

To: Senate Inquiry into the Environment Protection and Biodiversity Conservation Amendment (Great Barrier Reef) Bill 2013

From: Dr Andrew Jeremijenko

Save the Reef welcomes the proposed EPBC Amendment (GBR) Bill introduced by Sen Waters as an important step to greater protection for this world heritage. I, Dr Andrew Jeremijenko represent Save the Reef, a group of independent scientists trying to ensure that the Great Barrier Reef does not lose its World Heritage Status. Save the Reef has a long history of involvement in Reef protection.

I am extremely concerned about the current health of the Great Barrier Reef and the additional pressure proposed by large scale industrial development will only make the situation worse. Save the reef has focused our attention on Gladstone as this is the "model" for future Port developments in the Great Barrier Reef World Heritage Area.

Our group has been emailing representatives of IUCN and UNESCO (see emails below) who came to Australia for the WHC Reactive Monitoring Mission in 2012 and supports the recommendations of the WHC and the Mission for greater protection of the Reef from poor water quality, industrial developments and shipping.

We therefore welcome the proposed amendments to the EPBC Act, in particular, a ban on any new port development outside of the existing and long-established major port areas, including specifically banning new port developments at Port Alma, Balaclava Island, northern Curtis Island, and the entire northern section of the Great Barrier Reef. We further support a moratorium on any expansion until the Strategic assessment is completed and the ability to assess both the individual and cumulative impacts of all projects is possible. We also support the view that unless further developments provide a net benefit to the Reef, they should not proceed.

I have attached turbidity breach tables which detail the multiple exceedances in Gladstone harbour. We believe that it is likely future dredging activities could cause similar exceedances in Gladstone and in other ports. We believe that in Gladstone these exceedances were attributable to dredging and bund wall issues, and not tides and natural variation as the Ports and the regulating authorities have suggested.

There was only one EPO in January 10th 2012 administered despite multiple exceedances. I have attached some of the letters I sent detailing how the state and Federal governments have ignored high turbidity (muddiness) in the harbour. The move to light monitoring concerns us as light monitoring is not a good tool to control dredging and the associated high turbidity because it uses a 14 day rolling average. This means that high turbidity will not be picked up by light monitoring until it is high for close to 14 days.

The high turbidity is associated with high nutrients, high levels of total metals and may be contributing to disease in the harbour. This "muddy" turbid water is likely to have contributed to the illness in the fishermen. I have treated a number of patients with Shewanella who have been exposed to the dirty harbour water. Shewanella is an organism that is found in tropical marine waters and can metabolize heavy metals anaerobically. There have also been multiple cases of Vibrio infections associated with exposure to Gladstone harbour also a marine infection. Shewanella and Vibrio species have been identified in both the sampled diseased fish as well as from human infections. It is logical that dirty marine water may be contributing to more favourable conditions for marine bacteria growth and this is contributing to marine

infections. The initial investigation into human illness did not take into account these fishermen with Shewanella because it took over 12 months to digam interested. There have also been multiple cases of Vibrio that were not included in the initial study. In conjunction with other doctors I will be writing a paper on Shewanella species, marine infections and commercial fishermen.

It was noted that there have been multiple changes to the Water Quality and Dredge Management plans. This in our view has decreased the level of controls on GPC and has allowed them to increase the turbidity in the harbour. In one of the letters from GBRMPA it talks about the amendments to the Water Quality plan (Revision 9). I have not been able to see all of these 9 revisions. It also detailed there have been 7 Dredge Management plan revisions. Again I have not seen all of those revisions despite requests.

It was noted when we requested turbidity data from the Ports that we were quoted well over \$20,000 dollars to provide us with that data. I have only saved data from their website when they were above the limits. I wanted all the data so that I could do some statistics on it and calculate the new mean turbidity and compare it to baseline before dredging. In the conditions it stated that this data would be made freely available to the public but we were unable to afford over \$20,000 to get the data on turbidity.

The Ports have been given a long list of conditions but they are not complying with them including independent audits allowing public access to the data. They continue to ask for the conditions to be changed. We suspect these revisions are a way industry gets to do whatever it needs to keep the project on or in this case ahead of time and on budget.

I was most impressed with the Professor Callum Roberts visit and lectures this year (and his comments should be assessed by the senate enquiry) I was also impressed by the Allan Sefton Memorial Lecture, <http://www.youtube.com/watch?v=qQuWvBRiYQw> by Professor Terry Hughes. The lack of funding to the crisis facing the Great Barrier Reef was summarised as trying to stop a locust plague with a butterfly net. (e.g. increase to \$800,000 for Crown of Thorns outbreak after UNESCO visit while Murray Valley Darling Basin received over 10 billion dollars)

I recently was involved in a meeting on the Rainbow Warrior, where 16 groups discussed ways to protect the reef. In particular I talked with a lawyer on the Rainbow Warrior regarding the sea dumping issue. We believe that the dumping of dredge spoil contaminated with ASS, PASS and other heavy metals is illegal in the Great Barrier Reef Marine Park. In Gladstone we have to go through the courts and run the risks of costs, but this lawyer suggested we look at Abbott Point and going to the Administrative Appeals Tribunal which would not have cost issues. This may occur in the near future.

