CATASTROPHIC CORAL BLEACHING IN THE GREAT BARRIER REEF: A WORLD HERITAGE CRISIS

June 2016

To the Members of the World Heritage Committee:

We, environmental and scientific organisations, scientists, and lawyers, are writing to draw your attention to an unprecedented catastrophe unfolding right now on the Great Barrier Reef: **elevated sea temperatures have triggered the worst mass coral bleaching in recorded history.**[1] Bleaching weakens corals and destroys their natural beauty. If sea temperatures remain elevated, corals can die, threatening the entire reef ecosystem, including fish, invertebrates, and predators such as sea turtles, dolphins, and sharks.[2] Because of ocean warming, **35% of the corals in the northern and central Reef have died this year, with 50% mortality in the far northern section and 22% mortality across the entire Reef**.[3]

The current bleaching event is a World Heritage crisis that requires a new and urgent response from the World Heritage Committee.

The Great Barrier Reef, the world's largest coral reef, is a unique and irreplaceable part of Earth's natural heritage. One of the world's richest and most complex ecosystems, the Reef is home to innumerable species, including many found nowhere else on earth. As the World Heritage Committee has recognized, "No other World Heritage Property contains such biodiversity.... [The Great Barrier Reef] is of enormous scientific and intrinsic importance."[4]

TOP: Coral bleaching at Lizard Island, Great Barrier Reef, March 2016.
BOTTOM: Dead coral at Lizard Island, Great Barrier Reef, May 2016.
XL Catlin Seaview Survey.

Recent surveys by reef scientists reveal that **bleaching has now affected 93% of the thousands of individual reefs that comprise the Great Barrier Reef**.[5] The most severe bleaching is in the northern part of the Reef, where virtually all of the 900 reefs are bleached to some extent,[6] and over 80% are severely bleached.[7] Half or more of the corals in this region are likely to die,[8] with mortality possibly exceeding 90% on some reefs.[9] This is particularly devastating because their distance from other human pressures had kept them relatively healthy, unlike reefs in the central and southern regions that have long been under pressure from human activities.[10]

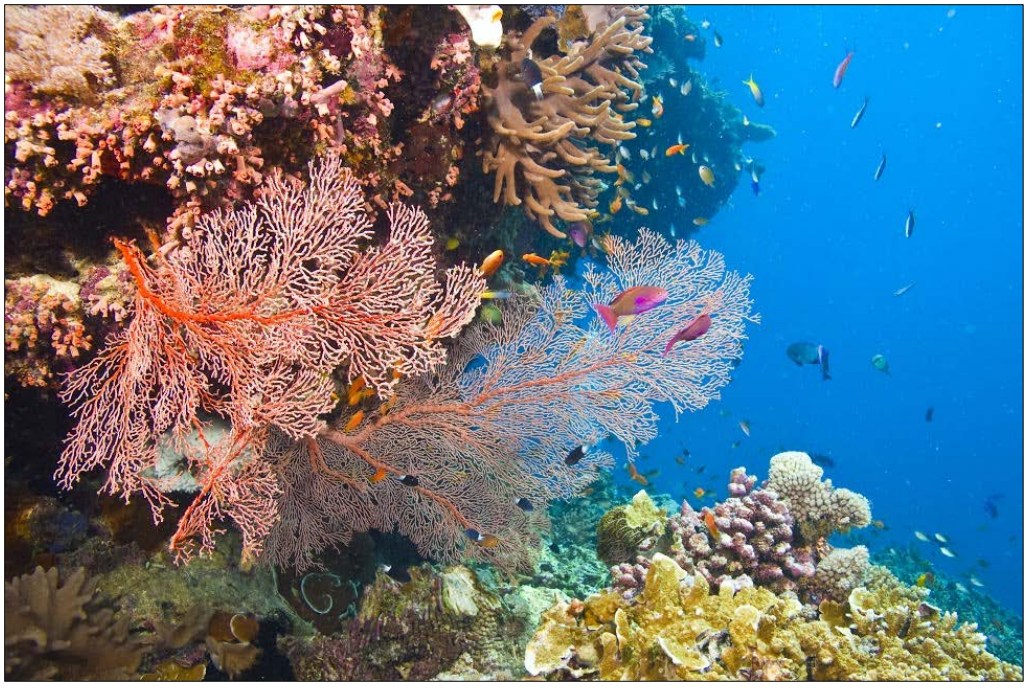
Scientists also tell us that the above-average sea temperatures that triggered the bleaching are made "dramatically" more likely by climate change – in fact, 175 times more likely.[11] As seas warm because of climate change, bleaching events are likely to become more frequent and more devastating.[12]

