WDC WHALE AND DOLPHIN CONSERVATION

Whale and Dolphin Conservation

Committee Secretary
Australian Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra, ACT, 2600

Dear Committee,

Oil and Gas Production in the Great Australian Bight

Whale and Dolphin Conservation (WDC) welcomes the opportunity to provide input to the inquiry into Oil or Gas Production in the Great Australian Bight. WDC are dedicated to the conservation and protection of the marine environment, and in particular, whales and dolphins.

This submission will address the following terms of reference:

A) The effect of a potential drilling accident on marine and coastal ecosystems, including:
   i. Impacts on existing marine reserves within the Bight
   ii. Impacts on whale and other cetacean populations, and
   iii. Impacts on the marine environment

D) The capacity, or lack thereof, of government or private interests to mitigate the effects of an oil spill

Thank you for the opportunity to make a submission to the Senate Standing Committee on Environment and Communications inquiry into Oil and Gas Production in the Great Australian Bight.

Our submission follows. Please contact us for any further information.

Yours sincerely,

Jessie Bates, Ciarne Denham, Gabbie Richards, Nicholas Ware and Declan Andrews.
On behalf of
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Declan Andrews
A Submission to the Australian Senate Standing Committee on
Environment and Communication Inquiry into
Oil and Gas Production in the Great Australian Bight

Group Members: Jessie Bates, Ciarne Denham, Gabbie Richards and Nicholas Ware

Senate Inquiry: Oil and Gas Production in the Great Australian Bight

Due Date: 17th October 2016

Recipient Organisation:

Australian Senate Standing Committee on Environment and Communications

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1.0 Introduction

Whale and Dolphin Conservation (WDC) is a non-profit organisation whose mission is to protect the lives of whales and dolphins around the world. Through field research, lobbying, rescues, campaigns, advising governments and conservation projects, WDC defend the amazing cetaceans against the countless threats that harm them. The visualisation of our organisation is to create a world where man made actions that endanger these mammals are absent, to ensure their survival for future generations.

Whale and Dolphin Conservation's foundations lie on the belief that these cetaceans deserve to live naturally and not the way humans decide. To be able to live free from the many dangers that are presenting themselves such as seismic airguns, pollution and the destruction of vital feeding/breeding locations, represents the values that we place within this submission.

The submission by WDC will detail our environmental, marine reserves and cetacean concerns we have with Bight Petroleum (BP) and other mining companies wanting to drill in the Great Australian Bight (GAB). These concerns reflected through the terms of reference provided by the committee, will outline WDC's core values of protecting and conserving whales and dolphins and how the effect of a potential drilling accident on marine and coastal ecosystems could be detrimental to Australia.

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2.0 Background

The GAB is a pristine environment that supports coastal communities and acts as a sanctuary for whales, fish, plants, birds and marine mammals. It is known as a whale nursery and critical habitat for endangered species such as 6 types of whales, sharks, sea lions and albatross. Further, the Bight supports commercial fisheries, aquaculture industries, and regional tourism industries. However, BP view the GAB as a global oil frontier seeking permission to use the area for exploration drilling that has the potential to supply billions of dollars in tax revenue to the Australian Government. Policy requires the BP to submit an Environmental Plan to The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) who are the governing body for commonwealth waters. Originally the Environmental Protection and Biodiversity Act 1999 would have protected the GAB species and would require approval from the Federal Environment Minister. However, a change in policy streamlined the system by removing environmental assessment and delegating sole responsibility to NOPSEMA. Environmental groups are extremely concerned the BP and other groups are unable to supply sufficient information in their ability to protect the GAB and protest drilling will destroy the pristine environment and marine life. Scrutiny has also risen as to whether NOPSEMA will overlook environmental concerns in the interest of seeking capital gain. The inquiry provides an opportunity to consider whether drilling in the GAB is truly in the national interest.

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3.0 The effect of a potential drilling accident on marine and coastal ecosystems

3.1 Impacts on existing marine reserves within the Bight

Currently the GAB Commonwealth Marine Reserve spans an area of 45 926km^2, with a depth of approximately 6000m below the surface of the water. This reserve encompasses the former GAB Marine Park, which became encompassed in the GAB Commonwealth Marine Reserve in 2012. The reserve has a designated Marine Mammal Protection Zone, which was originally created "to provide for undisturbed calving for the southern right whale and protection of Australian sea-lion colonies" (Great Australian Bight Commonwealth Marine Reserve 2016). The reserve also contains a Benthic Protection Zone, designed to protect and conserve a sample of the diverse and unique range of plants and animals that live on the ocean floor of the GAB. The conservation values for the GAB Commonwealth Marine Reserve include:

- Globally important seasonal calving habitat for the threatened southern right whale
- Important foraging areas for the threatened Australian sea-lion, threatened white shark, migratory sperm whales and the migratory short-tailed shearwater (Great Australian Bight Commonwealth Marine Reserve 2016).

