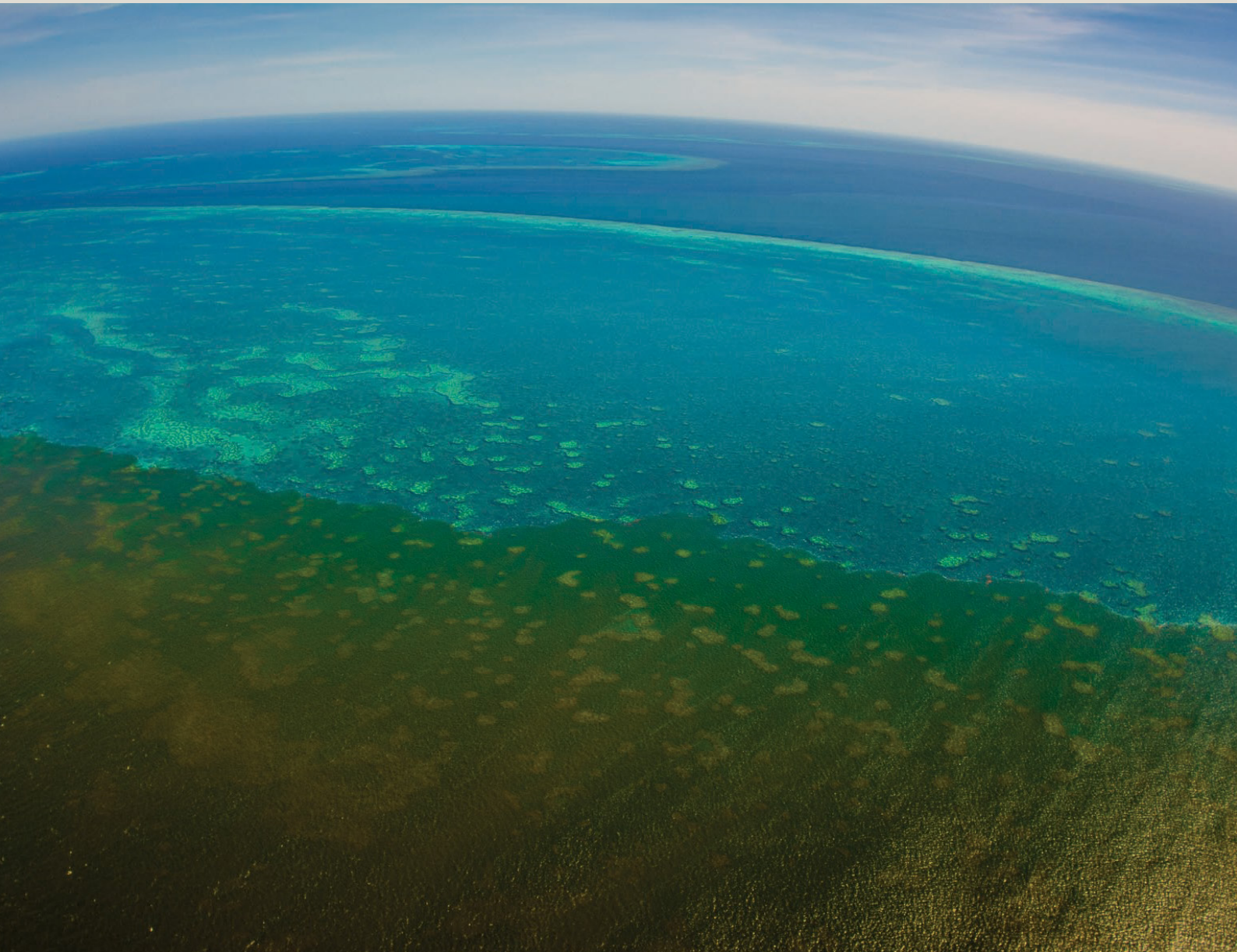
TREE CLEARING AND SEDIMENT POLLUTION IN GREAT BARRIER REEF CATCHMENTS



This summary report by the Australian Marine Conservation Society (AMCS) synthesises a technical report *Tree Clearing and Sediment Pollution in the Great Barrier Reef Catchments, 2018–2022 (2nd Edition)* authored by Martin Taylor (NatureAnalytics, University of Queensland) and Imogen Zethoven AO (Blue Ocean Consulting). The technical report contains detailed data, references, and recommendations.