But climate change is not the only threat to the Reef. Decades of human activities such as coastal development and water pollution have weakened this natural wonder. **Over half the coral cover has disappeared in the last 40 years, populations of key species like dugongs and dolphins have decreased alarmingly, and important habitats like seagrass meadows have been significantly degraded.**[13]

Although scrutiny by the World Heritage Committee has encouraged Australia to take steps to protect the Reef, Australia's plans and actions have not been – and are not – adequate to increase the Reef's resilience to threats and prevent continuing deterioration. Despite acknowledging that, "[m]ore than ever, a focus on building resilience by reducing all threats is important in protecting the Region's ecosystem and its Outstanding Universal Value into the future,"[14] Australia has recently approved development projects that will exacerbate existing harm to the Reef.

"This has been the saddest research trip of my life. Almost without exception, every reef we flew across showed consistently high levels of bleaching."

– Professor Terry Hughes, on his 2016 flight over the once relatively pristine northern reaches of the Great Barrier Reef



Healthy coral on the Great Barrier Reef.
Debra James / Shutterstock.

Since the World Heritage Committee considered the threats to the Reef at its meeting in mid-2015, Australia has approved the expansion of the coal export port at Abbot Point within and adjacent to the World Heritage Area.[15] This project would require dredging 1.1 million cubic meters of previously undisturbed seagrass habitat within the World Heritage Area, and dumping the dredge spoil adjacent to nearby coastal wetlands.[16] Expanding the port will also increase the number of industrial ships traversing the Reef, increasing the likelihood of shipping accidents and spills.[17] Together, these activities will disturb the habitat of iconic species that contribute to the Reef's Outstanding Universal Value, including dolphins, dugongs, and sea turtles – all of which are already extremely vulnerable.[18]

To add insult to injury, the expansion of Abbot Point Port is intended to facilitate the export of coal from the massive Carmichael Coal Mine, which the Australian and Queensland governments have also recently approved.[19] The Carmichael mine will be one of the largest coal mines in the world.[20] It is estimated that the mining and burning of coal from this mine will generate 4.7 billion tons of greenhouse gas emissions over its proposed 60-year operation, among the highest emissions from a single project anywhere in the world.[21] Not only do greenhouse gas emissions contribute to climate change-related sea temperature rise, they also contribute to ocean acidification, which reduces the capacity of corals to build skeletons.[22] This has ecosystem-wide impacts, as it reduces the capacity of corals to create habitat for reef biodiversity.[23]

We are also concerned that UNESCO agreed to Australia's request to remove Australian sites from the report UNESCO published last month, *World Heritage and Tourism in a Changing Climate*.[24] Australia's action casts further doubt on its commitment to addressing threats to the Reef, and is inconsistent with this Committee's decision encouraging State Parties to "seriously consider the potential impacts of climate change within their management planning, … to take early action in response to these potential impacts … [and] to use the network of World Heritage properties to highlight the threats posed by climate change" to natural heritage.[25] UNESCO's capitulation to Australia's pressure is inconsistent with the same decision, which encouraged UNESCO to "do its utmost" to inform the public about the effects of climate change on World Heritage properties "in order to mobilize political support for activities against climate change and to safeguard in this way the livelihood of the poorest people of our planet."[26]

To protect the priceless and irreplaceable Great Barrier Reef World Heritage Area, we request that the World Heritage Committee, at its 40th session in July 2016:

1. **Express its deep concern about the coral bleaching that is occurring in the Great Barrier Reef World Heritage Area, and about the threat that climate change poses to the health and survival of the Great Barrier Reef ecosystem;**

2. **Call on Australia not to approve or support any development projects that will directly, indirectly, or cumulatively harm the Great Barrier Reef World Heritage Area;**

3. **Urge Australia to detail, in its December 2016 report, the *substantive, near-term* steps it is taking to immediately address the threat of climate change to the Great Barrier Reef World Heritage Area and to ensure that the Reef can adapt to the many stressors that threaten it, including whether it will invest the level of additional resources recommended by scientists as necessary to protect the Reef and build its resilience to the impacts of climate change[27];**

4. **Request Australia to invite a monitoring mission as soon as possible to review Australia's response to the coral bleaching crisis and the effectiveness, implementation, and funding of the Reef 2050 Long-Term Sustainability Plan, and to consider the state of conservation of the property as a whole; and**

5. **Call on financiers not to support or fund development projects that will directly, indirectly, or cumulatively harm the Great Barrier Reef World Heritage Area.**

