A/Committee Secretary
Innovation, Tourism Development and Environment Committee
Parliament House
George Street
Brisbane Qld 4000
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**RE: Environmental Protection (Great Barrier Reef Protection Measures) and Other Legislation Amendment Bill 2019**

Dear Committee,

The Australian Marine Conservation Society (AMCS) is the leading charity devoted solely to caring for Australia's oceans and their wildlife. AMCS has over 250,000 members and supporters in Australia (30% in Queensland) whom we represent and work with on key marine issues facing the nation. One of core focus areas is to protect the Great Barrier Reef from threats, particularly climate change and poor water quality.

We thank-you for the opportunity to make a submission on this Bill amendment.

We would like to congratulate the government for taking action on the key Reef Taskforce recommendation, which was to strengthen regulations to reduce run off from Reef catchments. We believe the Bill provides a good framework for tackling the pollution that is harming the Great Barrier Reef. To be effective however it will need to be backed up by: regulations which provide the necessary standards and implementation detail; and resources to ensure the new regulations are effectively enforced.

Our Great Barrier Reef is an international icon and one of the world's most beautiful and biologically rich ecosystems on earth. It provides $6.4 billion to the economy every year and supports over 64,000 jobs. Yet despite its international and economic significance, its health is in decline. The Outlook Report[1] published every five years by the Great Barrier Reef Marine Park Authority identifies the two key impacts on the Reef's health as climate change and polluted run-off.

Climate change is the biggest environmental crisis we are facing. The impacts are already being heavily felt in the World Heritage listed Great Barrier Reef. During the summers of 2016 and 2017, half of the Great Barrier Reef's shallow water corals died due to two consecutive marine heatwaves.

[1] http://www.gbrmpa.gov.au/our-work/reef-strategies/great-barrier-reef-outlook-report

The geographic scale of recent bleaching means that breeding populations of corals have been decimated over large areas. As warming continues to worsen major bleaching events will increase in frequency leaving little time for the Reef to recover.

Paired with the increasing threat of climate change is the continued impacts of poor water quality. The inshore ecosystems of our Great Barrier Reef have been severely degraded by agricultural runoff. The runoff is coming mainly from cane and grazing properties, with the main pollutants being sediment, nutrients and pesticides. Recent research has shown that this pollution is not only changing the composition of inshore coral habitats, but also reducing the recovery rates of these corals by 25% and that these areas are more susceptible to disease and crown of thorn starfish outbreaks[2]. Most of the inshore coral reefs south of Cooktown have now become severely degraded due to nutrient pollution from overuse of fertilisers, especially on cane farms.

Inshore ecosystems, such as seagrass meadows on which threatened dugongs and turtles depend, have also been severely degraded by sediment and nutrient pollution. During intense wet seasons the volume of polluted runoff is extreme. In the 2011 Queensland floods, intense rainfall lead to many dugongs starving to death due to the extensive loss of their critical seagrass feeding grounds.

The effects of farm pollution however are not limited to inshore ecosystems. Excessive nutrient pollution leads to excessive phytoplankton growth, which is good news for the larvae of the Crown-of-Thorns Starfish (COTS). Nutrient pollution of the Reef's waters leads to outbreaks of these coral-eating starfish.

In 2012, the Australian Institute of Marine Science stated that storm damage (48%) and crown of thorns starfish, COTS (42%) were the biggest cause of coral loss in the Great Barrier Reef. These figures are now out of date post the two consecutive bleaching events (in 2016-17) but the need for action to reduce farm pollution hasn't declined in importance. In fact, the need for action on agricultural runoff has *increased* because it will increase the resilience of the Great Barrier Reef and buy time for it to recover from bleaching events before we can limit global average temperature rise to 1.5C or less.