(Merits appeals against certain decisions under the Great Barrier Reef Marine Park Act 1975 (Cth) and specified other Commonwealth laws Administrative Appeals Tribunal (AAT) \*\* (jurisdiction provided under various legislation). The data from Gladstone harbour may be used in the Abbott point case. ) Dr Ove agreed with this assessment that dumping dredge spoil seems to run at serious odds with the original act.

The 4 Corners programme on the CSG industry

<http://www.abc.net.au/4corners/stories/2013/04/01/3725150.htm> should be considered. Though it is on CSG in Australia and not specifically on the Great Barrier Reef and port development, it does raise many questions about the environmental approval process in Qld. The industries were not carefully assessed.

Decisions were rushed and environmental concerns were ignored. This programme is more to do with the environmental impacts on the water table in Australia, but similar issues with regard to the Great Barrier Reef World Heritage Area and the development on Curtis Island can be extrapolated.

I believe that the Great Barrier Reef World Heritage Area may be put on the In Danger list on the 1st June 2011.

I have attached the emails below from Dr Douvère that make me believe this. The initial story by Four Corners "Great Barrier Grief" was by far the most comprehensive analysis and predicted the problems with UNESCO when it outlined the multiple port developments faced by the Reef. (This programme should also be considered) UNESCO came and recommended we stop developments outside of existing ports. These recommendations have been ignored and Port developments have been approved, a 10 year port strategy was released that flew in the face of the recommendations, coastal developments laws and environmental protection act has been weakened and the sea dumping act has been changed to allow for contaminated dumping in the Great Barrier Reef Marine Park, and now the natural conservation act is being changed to allow more eco developments with poor controls in national parks.

Marlina Whop did a story on Gladstone Harbour on 7.30 during the time of dugong deaths. Catalyst has done a story as well on Gladstone harbour. <http://www.abc.net.au/catalyst/stories/3593812.htm> These media reports should be considered by the enquiry.

Considering the potential impact of an "in danger" listing on the 6 billion dollar economy from the Great Barrier Reef, I think the port development deserves more analysis. Save the Reef believes we have failed to protect this world wonder and tourism icon and have put at risk all the small businesses and tourism operators that depend on the 6 billion dollars that the Great Barrier Reef brings in.

The attached scorecard and report that showed both Federal and State Governments failed to respond adequately to the recommendations of the UNESCO mission also shows that other organisations do not believe the current policy direction is appropriate. <http://www.amcs.org.au/pdf/ReportToUNESCO.pdf> Save the Reef believe they should have included the federal changes to the sea dumping act, and changes to piloting through the Torres straight, but otherwise did a good job. The latest changes to the Sea Dumping Act, came in 2009 under Federal Labor. "The government removed strict provisions that previously governing sea dumping in Australian waters. Those amendments included removing the distinction between contaminated and non-contaminated materials and removing the distinction between environmentally sensitive and non-environmentally sensitive areas." The piloting and removal of enforcement was written about in this SMH article <http://www.smh.com.au/environment/conservation/reef-safeguard-sacrificed-secretly-for-us-singapore-20110911-1k48j.html#ixzz2LseRorWt>

I have sent Dr Douvère emails, updating her about the reef developments and she often forwards them on to Tim Badman (Director World Heritage Programme) and other people in the IUCN. (See below) Come June, 2013, my impression from her emails is that there is no way that they can say "sorry about that, everything is fine with the Great Barrier Reef"

Save the Reef believes there are only two options. The first is they put the Great Barrier Reef on the In-Danger List because we did not follow their recommendations. (e.g Approved Abbott Point despite them saying not to., changed laws to allow coastal development, changed EPA to allow dumping of mine waste).

The other option is to give us some more time. E.g. delay decision for 1 more year until the next meeting. With Tony Abbott reversing the carbon tax and allowing Campbell to do further port developments, I can't see even if we get this option that we won't be on the In Danger list at the next meeting.

The email from Dr Douvere stating "we are following up on the situation right now" indicates to me some exasperation when Abbott point approval was given. (see below) If I were a betting man I would say that the Great Barrier Reef will be on the In Danger list in June and a lot of it has to do with CSG and port expansion and the devastating impact in Gladstone harbour. It should not be the model for future port developments in the Great Barrier Reef. Arrow Energy (Shell CSG) has recently had its Bowen pipeline approved, and the Plant on Curtis should approved in the near future. That will be the nail in the coffin and I believe will ensure In Danger listing. (It is noted that Shell promised it would not develop oil and gas in a world heritage area, but will break its promise on Curtis Island see attached.)

