Submission No 30

MINERALS LEGISLATION AMENDMENT (OFFSHORE DRILLING AND ASSOCIATED INFRASTRUCTURE PROHIBITION) BILL 2023

Organisation: Vets for Climate Action

Date Received: 31 August 2023

Vets for Climate Action

vfca.org.au
info@vfca.org.au
ABN: 16 636 944 191

Contact:
Stefany Goldring
Acting Chief Executive Officer
E: [redacted]

NSW Legislative Assembly Committee on Environment and Planning
Parliament of New South Wales
6 Macquarie Street
Sydney NSW 2000

31 August 2023

Dear Chair,

Submission to Inquiry into *Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023*

Vets for Climate Action (VfCA) is leading the Australian veterinary and animal care Industry into a future where animals, the industry, our communities and the natural world are thriving. We are an animal-centred, vision-led and impact-driven organisation. We are evidence-based and informed by published scientific findings.

Our Board of six Directors, includes Dr Helen Scott-Orr, former Inspector-General of Biosecurity and Professor Mark Howden, Nobel Laureate and a current Vice Chair of the Intergovernmental Panel on Climate Change. Thirty-three former Chief Veterinary Officers and Senior Government Veterinarians work alongside us allowing mutual exchange of knowledge and experience. Our Patron is Professor Peter Doherty, veterinary surgeon, Nobel Laureate and Australian of the Year in 1997.

We represent over 2000 members of the veterinary profession and animal care community around Australia, including over 700 in NSW, many of whom reside on the NSW coast. Veterinary professionals are on the frontline, experiencing climate change firsthand. We see the devastating impacts that floods, bushfires and heat stress have on our livestock, pets and wildlife (such as the inconsolable loss of 3 billion animals in the bushfires of 2019/20). We also understand that animal health has a critical position in our future, whether the diversity of native wildlife contributing to a sustainable environment, the livestock that contribute to our food security or our much-loved pets.

Vets for Climate Action welcomes the opportunity to provide a submission to this inquiry.

Vets for Climate Action supports the *Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023* (the Bill) because we strongly support a ban on offshore oil and gas, and associated infrastructure in NSW waters. As per the Terms of Reference governing the Committee, we are extremely concerned about (d) environmental impacts of offshore drilling for the following reasons:

1. **The resulting emissions from any new oil or gas projects would only fuel worsening climate impacts already affecting our marine animals and ecosystems.**

The most recent IPCC report, the AR6 Synthesis Report based on the content of the three Working Groups Assessment Reports was released in March 2023. It states that human activities, principally through emissions of greenhouse gases (GHG), have unequivocally caused global warming. The largest share and growth in gross GHG emissions occurs due to the mining and combustion of fossil fuels.[1]

The AR6 Synthesis Report also states climate change has caused substantial damages, and increasingly irreversible losses, in terrestrial, freshwater, cryospheric, and coastal and open ocean ecosystems (high confidence). Hundreds of local losses of species have been driven by increases in the magnitude of heat extremes (high confidence) with mass mortality events recorded on land and in the ocean (very high confidence).[2]

Impacts on some ecosystems are approaching irreversibility such as the impacts of hydrological changes resulting from the retreat of glaciers, or the changes in some mountain (medium confidence) and Arctic ecosystems driven by permafrost thaw (high confidence).[3] For example, the declining sea ice between 2018 and 2022 caused by climate change is responsible for the complete and catastrophic loss of all emperor penguin chicks from 4 out of 5 colonies in Antarctica in the spring of 2022.[4]

Additionally, the sex of a sea turtle is determined by the sand temperature in which the eggs incubate. When temperatures are below 29.1°C the turtle will be born male. But, with temperatures on the rise due to climate change, 99 out of a hundred turtles are born female. This threatens the future of many turtle species including the Pacific green turtle which nests in northern Queensland.[5]

---

[1]IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

[2] Ibid.

[3] Ibid.

[4] Fretwell, P.T., Boutet, A. & Ratcliffe, N. Record low 2022 Antarctic sea ice led to catastrophic breeding failure of emperor penguins. *Commun Earth Environ* **4**, 273 (2023).

[5] Craig Welch, *Rising Temperatures Cause Sea Turtles to turn Female,* National Geographic, 9 Jan 2018, access 28 October 2022.

Climate change is an animal health and welfare issue. Many animals have already perished in Australia due to heatwaves and severe weather events. Additional details are presented in **Appendix 1** below. Vets for Climate Action is extremely concerned about the effects and risks to all animals (terrestrial and aquatic), ecosystems, and food webs if new oil and gas projects are permitted in NSW waters because of their role in climate change. This is why we support this Bill.