Australian Marine Conservation Society (AMCS) is the voice for Australia's oceans. AMCS are Australia's leading national charity dedicated solely to protecting our precious ocean wildlife – a community of ocean lovers across the nation working for healthy seas.

Acknowledgement: The Australian Marine Conservation Society acknowledges the Sea Country management and custodianship of the Great Barrier Reef by Aboriginal and Torres Strait Islander Traditional Owners, whose rich cultures, heritage values, enduring connections and shared efforts protect the Reef for future generations. We pay our respects to their Elders, both past, present and emerging leaders. We acknowledge that the Great Barrier Reef was and always will be Aboriginal land and sea.

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By the numbers: Great Barrier Reef Catchment Tree Clearing Statistics (2018–2022)

- A total of 684,000 ha of bushland was cleared across the Reef catchments over the four years.
- 82% (559 858 ha) of clearing was legal (in exempt areas under Queensland's Vegetation Management Act 1999)
- A further 108,075 ha of regulated vegetation (remnant or regrowth) was also cleared.
- 88% of clearing was for livestock pasture expansion
- Around 67.5% of all clearing, (approximately 461,000 hectares), was bushland that really should have been protected under Queensland's laws. These were areas with trees more than 20 years old or with good, healthy forest cover, but they were still cleared because of a loophole exemption in the mapping system that let old property maps override current protections. In addition to this, 70,796 hectares of riparian vegetation along creeks and rivers was cleared - a major driver of sediment pollution.

EXECUTIVE SUMMARY

The Great Barrier Reef is the world's largest and most diverse reef ecosystem. The Reef's scientific, cultural and environmental values are world-renowned. However, the Reef is currently facing unprecedented challenges. Since 2016 the Reef has experienced six mass bleaching events, driven by rising ocean temperatures. Climate change impacts are compounded by local pressures, including tree clearing in adjacent catchments, which is a major source of sediment and nutrient runoff. Fine sediment increases water turbidity and can smother seagrasses and inshore corals, which provide critical habitat for threatened species such as turtles and dugongs.

This report summarises a technical analysis assessing the scale and distribution of deforestation in Great Barrier Reef catchments between 2018 and 2022, a period marked by efforts in Queensland to strengthen vegetation protections. While these years saw an average 19 percent drop in clearing, overall levels remained high, showing that state-based measures alone have not been effective in reducing deforestation pressure on the Reef. From 2018 to 2022, about 684,000 hectares were cleared across the Reef's catchments, with 88 percent of this clearing for livestock grazing. Most occurred in the Fitzroy and Burdekin regions, which together made up 82 percent of all clearing.

A key finding of this report is that much of the vegetation cleared during this period was legally allowed under Queensland law because of loopholes in the Vegetation Management Act. Of the 684,000 hectares cleared over the four years, 82 percent was exempt from the Act. These areas are classified as exempt because they had been cleared in the past and, in most cases, were "locked in" as permanently exempt. Clearing in these areas can occur automatically, regardless of whether the vegetation has regrown to maturity, has high conservation value, or is on land prone to erosion and sediment runoff. There are currently around three million hectares of vegetation in Great Barrier Reef catchments that remain unprotected under these exemptions.

Whilst the Commonwealth has jurisdiction over activities that impact the Reef and other World Heritage Areas, clearing within the Reef's catchments is currently allowed under an exception in national law. The Australian Government is expected to amend the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in the coming weeks. These reforms must remove the exemption that allows most land-clearing activities in Reef catchments to escape assessment, ensuring Australia meets its commitments to protect the Great Barrier Reef.

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Tree clearing and fine sediment pollution of the Great Barrier Reef

Tree clearing is recognised in the scientific literature as the main cause of soil erosion releasing fine sediment and nutrient pollution that enters the Great Barrier Reef. The fine sediment causes turbidity and can smother seagrasses and inshore corals, which provide habitat for threatened species such as turtles and dugongs.

