The Great Barrier Reef, UNESCO and the Australian government
The deadline

On or before 1 December, the Australian government must submit a report to the UNESCO World Heritage Committee detailing its handling of the health of the Great Barrier Reef in the last 18 months—a period during which it suffered its worst ever coral bleaching and the death of 22% of its coral. The Australian government claimed that it has made “good progress” during this time.

The backstory

In 2012, UNESCO warned Australia the Great Barrier Reef was under imminent threat and could be listed as “in danger”. Fears about the reef were sparked by its deteriorating condition and the dangers posed by further coal expansion projects in the area. An “in danger” listing allows the UNESCO World Heritage Committee to allocate assistance from the World Heritage Fund. The act of listing a site as “in danger” can be seen as an embarrassment for the government responsible.

In July 2015, after intense lobbying from the Australian government, UNESCO placed the Great Barrier Reef on its watch list, declining to list it as “in danger”. The Australian government committed to regular updates on its handling of the reef’s health over the next five years. Before 1 December, the Australian government must report back with its first submission to UNESCO about its handling of the Great Barrier Reef’s health.

In the time that has elapsed between July 2015 and now, almost a quarter (22%) of the Great Barrier Reef’s coral has died after the most severe coral bleaching event in history. The bleaching was caused by higher water temperatures caused by climate change and the El Nino weather pattern. Australia’s carbon emissions have increased during that time and the Australian government has committed to and approved a number of projects that are detrimental to the Great Barrier Reef’s health.
What has Australia done for the Great Barrier Reef during this period?

**2015**

- Australian government announced Reef 2050 long-term sustainability plan. Under plans announced in 2015, the Great Barrier Reef would receive “extra funding” to protect the reef from climate change, although there were concerns it was not enough. The Australian government announced $57.8 million in funding to protect the Great Barrier Reef from the impacts of climate change. The initiative, named the Great Barrier Reef 2050 Long-Term Sustainability Plan, is aimed at protecting the reef from the impacts of climate change and reducing the pressure on the reef from run-off pollution and coastal infrastructure. It includes a combination of research, monitoring and restoration projects, and aims to improve water quality and reduce the impact of climate change on the reef.

- Australian government announced landmark climate change legislation. The Australian government announced a landmark climate change law that will force the country’s emissions to drop by at least 26-28% of 2000 levels by 2030. The legislation, which will be debated in Parliament this week, is a significant step in Australia’s commitment to tackling climate change. The bill is expected to be passed this week and will likely be the first time Australia has enshrined a climate change target into law. The legislation is expected to be passed in time to meet the Paris Agreement’s goal of keeping global warming below 2 degrees Celsius. The bill includes a national carbon pricing scheme, which will begin in 2016, and introduces a new emissions trading scheme. The scheme will allow businesses to trade permits to emit greenhouse gases. The government has committed to reducing greenhouse gas emissions by 26-28% below 2000 levels by 2030. The bill also includes measures to encourage the transition to renewable energy, including a target to generate 23% of Australia’s electricity from renewable sources by 2020. The government has also committed to reducing the cost of renewable energy and investing in research and development. The bill is expected to be passed in time to meet the Paris Agreement’s goal of keeping global warming below 2 degrees Celsius. The bill includes a national carbon pricing scheme, which will begin in 2016, and introduces a new emissions trading scheme. The scheme will allow businesses to trade permits to emit greenhouse gases. The government has committed to reducing greenhouse gas emissions by 26-28% below 2000 levels by 2030. The bill also includes measures to encourage the transition to renewable energy, including a target to generate 23% of Australia’s electricity from renewable sources by 2020. The government has also committed to reducing the cost of renewable energy and investing in research and development. The bill is expected to be passed in time to meet the Paris Agreement’s goal of keeping global warming below 2 degrees Celsius. The bill includes a national carbon pricing scheme, which will begin in 2016, and introduces a new emissions trading scheme. The scheme will allow businesses to trade permits to emit greenhouse gases. The government has committed to reducing greenhouse gas emissions by 26-28% below 2000 levels by 2030. The bill also includes measures to encourage the transition to renewable energy, including a target to generate 23% of Australia’s electricity from renewable sources by 2020. The government has also committed to reducing the cost of renewable energy and investing in research and development. The bill is expected to be passed in time to meet the Paris Agreement’s goal of keeping global warming below 2 degrees Celsius. The bill includes a national carbon pricing scheme, which will begin in 2016, and introduces a new emissions trading scheme. The scheme will allow businesses to trade permits to emit greenhouse gases. The government has committed to reducing greenhouse gas emissions by 26-28% below 2000 levels by 2030. The bill also includes measures to encourage the transition to renewable energy, including a target to generate 23% of Australia’s electricity from renewable sources by 2020. The government has also committed to reducing the cost of renewable energy and investing in research and development. The bill is expected to be passed in time to meet the Paris Agreement’s goal of keeping global warming below 2 degrees Celsius.
The Australian federal government released the Reef 2050 plan in March 2015 as part of its response to UNESCO’s threat to categorise the Great Barrier Reef as “in danger.”