There are three key ecological values of the reserve, these being ancient coastline, benthic invertebrate communities of the Eastern GAB, and areas important for small pelagic fish.

Moore, Harvey and Possingham (2014) highlight the impacts that a potential drilling accident could have on a marine reserve, stating: "We lack the ecological data for the region to be able to identify and manage the impacts of an oil spill" (2014). This statement emphasises the fact that an oil spill is extremely hazardous as the full impact cannot be known in advance. Oil spills can affect marine reserves in a number of ways, some of which being physical smothering and toxic effects. The severity of the spill is dependent on the quantity and type of the oil, as well as the ambient conditions and the sensitivity of the affected organisms and their habitat to the oil. One of the main issues

that can result from an oil spill in a marine reserve is the inability of the marine environment to recover from such a devastating occurrence. For example, coral is a highly sensitive organism that takes a great deal of time to recover from an oil spill, which is the most damaging phenomenon that can occur to a coral reef. (Effects of pollution on the marine environment 2011).

Light oils, including gasoline and diesel, are more harmful to marine reserves than heavy oils. BP's proposed oil drilling project will use light oils, which can easily ignite or explode and can kill animals and plants they touch. This poses an extreme threat to the GAB Commonwealth Marine Reserve (How oil harms animals and plants in marine environments 2016). The extraction of oil and gas has serious negative impacts on marine reserves, with exploration involving seismic waves that can interfere with the navigational signals of marine animals. As well as this, waste water is a by-product of oil drilling and contains hydrocarbons that are lethal to marine life (Offshore mining 2016). Ultimately, oil spills are always a risk in this industry, and offshore gas and oil exploration and mining is not consistent with the conservation values of the GAB Commonwealth Marine Reserve.

3.2 Impacts on whale and other cetacean populations

Significant issues relating to Term of Reference (a, ii) that have surfaced following this consideration to mine in the area are listed as follows:

- The risk of oil spills to the area and how it would affect physical processes, biodiversity and ecology
- The seismic airgun noises effect on the marine animals and environment
- The affect that mining will have on marine animals, ecosystems and local area
- The lack of scientific research by BP to provide information proving the risk reduction of marine life, environment and coastal areas
  (AMCS, 2016).

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Paying particular attention to the effect of mining to whale and other cetacean populations, part two (ii) of the first Term of Reference refers to issues that may arise from a drilling accident on marine and coastal ecosystems. The environment, cetaceans and other marine lifes vulnerability, if an oil spill was to occur in the GAB, can be emphasised through the tragic events in 2010 (Whales.org 2016). An oil spill on the BP operated Macondo Prospect in the Gulf of Mexico, leaked millions of litres of oil into the waters. Research conducted from the time of the incident to this day has found marine mammals still showing signs of lung disease, birth success rate decline, lack of fertility and death (WDC 2015, p. 2). This tragedy clearly accentuates not only the devastating effects of oil drilling in the ocean but the irreversible effect as well.

Through the example of seismic airguns to whales and dolphins, studies show that the airguns used to find oil and gas underwater disrupt, harm and kill marine life. Repeating every ten seconds for weeks at a time, the seismic airguns according to government estimations could injure up to 130,000 whales and dolphins (Oceana.org 2016). What exactly are the impacts to these cetaceans? Whales and dolphins both use their hearing to navigate, find food, communicate and reproduce. The airguns can do is cause permanent hearing loss which is a life or death matter for whales and dolphins. Other impacts include:

- Abandonment of habitat
- Disruption of feeding
- Disruption of mating
- Temporary/permanent hearing loss
- Beached marine life
- Death

(Oceana.org, 2016).