A total of 684,000 ha of woody vegetation was cleared across the Reef catchments over the four years between 2018 – 2022. Nearly 82% (559 858 ha) of that clearing was exempt from *Queensland's Vegetation Management Act 1999* (VMA) — meaning clearing was allowed. In addition to this a further 108,075 ha of vegetation that was regulated under the VMA was also cleared despite legal restrictions. There is currently three million ha of vegetation exempt from protection in Great Barrier Reef catchments.

Livestock pasture expansion drove about 88% of all clearing during this period.

In just one year 2018-19, total annual clearing within the GBRC reached 212,993 ha.

Approximately 67.5% of all catchment clearing, around 461,000 hectares, was bushland that really should have been protected under Queensland legislation. These were areas with trees more than 20 years old or located along watercourses, which help to stabilise riverbanks, reducing erosion. They were still cleared because of a loophole exemption in the mapping system that let old property maps override current protections.

The Fitzroy and Burdekin regions made up 82% of all clearing. Burnett Mary contributed most of the remainder. Smaller coastal regions like the Wet Tropics and Mackay–Whitsunday saw relatively low clearing rates (<3% of total) but are ecologically sensitive.

Further analysis of the recently released 2022 - 2023 *Statewide Landcover and Trees Study* shows that land clearing across Queensland, including the Great Barrier Reef catchments increased from the previous year. Within the Reef catchments, about 147,700 hectares were cleared, a 5% rise on 2021–22, with roughly three-quarters of that involving the complete removal of vegetation.