Despite conceding that climate change is the “biggest long-term threat” to the reef’s health, the Reef 2050 plan offered little action to curb the impacts of climate change. The report’s main proposals include a ban on dumping dredge from new coal port developments in the Great Barrier Reef marine park, $100m to improve water quality, and reductions in pesticide and sediment pollution. In October 2016, the chief of the Great Barrier Reef Marine Park Authority admitted that climate change should have featured more heavily in the Reef 2050 plan.23

The Paris climate agreement saw governments all over the world, including Australia, agree to aim to limit global temperature increases to within 1.5°C/2°C. However, if nations were to mine and burn all the world’s currently operating coal, gas, and oil field reserves, the resultant carbon emissions would break through the 2°C upper limit.25 Opening up even more coal, gas and oil reserves is simply incompatible with the Paris climate agreement that Australia and the rest of the world has signed.

Australia's coal exports (coal that is mined in Australia and then sold abroad) are responsible for almost double the carbon emissions (1bn tonnes CO₂) of Australia’s domestic emissions (560m tonnes CO₂).26 Australia's coal exports are by far the nation's largest contribution to climate change and global warming – and there are more than 60 major coal projects in the pipeline.

As coal is the most carbon-intensive fossil fuel, a permanent ban on new coal mines that would keep more Australian coal in the ground is the first and most logical step towards meeting Australia's global commitment to averting the worst impacts of climate change.

The Carmichael coal mine is the largest coal mine ever proposed in Australia. It is planned by mining company Adani and will be located in the Galilee Basin in Queensland. The scale of the proposed mine dwarfs many of the world’s capital cities. At full production, the mine will produce 60 million tonnes of coal per year and its annual CO₂ footprint will be bigger than the cities of New York and Tokyo. It has been plagued by funding withdrawals and legal challenges, but has received unprecedented support from Australian state and federal governments.

Much of coral’s colour comes from marine algae known as zooxanthellae, which symbiotically inhabit the polyps and provide most of the nutrition that corals rely on to thrive. When surface ocean temperature increases – a consequence of climate change – the coral polyps react to the changing conditions by expelling the zooxanthellae, leading to coral bleaching. In severe and protracted bleaching events, the coral will die as a consequence.

The Reef 2050 plan

The Carmichael coal mine

Why ban new coal mines?

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The proposed Carmichael coal mine the Australian government approved would be responsible for more CO₂ per year than cities such as New York and Tokyo.  

Additional facts

**Highest per capita carbon emissions of developed nations**

Australia is the largest exporter of coal in the world.  

**Largest living structure on the planet**

The Great Barrier Reef is more than 2,300km long. It is roughly as large as Japan, Italy or Germany.  

**Climate change is the largest threat to the Great Barrier Reef**

The year the Great Barrier Reef was listed as a UNESCO World Heritage.

**2°C?**

The potential carbon emissions from the world’s existing oil, gas and coal fields would already exceed the Paris climate agreement upper target of a 2°C temperature increase limit, making any new fossil fuel projects entirely incompatible with global climate targets.
Adverbs and adverbials are crucial in enhancing the clarity and precision of language. For example, in the sentence provided:

1. The adverbial phrase “in the face of” in the sentence “in the face of climate change” emphasizes the challenge the subject is facing.

2. The adverbial phrase “by human activities” in the sentence “by human activities” clarifies the cause of the climate change.

3. The adverbial phrase “over decades” in the sentence “over decades” indicates the time span.

4. The adverbial phrase “on the Great Barrier Reef” in the sentence “on the Great Barrier Reef” specifies the location.

5. The adverbial phrase “of fossil fuels” in the sentence “of fossil fuels” highlights the specific type of energy source.

6. The adverbial phrase “as a result of” in the sentence “as a result of” suggests a cause-and-effect relationship.

7. The adverbial phrase “where the impact on the Great Barrier Reef is particularly severe” in the sentence “where the impact on the Great Barrier Reef is particularly severe” indicates a specific area of concern.

8. The adverbial phrase “by increasing the amount of CO2 in the atmosphere” in the sentence “by increasing the amount of CO2 in the atmosphere” describes the mechanism of the process.

These adverbial phrases help to provide more detail and context, making the sentences more vivid and informative.