Addressing water quality is a critical international commitment that the Queensland and Australian governments have made to the World Heritage Committee. In 2015, the World Heritage Committee narrowly avoided placing the Great Barrier Reef on the *World Heritage In Danger* list. Australia's 'get out of jail card' was the joint Commonwealth-Queensland *Reef 2050 Plan*, which contains important commitments to improve water quality along the Reef coast. The World Heritage Committee recently noted that the inception of the Plan had begun but urged Australia to lift its game, passing the following decision:

*[The World Heritage Committee] strongly encourages the State Party to accelerate efforts to ensure meeting the intermediate and long-term targets of the plan, which are essential to the overall resilience of the property, in particular regarding water quality]*

Despite significant time, effort and public investments of hundreds of millions of dollars, poor water quality continues to be one of the biggest threats to the reef. The Reef Taskforce Report, published over two years ago, found that, "Transformational change is needed over the next 5-10 years if the targets have any chance of being achieved". In its Reef water quality report to Parliament in June last year, the Queensland Audit Office found that "despite significant efforts, best management practice programs are still only used by two per cent of graziers and seven per cent of canegrowers".

[2] https://www nature.com/articles/s41559-019-0832-3

The most recently published Reef Report Card has shown progress on pollution targets and management action was way off track:

1. Both sugarcane and grazing received a 'D' with only 32% and 36% respectively at best practice towards a target of 90% by 2018
2. Actions to reduce fertiliser pollution received an E rating with only 20.9 % reduction achieved towards a target of 50% by 2018

It is clear that voluntary initiatives with farmers are not working and regulation is a critical part of the way forward if we are to dramatically decrease the amount of pollutants and sediment entering the Reef's waters. Regulation has been a necessity for many landmark initiatives and is already used extensively within the Great Barrier Reef to limit the impact of industries such as tourism, fishing and aquaculture. Farming should be no different to other regulated industries that operate near or on the Reef.

We need strong laws to ensure all farmers achieve minimum standards and that highly polluting practices are phased out. This not only benefits the Reef but also farmers. The new laws will drive uptake of practices which have been shown to improve business profitability and farm viability. They will also protect the social license of the agricultural sector, so that the good work of many to be 'clean and green' is not undermined by those who continue polluting.

The rate of progress in achieving improved water quality in the Great Barrier Reef has been glacial and underlines the importance of the forthcoming Reef regulations to make a transformational change. In the past Reef pollution regulation has been slow to be delivered and suffered from poor implementation. Given the crisis that the Reef is facing these new reforms need to be enacted swiftly and enforced immediately.

The Bill before Parliament provides the head of power for the regulatory recommendations of the Reef Taskforce to be implemented. We strongly support the main elements of the Bill:

1. **Catchment pollution targets that will give the Reef clean water.**

For the first time we have pollution reductions for each of the 35 catchments that flow into the Great Barrier Reef. The best available science has been used to set these targets so they provide the clean water the Reef needs to help restore its health.

2. **Ability to regulate all industries, all agriculture sectors and all catchments.**

As per the Recommendation of the Taskforce all industries are to be regulated. The largest gap previously was only some agricultural sectors in some catchments were regulated which was inequitable. Pollution laws should apply to everyone so that progress can be made as rapidly and as equitably as possible.

3. **The ability to set minimum standards which will ensure significant cuts to water pollution,**

The Bill provides the ability to set minimum standards for agriculture which is supported. These standards will need to be detailed in regulations and must include the full Six Easy Steps for cane farming, and all grazing land in C and D class restored to good condition (B class or better).

4. **The ability to collect essential data**

Data needs to be collected and provided which shows that changed management actions have occurred and what the likely pollution reduction will be. No industry should be exempt from providing data to show compliance with the law and avoidance of Reef pollution.

The Water Science Taskforce recommended that at a minimum for the cane industry, fertiliser sales data should be mandated and provided to government. It also stated that "the requirement to provide the data should be targeted at the most efficient source to minimise the burden on industry. For example, yield data is collected by sugar mills so the requirement to provide this data should be upon the mills rather than the growers."

We strongly support the Taskforce's view that farm, and eventually block level data, should be mandated from fertiliser resellers and sugar mills to be used by government to assess compliance with the law and avoidance of Reef pollution.