Our group has prepared numerous submissions to various government and industry processes around plans to allow further development along the GBR coast line. Save the Reef also spoke at the parliament in response to the proposed economic development bill. In these submissions we have reiterated our concerns about specific developments, which we consider are not appropriate to proceed and which will have unacceptable environmental impacts on the GBR. We also raise concerns about the government processes which are meant to ensure the protection of the Reef but which instead support fast tracking, inadequate assessment processes and poor accountability.

We have provided the Gladstone Enquiry submissions and media statements regarding Gladstone. We have also provided letters to Shell and other documentation to highlight the nature of the concerns our organisation holds. Save the Reef believes the current EPBC Act is insufficient to ensure the protection of the Reef's outstanding universal values.

Save the Reef supports the strengthening of the EPBC Act through these proposed amendments. I hope one day soon we will see better protection in place for the reef, a world wonder, a tourism icon, a \$6 billion a year asset, a scientific wonderland, and a world heritage area.

Yours sincerely

Dr Andrew Jeremijenko

Representing Save The Reef



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Dear Doctors Jeremijenko, Connors and Kirby

Thank you for your letter dated 8 October 2012 expressing your concern regarding developments in Gladstone Harbour and the broader Great Barrier Reef World Heritage Area.

As you have stated, approvals granted for these developments in Gladstone Harbour are the responsibility of the Queensland Government's Department of Environment and Heritage Protection and the Australian Government's Department of Sustainability, Environment, Water, Population and Communities. The Great Barrier Reef Marine Park Authority does not have any regulatory responsibility for the management and enforcement of approval conditions within Gladstone Harbour.

The trigger levels which relate to the identified exceedances are a requirement of a Queensland Government permit. In these instances, the Commonwealth does not have a role in regulating the compliance of proponents with state approval conditions.

The exceedance of Commonwealth regulated turbidity trigger levels are required to be reported to the Department of Sustainability, Environment, Water, Population and Communities as per the approved Water Quality Management Plan which is required under the *Environment Protection and Biodiversity Conservation Act 1999* approval conditions. Additionally, an independently chaired Dredge Technical Reference Panel, consisting of a variety of scientific and technical experts, is another requirement under *Environment Protection and Biodiversity Conservation Act 1999* approval conditions. In response to the October 2011 exceedance of trigger levels, this advisory panel met to advise the Gladstone Ports Corporation Limited on various management measures that could be implemented to reduce turbidity concentrations in Gladstone Harbour. We understand that a number of actions have been taken as a result of this meeting.

The raising of Queensland's turbidity trigger levels is not a matter that the Commonwealth regulates. The Department of Sustainability, Environment, Water, Population and Communities was, however, consulted on the changes by the Queensland Department of Environment and Heritage Protection. To date, I understand that the Department of Sustainability, Environment, Water, Population and Communities has not raised the turbidity trigger levels.

On 17 October 2012, the Department of Sustainability, Environment, Water, Population and Communities received an amended Water Quality Management Plan incorporating, among other things, trigger levels consistent with Queensland levels and a move toward light based trigger levels from the Gladstone Ports Corporation Limited for consideration. The Department of Sustainability, Environment, Water, Population and Communities will consider the revised plan carefully before making a decision on whether to approve the plan.

The requirement to implement a move from turbidity based trigger levels to light based trigger levels is a requirement of condition 19 (b) of the *Environment Protection and Biodiversity Conservation Act 1999* conditions of approval. The Dredge Technical Reference Panel contains members whose expertise includes tropical seagrass. The seagrass experts have assisted in the development of light based triggers that provide protection for the growth of seagrass in Gladstone Harbour.

In line with the approved Water Quality Management Plan required under *Environment Protection and Biodiversity Conservation Act 1999* approval conditions, the wet season for Commonwealth approved trigger levels has always been interpreted to be from 1 October to 31 March.

The Great Barrier Reef Marine Park Authority has been concerned about the potential impact of dredge spoil disposal at the East Banks Sea Disposal Area on the Great Barrier Reef Marine Park. Physical and chemical testing for contaminants in the sediment to be disposed of to this site has been determined to be below any concentration likely to pose a significant risk to Great Barrier Reef ecosystems. Ongoing independent monitoring of the benthic, coral and seagrass communities within the Great Barrier Reef Marine Park is required as part of the *Environment Protection and Biodiversity Conservation Act 1999* approval conditions. The Great Barrier Reef Marine Park Authority is also investigating establishing its own monitoring program to further verify the level of impact on the Great Barrier Reef Marine Park that may result from the disposal of dredge spoil at the East Banks Sea Disposal area.

I thank you again for raising your concerns regarding the potential impacts of further development on Gladstone Harbour and the Great Barrier Reef World Heritage Area. I wish to reassure you that should the Great Barrier Reef Marine Park Authority hold any concerns regarding potential impact on the Outstanding Universal Value of the Great Barrier Reef World Heritage Area that we would raise them immediately with the Minister for Sustainability, Environment, Water, Population and Communities and his department.

Yours sincerely

Russell Reichelt  
Chairman

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