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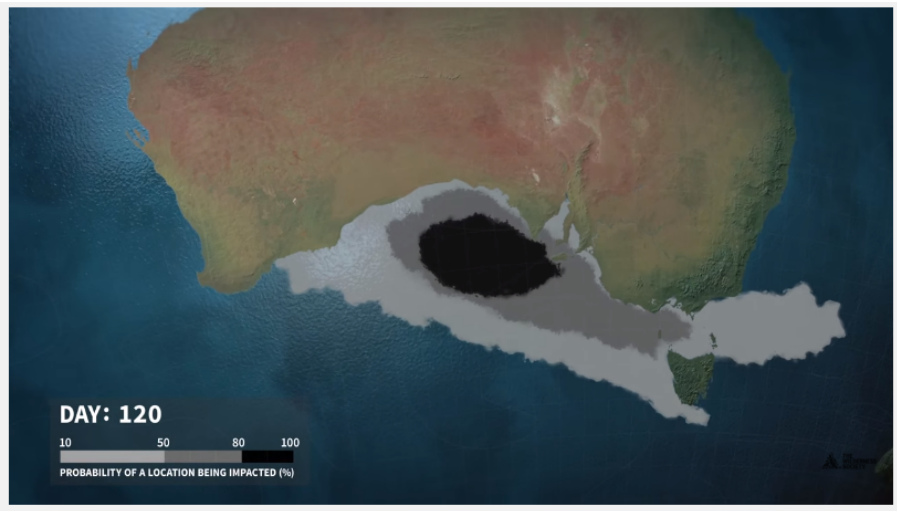
The GAB provides one of the most biodiverse environments in the world with up to 85% of its species being endemic to the region. One particular species of whale, the Southern Right, has several whale sanctuaries in the GAB with calving areas being incredibly significant internationally (HOPE inc 2016). As well as this protected species the Bight is home for a diverse range of migratory animals which include: Humpback, Sperm, Blue, Fin, Sei Whales and Bottlenose, Risso's, Dusky, Long finned pilot and Southern Right Dolphins (Environment.gov 2016). If the drilling in the area does get accepted the lives of all of these species will ultimately be at risk.

What should also be noted is the cetaceans mentioned above have distinct migratory patterns throughout the year. Many of the species come to the south of Australia to migrate and feed before returning to other areas of the world. What an accident would do in this case is severely harm the life of all the marine species not just cetaceans. The endangered Southern Right Whale would be all but extinct in the face of an oil spill the scale of the Gulf of Mexico incident (2010) (Sea Shepherd Australia 2016). As seen below, the effects of an oil spill would not only consume the GAB but the whole south side of Australia causing devastating effects for marine animals, the environment and ecosystem (The Wilderness Society 2015). It should also be noted that BP's own modelling indicates the likelihood of significant shore-based impact from a spill even within the most feasible response period to try and cap a blowout (BP, GAB Exploration Drilling Fate and Effects Oil Spill Modelling 2016). This should be a salutatory lesson for governments considering future exploration in the region.



3.3 Impacts on the marine environment

Significant issues that relate to the impacts on the marine environment are listed below.

- The affect that the mining will have on the marine environment
- The high risk of oil spills, and their crucial impact on the environment
- The impacts of the mining and its affect on breeding grounds, food sources, and the water quality of the environment.

The Great Australian Bight is a breeding and feeding ground for various sea creatures, which includes many endangered species. “It provides a feeding ground for seabirds, fishes, whales as well as other higher order predators such as fur seals and penguins” (Butler et al 2002).

The impact of the mining on the marine environment is devastating for many reasons. Pollution from mining can increase the risk of a break down of marine environment. The most significant problem in terms of pollution is the risk of an oil spill. “Oil spills can result from pipeline leaks and/or pipeline failure, accidents on a platform, accidents related to the onshore production facility and vessel collisions” (Redoubt Shoal Unit Development Project 2002).

BP does not have a good history with oil spills. In 2010, BP was responsible for an oil blowout in the Gulf of Mexico, which devastated marine life and ruined the habitats for many sea creatures. “Oil poured into the sea for 87 days, releasing approximately 4.9 million barrels of oil” (The Wilderness Society 2015).

Oil spills have direct impacts on the environment, these include:

- Physical smothering of organisms
- Chemical toxicity
- Ecological changes

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Heavy oils have the potential to smother and affect organisms. Chemical toxins can be absorbed into organs, tissues and cells. Ecological changes are also evident as the oils can alter and change habitats and therefore organisms perform completely different functions, thus altering the ecosystem. ("Environmental Effects - ITOPF" 2016)

Other impacts on the marine environment will have a spiral of negative consequences, including:

- "A gulf scale spill could destroy marine environments, and contamination could reach as far as Sydney and New Zealand" (The Wilderness Society 2015).
- "Uncontained release of pollutants could impact the environment, and coat animals in chemicals, resulting in deaths of endangered species and high levels of water pollution" (Piddock, Burton & Lunney 2003).
- "Major kills of prey species, and damage to their environment" (Piddock, Burton & Lunney 2003).
- "Disruption of behaviour of marine mammals, causing displacement in their key habitats" (Piddock, Burton & Lunney 2003).

Furthermore, "Sea surface water leaks from the Indian Ocean, transits in the Great Australian Bight and eventually enters the Tasman Sea and the Southern Pacific Ocean through Bass Strait and South of Tasmania" (Lebreton 2015, p.12).