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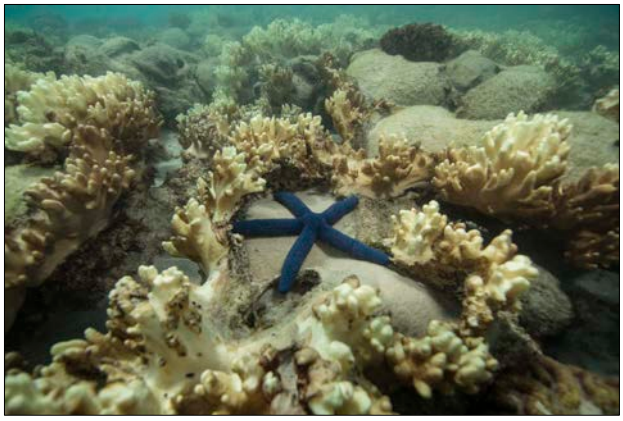
ATTACHMENT 1 – Images captured at Lizard Island on the Great Barrier Reef by the XL Catlin Seaview Survey (March and May, 2016)[28]



Sea star surrounded by decomposing coral, May 2016.

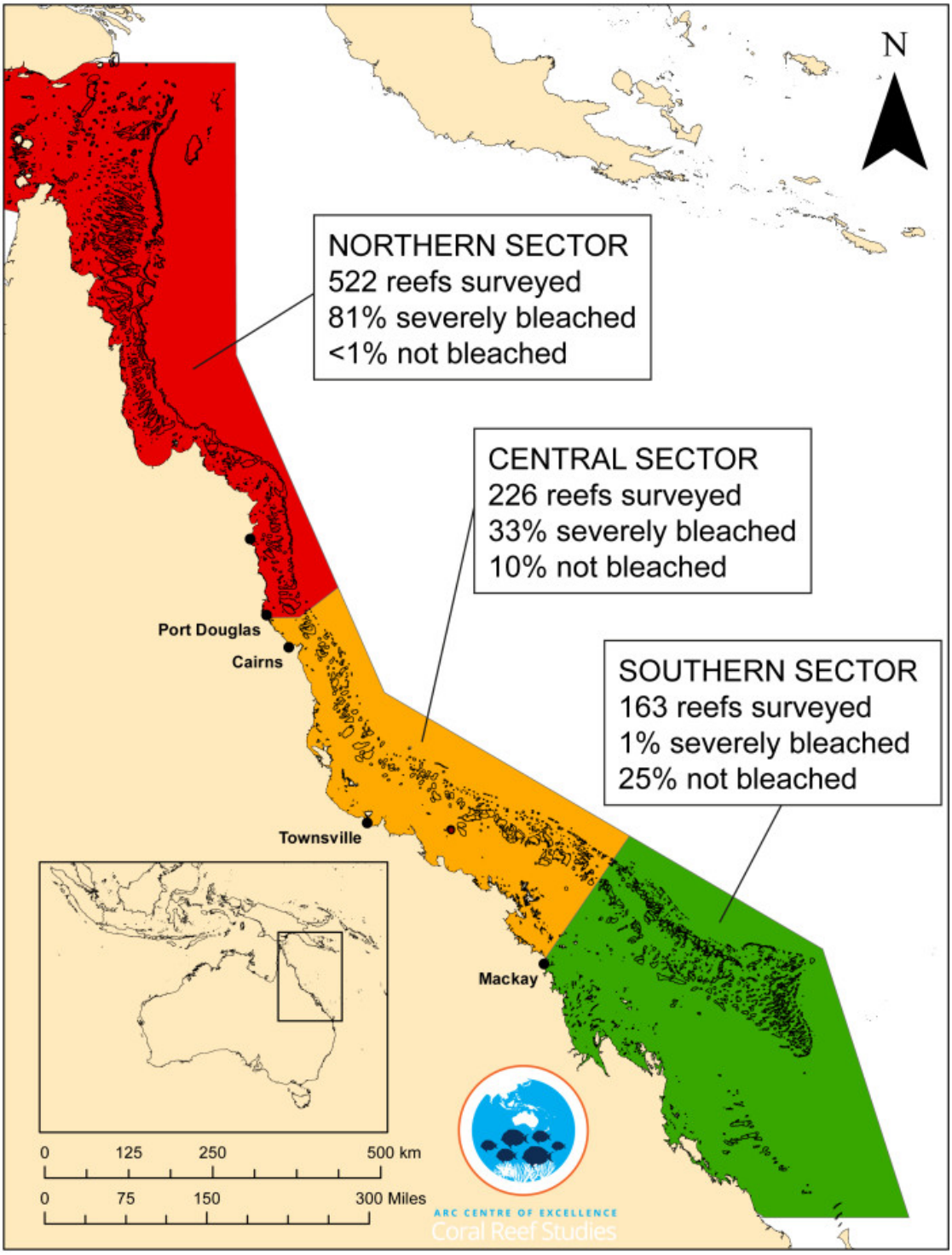
Documenting the dead coral after the bleaching event, May 2016.

