reef catchments, and across Queensland. For example:

The Queensland Government should:

- create 'declared areas' along Reef watercourses, to ban clearing of riverside vegetation where it poses a high risk to the Reef
- tighten the 'self-assessable' codes that now regulate most tree-clearing activities
- update official vegetation maps to reflect the latest science, to make sure all known threatened species habitat is protected

The Australian Government should:

- enforce existing laws that require landholders to get a federal environmental approval before clearing bushland that could contain nationally threatened plants or animals and other matters of national environmental significance
- publicly and politically support the Queensland Government's proposed legislation to control tree-clearing.

2. STOP FARM POLLUTION HARMING THE REEF

We know that precision farm practices can cut pollution whilst boosting profits. With the right mix of regulations and incentives, widespread uptake of these Reef safe practices can help give the Reef the clean water it needs to rebuild its coral gardens. Successive governments have set pollution reduction targets and invested in programs to help farmers adopt cleaner, more efficient practices.

However, as the Reef Taskforce Report found, current programs and investments, while making progress, fall far short of targets and unless there is rapid scaling up, pollution reduction targets are unlikely to be achieved.

To deliver clean water for the Reef, the full package of reforms recommended by the Reef Water Science Taskforce must be adopted by the Queensland and Australian governments, and rapidly implemented. These include:

- A legislated limit on pollution loads entering the Reef which reduces until clean water targets are met.
- Minimum standards for all industries which improve over time to meet clean water targets.
- No increases in pollution from new development.
- A broadscale communications program to assist all farm businesses to implement the latest profitable pollution cutting practices.
- Catchment restoration to repair degraded pollution hot spots.

Meeting the 2025 clean water targets is critical if we are to avoid the next crown-of-thorns starfish outbreak, and give the Reef the best chance of recovery from coral bleaching. A legal cap on pollution entering the Reef is the only mechanism that can provide certainty that the targets will be met.

The Australian and Queensland governments can support agricultural enterprises to meet this challenge by providing a major investment package to assist farmers to adopt profitable, low-polluting practices, and repair the landscape, as described below.

3. COMMIT TO FULLY FUND THE REEF 2050 PLAN, AND MAKE A DOWN-PAYMENT RIGHT NOW

A long-term, multi-billion dollar investment package is needed to support agricultural enterprises to adopt precision farm practices that can cut pollution whilst boosting profits. The investment package must also fund much needed catchment repair, such as restoring wetlands and riparian forests, and rehabilitating streambanks and gullies to halt soil erosion and filter out pollutants before they reach the Reef.

The Queensland Government's costings report has estimated that it will cost over $8 billion to achieve the clean water targets by 2025 or $800 million a year. Governments need to fully deliver the investment needed to achieve Reef 2050 targets. Initially the most cost-effective actions should be funded to drive rapid progress with $800 million a year over five years

STEP 1 - Commit to an Investment Strategy that will fully fund all the actions promised in the Reef 2050 Plan and specifies the budget that each government will allocate each year.

STEP 2 - Immediately commit the funds needed over the next 5 years to implement the most cost- effective actions to clean up water pollution. The new Reef Water Quality Protection Plan for 2017-2021 should set out the annual actions and investment to deliver specified pollution reduction targets including:

- The actions and investment needed to deliver the full nitrogen reduction target of up to 80% (estimated to be around $400 million) as this is the most cost effective area to cut Reef pollution
- The actions and investment needed to deliver 75% of the 2025 target to halve sediment pollution (estimated to be $3.6 billion) by 2021
- Innovations programs to prove up more cost-effective actions to fully achieve the 2025 clean water targets by the due date.

4. DELIVER A RAPID SHIFT TO RENEWABLE ENERGY AND AWAY FROM FOSSIL FUELS

The devastating coral bleaching event that hit the Reef earlier this year shows how urgent it is for all countries to limit global warming to 1.5 C or less. As guardians of the Great Barrier Reef, Australia should lead the way by doing its fair share.

- Commit to a target of 100% renewable electricity by 2035.
- Commit to targets of at least 50% of total renewable energy (electricity, transport, and industrial process) by 2030 and 100% before 2050.
- Implement policies to support the rapid growth of renewable energy
- Phase out fossil fuel subsidies
- Rule out any new thermal coal mines or coal mine expansions
- Transition out coal-fired power plants before 2035

5. A STRONG NEW CHAMPION FOR THE REEF

The problems facing the Great Barrier Reef have outgrown the capacity of the institutions and systems put in place to protect it a generation ago.

There is often a disconnect between the long-term and stable policies required to conserve and recover the Reef and federal and state electoral cycles. That's why the Reef needs a strong, independent watchdog that can ensure the Reef's interests are represented and defended when important decisions are made and developments proposed.

A stronger, better resourced and more independent Great Barrier Reef Marine Park Authority (GBRMPA) is needed, that places conservation and recovery of the Reef above all other priorities and strengthens the way Australia manages this World Heritage icon.

To meet the many challenges facing the Reef, GBRMPA should have the following roles, powers and resources:

1. Independence: Governed by an independent chair and an expertise based board of international stature

2. Strong: Ensure GBRMPA has approval powers for all developments and activities that are likely to have a significant impact on World Heritage values of the Great Barrier Reef Region

3. Leadership: As the government champion for the Great Barrier Reef, GBRMPA should be given responsibility to lead implementation of the Reef 2050 Plan and investment strategy.

4. Smarter government investment: increase GBRMPA's budget by approx. $20 million per year.

5. On-ground: increase resourcing and effectiveness of GBRMPA's field management and compliance programs to stop the current high rate of breaches of marine park rules.

6. Innovative: Establish a Great Barrier Reef research strategy to deliver the critical research required to underpin effective management of the Great Barrier Reef and coastal ecosystems.

7. Transparent and accountable: Enhance the independence and credibility of the 2019 Great Barrier Reef Outlook Report given its crucial role for deliberations by the World Heritage Committee in 2019/2020.

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A child at an Earth Hour event in Sydney, 2014. People around the world are calling for faster action on climate change, to save natural treasures like the Great Barrier Reef.

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