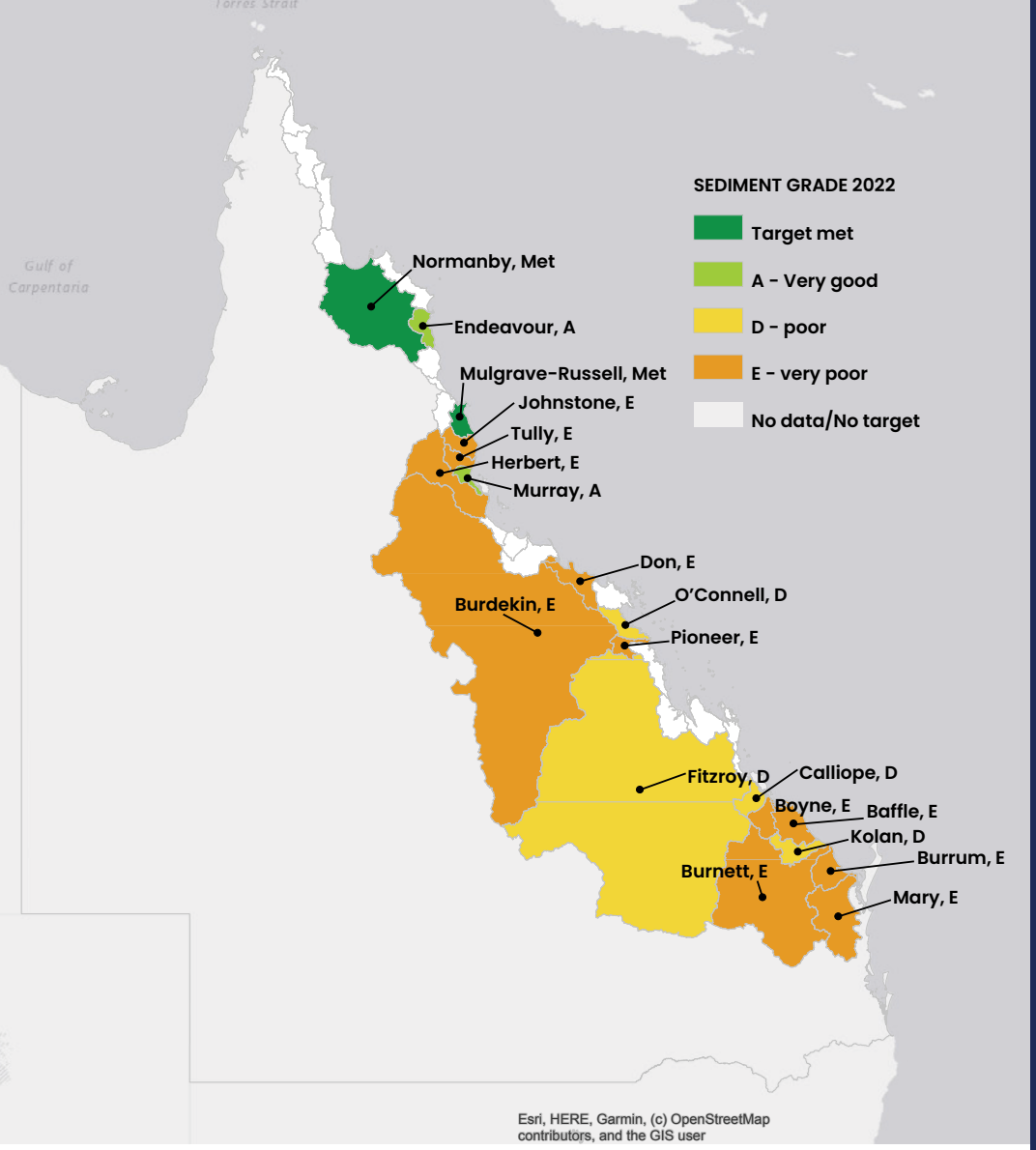

FIGURE 1

2022 Reef Water Quality Report Card grades for progress towards fine sediment pollution reduction targets. Note: Unlabelled catchments did not have data or the target is "Maintain current load".

Water quality implications

Acknowledging the impact that land use is having on the Reef, the Australian and Queensland Governments developed the *Reef 2050 Water Quality Improvement Plan 2017–2022*. The Plan sets water quality targets for each of the 35 river catchments.

It is abundantly clear that Australia will not meet the 2025 Reef water quality targets.

The latest Reef Water Quality Report Card 2021 and 2022 (published on 30 May 2024) details progress towards targets. For the fine sediment targets, the report finds that of all catchments for which a grade was given, only the Murray and Endeavour River catchments had good grades, the rest were graded as "Poor" or "Very Poor" (see figure 1).

World Heritage concerns about tree clearing in Reef catchments.

The Great Barrier Reef was inscribed on the UNESCO World Heritage list in 1981. Recognising the continued rate of clearing is driving sediment and nutrient runoff into the World Heritage area a joint UNESCO/IUCN Mission report In 2022 recommended that the Australian Government *"Prioritise the protection of remnant native vegetation across the GBR catchments through strengthened native vegetation clauses under existing laws."*

In September 2023, the 45th Session of the World Heritage Committee urged the Australian Government "to fully implement all the recommendations of the mission, including as a matter of utmost priority … d) *Prioritise the protection of remnant native vegetation across the GBR catchments".*

Then Minister for the Environment and Water, the Hon. Tanya Plibersek, had earlier made a series of commitments in a letter dated 25 May 2023 to the Director General of UNESCO. The key commitment made regarding tree clearing was: By July 2024: *expand the implementation of 2018 land clearing legislation and further strengthen protection to remnant and high value conservation areas, including, through an accelerated and enhanced compliance program to secure the protection of remnant native vegetation in areas of high conservation value in the Reef catchments."* However, The Australian Government's 1 February 2024 progress report to the World Heritage Committee did not identify any measures to strengthen *"native vegetation clauses under existing laws".*

In July 2024, the 46th Session of the World Heritage Committee noted *"with serious concern the remaining high rates of land clearing"* in the Great Barrier Reef Catchment. The Committee requested Australia to take urgent action to *"Strengthen clauses under existing laws to ensure that all remnant and high value regrowth areas are protected"*

In July 2025, the 47th Session of the World Heritage Committee again reiterated the need for Australia to *"Strengthen clauses under existing laws to ensure that all remnant and high value growth areas are protected, including category X vegetation (under the Queensland Vegetation Management Act), and other high priority areas including riparian zones, lands vulnerable to degradation and areas contributing to sediment and nitrogen pollution"*

Recommendations

The Australian and Queensland Governments should immediately implement the Great Barrier Reef decisions adopted by the World Heritage Committee.

The Australian Government is expected to amend the EPBC Act in the coming weeks. These reforms must remove the exemption that allows land-clearing activities in Reef catchments to continue largely unregulated.

The World Heritage Committee has repeatedly recommended that the Australian government introduce further regulatory powers to constrain tree clearing on the Great Barrier Reef's catchments – now is the moment.