Decomposing soft coral falling off the reef, May 2016.

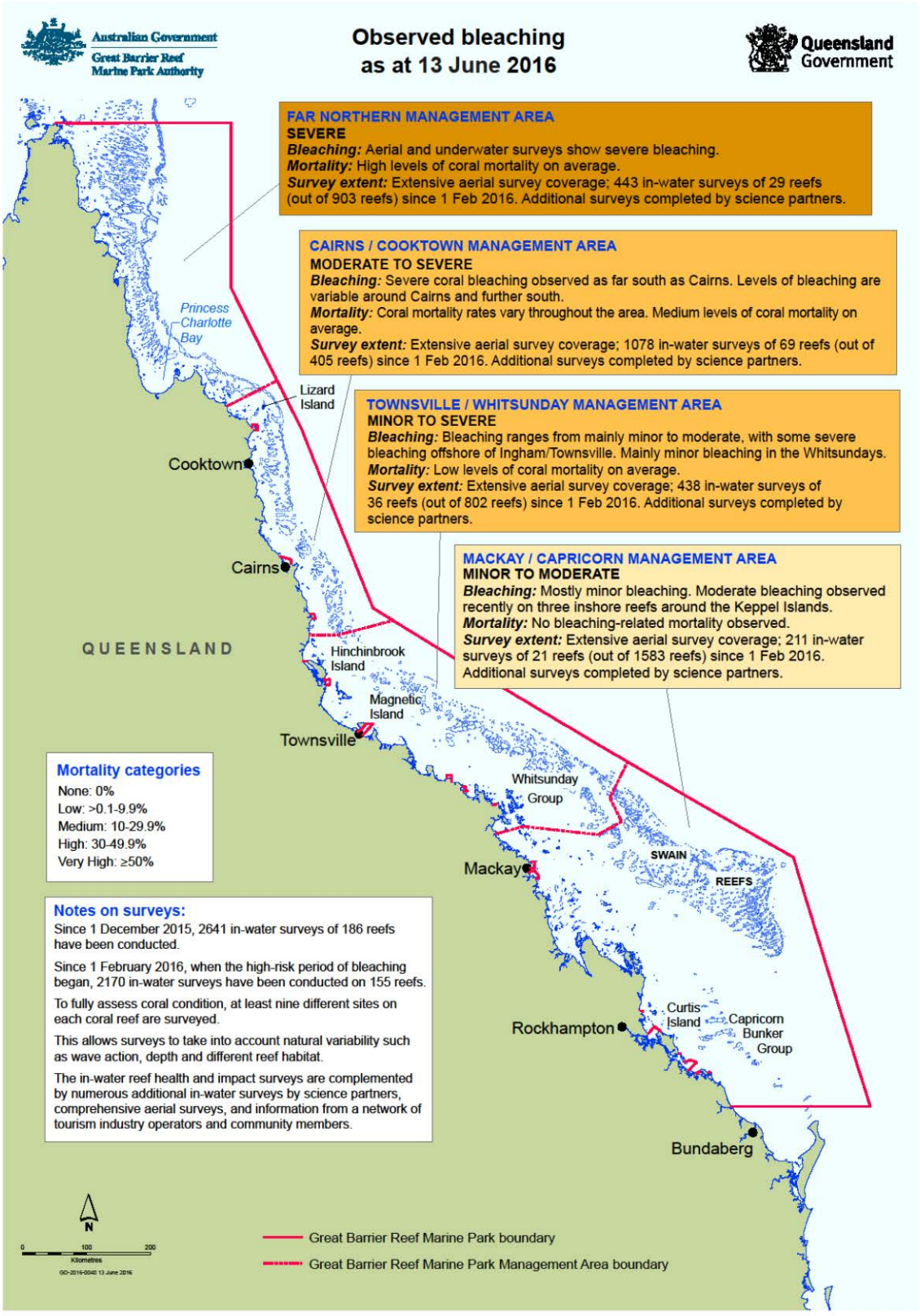
Algae covers dead coral after the bleaching event, May 2016.

Coral bleaching, March 2016, and dead coral, May 2016.

ATTACHMENT 2 – Map showing extent and severity of bleaching prepared by the ARC Centre of Excellence for Coral Reef Studies (April 20, 2016)[29]



ATTACHMENT 3 – Map showing observed bleaching prepared by the Great Barrier Reef Marine Park Authority (June 13, 2016)[30]



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