The GAB contains strong currents and fierce winds, if a spill was to occur than it could potentially be carried along the coast of Southern Australia and in turn danger the marine environments in those areas. Risk of an oil spill would not only affect the Bight but many other environments around it. (Lebreton 2015).

BP's oil spill in 2010 took place 6 years ago, and the clean up is still on going. (The Wilderness Society 2015). The danger to the marine environment is too risky, water pollution and oils spills could potentially ruin the water quality, and destroy marine habitats.

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4.0 The capacity, or lack thereof, of government organisations to mitigate the effect of an oil spill

Significant historical events that demonstrate the inability for BP to effectively mitigate oil spills include:

2005: BP explosion killing 15 due to staff negligence.

2006: Two leaks spilling 760,000 litres of oil.

2009: Pipeline leak spilled 174,000 litres of a mixture of oil and water.

2010: Drilling rig explosion kills 11 with 4 million barrels of oil released into the water.

2011: A line rupture spills 15, 900 litres of a mixture of methanol and oily water.

(Mattera 2015).

Further, BP have recorded multiple uncontained oil spills to land and water consecutively each year from 2009 to 2015 (Oil Spill preparedness and response 2015). The data collated by BP to gauge the conditions of the GAB are recorded from a simulation model of a natural environment. The BP tactics in responding to oil spills in their Environmental Plan submitted to the National Offshore Petroleum Safety and Environmental Management Authority are based upon the data and assumptions of the simulated environment. The OSCAR model BP use to base their contingency plan is not 100% successful. According to environmental scholars Aamo, Reed & Lewis (1997) when using the OSCAR model it should be noted that regardless of the response tactic, damage is likely to have been caused to the environment regarding any oil spill. The model can assert some degree of damage limitation however it is not 100% successful (Aamo, Reed & Lewis 1997). It is highly reasonable to propose damages to the environment are inevitable as a result of an oil spill.

The Occupational Safety and Health Administration in the United States found BP to have systematic safety and health problems in 2009. Further, in 2010 leaders of House Energy and Commerce Committee also indicated “serious safety and production incidents” (cited in Mouaward 2010). BP have been accused of repeatedly putting profits before safety.

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In 2010 the BP were responsible spilling 4 million barrels of oil into the Gulf of Mexico, the spill lasted for 87 days and costed billions of dollars in environmental damage (National Oceanic and Atmospheric Administration 2013). Known as Deepwater Horizon the historical event has been noted as the worst spill in US history and deemed grossly negligent (Stelloh 2016). This is of particular interest to the GAB due to the intended similar structure of an offshore drilling rig and the BP's inability to mitigate an oil spill in that circumstance. The BP note a team of 50 experts take into consideration recommendations using the Gulf of Mexico as a case study. Though with plans to drill in harsher and extremely different conditions, the chances of experts predicting unforeseen circumstances, or the likelihood of a miscalculation or a mere underestimation, it has the potential for devastating consequences. The GAB is known for extreme weather conditions, strong winds, and large swells (Bureau of Meteorology, n.d.). If the BP cause an oil spill the damage is irreversible with the of Tasmania, the Victorian coast, entire South Australian coast, southern coast of WA could be covered in oil. There is only one chance preserve the Bight. The proposed drilling is high-risk and as indicated above, history would indicate BPs inability to mitigate oil spills.

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5.0 Conclusion

Bight Petroleum's plan to mine in the Great Australian Bight will have major impacts on the surrounding marine environment and marine life. The Bight is home to over 85,000 endangered species, risking the lives of these endemic animals to mine oil is an outrageous idea. The seismic air guns used in this type of mining have dangerous effects on sea creatures, in particular whales and dolphins. It will not only disturb their communication but their breeding habits as well. These cetaceans travel through the GAB in migration season. Breeding will be disturbed for these animals if the mining is to go ahead.

The Marine environment is far too precious to be at risk of the pollution from the drilling. Bight petroleum has had a toxic past of oil spills particularly in the Gulf of Mexico. They have the inability to effectively mitigate oil spills. For example, BP has consecutively had oil spill contaminations from the years 2009-2015. Its track record evidently outlines its lack of caution for the protection of marine life and environment.

We urge the Australian Government not to allow this plan, and to also understand the risks it has on our fishing, tourism and of course marine life in South Australia. Because of the huge impact of such a venture in an environment which is as significant as the Great Australian Bight, the Federal Government needs to carefully consider its position in regard to the approval of such a scheme.

6.0 Recommendations

The proposed plan will cause devastating effects for every aspect of the GAB. It is in the best interest of WDC to recommend that BP's proposed oil and gas production in the GAB does not go ahead, for the variety of reasons stated above.

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