**5. New developments to not increase pollution**

Hundreds of millions have been invested to cut pollution. Many farmers have undertaken significant management practice changes to reduce the pollution coming off their properties. These investments and on-ground efforts would be wasted if new development was allowed to further increase the amount of pollution flowing to the Reef. New development must not add to the already excessive pollution that is harming the Reef.

An offset framework is fundamental to ensuring there is no net decline in Reef water quality for new developments in the Reef catchment – at least cost. It is also fundamental to achieving the objective of the Reef 2050 Plan July 2018, namely "WQO1: Over successive decades the quality of water entering the Reef from broadscale land use has no detrimental impact on the health and resilience of the Great Barrier Reef".

Despite implementing many of the Reef Taskforce's recommendations there are some key gaps in the Bill that must be addressed if significant progress to pollution targets and Reef health are to be made:

**1. Management of activities in high risk areas and large scale restoration**

There are high risk areas which are more prone to exporting pollutants to the Reef such as riparian zones, erodible soils and 'leaky' cropping land. Special requirements are needed for this land which set out what activities can occur and what restoration actions may be needed. Modelling has shown that practice change alone will not achieve the 2025 pollution targets – we must address pollution hot spots. This is one key area addressed by the Taskforce, which the Bill does not address.

Large scale restoration of the Great Barrier Reef catchment areas is also needed and will be critical if we want to achieve the water quality targets. Over 80% of wetlands have been lost from the Great Barrier Reef catchments and many riparian areas have been cleared. AMCS believes more focus needs to be on this, including a plan of how this could be achieved and the cost involved. In Lake Taupo, New Zealand a 20% reduction in nitrogen was achieved through direct buybacks and paying farmers to change their land use.

**2. All activities should have access to offsets to achieve least cost pollution abatement**

The Bill allows for point source pollution from industrial development to be offset but agriculture is excluded and will not be able to access least cost options for pollution abatement. This will mean agriculture has to undertake on site works to achieve a no net increase in pollution which in many instances would be more expensive than accessing on-site offsets. Recommendation 5.6 of the Reef Taskforce stated "Establish a water quality offset framework that can apply across industries (urban, ports, agriculture)." The current Bill does not meet with this Recommendation despite the Queensland Government committing to fully implement all recommendations.

**3. Address the dumping of maintenance dredge spoil in the Reef's waters**

Whilst the Bill provides for phasing out outdated polluting practices in the catchment, the practice of dumping millions of tonnes of maintenance dredge spoil continues. Suspended sediments from dredging and spoil disposal can have serious impacts on coral reef and seagrass habitats. These include doubling the incidence of coral disease, blocking light required for reefs and seagrass habitats to grow, smothering seagrass and coral and inhibiting the settlement of coral larvae. Sediment mobilised in maintenance dredging generally has a much higher fines content and it is the fine sediment content that has the highest impact on Great Barrier Reef ecosystems.

Despite significant policy efforts occurring on the ports front, more effective management of maintenance dredging is still required. This includes looking at port efficiency, limiting ship size access to some ports (Cairns in particular), under keel management systems and effective channel and swing basin designs so that they scour rather than accrete. If maintenance dredging must occur then there needs to be very good analyses of effective land disposal options (that avoid sensitive habitats and reclamation) and where this is not possible the consideration of spatially and temporally relevant offsets.

With all the efforts and investments being made to cut catchment pollution running into the Reef it makes no sense to continue with a business as usual approach in allowing the direct dumping of maintenance dredge spoil in Reef waters. This matter being unaddressed by the Bill is again contrary to the Recommendation of the Reef Taskforce. Ports and the shipping companies that use them have a responsibility to not impact the waters that they rely on for their operations.

I urge the Committee to support this important Bill to help safeguard the future of our Great Barrier Reef and to recommend improvements to ensure the achievement of the 2025 clean water targets.

Yours sincerely

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