2. **The scientific evidence is clear: we must reduce emissions this decade to avoid irreversible tipping points that threaten our planet, oceans, and way of life.**

In a 2011 report, the then Climate Commission identified 2010 - 2020[6] as the critical decade for action to minimise climate change risks. However, the decade to 2020 was marked in Australia by inaction and climate wars. This was symptomatic of a global malaise. As a result, this decade has begun with accelerating emissions and record temperatures. In May 2022 the highest atmospheric carbon dioxide (CO2) concentrations in the history of humankind were recorded: 421 parts per million. This is 50% higher than pre-industrial levels.[7] And, the last eight years have been the hottest on record with decadal global temperatures at 1.1°C above the average from the start of the industrial revolution.[8] In fact, July 2023 was the hottest month on record globally. Sea ice was the lowest on record. And, for the fourth consecutive month, the global ocean surface temperature hit a record high.[9] The CSIRO states that Australia's climate has warmed on average by 1.44°C since national records began in 1910.[10]

The importance of reducing GHG emissions to zero this decade, and therefore banning any new offshore oil and gas projects, cannot be overstated. In scenarios assessed by the IPCC in its Sixth Assessment Report, limiting warming to around 1.5°C requires global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 43% by 2030; at the same time, methane would also need to be reduced by about a third.[11] The consequences of exceeding 1.5°C will be stark: heatwaves, droughts, bushfires and intense rain events will become even more severe. Sea levels will rise, species will become extinct and crop yields and livestock production will fall. This will cause further food and water insecurity, economic disruption, conflict, and terrorism.[12]

---

[6] W. Steffen & L. Hughes, *The Critical Decade: New South Wales climate impacts and opportunities,* The Climate Commission (Department of Climate Change and Energy Efficiency), 2011, accessed 24 October 2022

[7] US National Oceanic and Atmospheric Administration, *Carbon dioxide now more than 50% higher than pre-industrial levels*, 3 June 2022, accessed 24 October 2022

[8] Josh Davis, *The last eight years have been the hottest on record*, Natural History Museum, 14 January 2022, accessed 25 October 2022

[9] World Meteorological Organization, July 2023 confirmed as hottest month on record, 14 August 2023

[10] CSIRO & Bureau of Meteorology, *State of the Climate*, 2020, accessed 24 October 2022

[11] IPCC, 2022*:* Summary for Policymakers. In: *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.001, accessed 24 October 2022

[12] United Nations, The Climate Crisis – A Race We Can Win, 2020, accessed 24 October 2022

A discernible slowdown in global warming within around two decades can be achieved by deep, rapid, and sustained reductions in greenhouse gas emissions and an immediate reduction of new oil and gas exploration. This is why VfCA supports the Bill.

3. **Seismic surveying, required in the exploration phase of any new offshore oil and gas projects, has incredibly harmful impacts on marine animals and the marine environment.**

Any new offshore oil and gas projects requires seismic surveying, also referred to as seismic blasting, as a method of locating and mapping oil reserves below the ocean floor.[13] The blasts from seismic airguns (used in seismic testing) can exceed more than 250 decibels.[14] The NSW Government recognises that 'underwater noise can impact marine mammals (whales, dolphins, porpoise, seals, and dugong), fish, sharks, rays, sea turtles, marine reptiles, birds, invertebrates, squid, and crustaceans. It can also affect divers and other recreational users.'[15] The Environmental Defenders Office provided the following information in their Submission to the Inquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment in December 2019:

> The University of Tasmania's Institute for Marine and Antarctic Studies (IMAS) has been undertaking research into the direct impact of seismic testing on marine species that are important for commercial fisheries. They have identified significant increases in mortality in scallops as a result of noise from seismic airguns, a potential three-fold increase in mortality of adult and larval zooplankton, and damage to the sensory organs and righting reflexes of rock lobsters. The impacts of noise on marine life remains an evolving field of research, but a 2015 review identified that "anthropogenic noise can cause auditory masking, leading to cochlear damage, changes in individual and social behavior, altered metabolisms, hampered population recruitment, and can subsequently affect the health and service functions of marine ecosystems". These impacts occur in an environment where 90% of fish stocks are already considered fully fished or over-fished, making them vulnerable to cumulative anthropogenic impacts.[16]

Zooplankton is the very basis of ocean food chains, it underpins the health and productivity of marine ecosystems. Seismic blasting also impacts communications channels between species such as whales and dolphins that rely on sonar and hearing to be able to communicate with each other and as a result these animals will be forced out of crucial breeding grounds.

The seismic blasting that would support any new oil and gas projects in NSW waters will cause direct harm to all marine life and marine ecosystems which is why VfCA supports this Bill.

---

[13] Australian Marine Conservation Society, What is seismic blasting?, 22 March 2022
[14] https://www.nature.com/articles/s41598-019-55500-4
[15] Transport for NSW, Kamay Ferry Wharves Project Underwater Noise Assessment, 26 March 2021
[16] https://www.edo.org.au/2019/12/16/impact-of-seismic-testing-on-fisheries-and-marine-environment/

4. **Offshore oil and gas production introduces the risk of oil spills in our ocean that pollute our water, which harms human health and kills our precious marine life.**

New offshore oil and gas production brings increased risks of oil spills in our ocean, polluting our water and harming our marine life, including threatened and protected species like the weedy sea dragon, eastern blue devil fish, elegant wrasse, grey nurse shark and great white shark.[17] The National Ocean Service[18] in the United States describes the damage caused by oil:

> "Oil destroys the insulating ability of fur-bearing mammals, such as sea otters, and the water repellency of a bird's feathers, thus exposing these creatures to the harsh elements. Without the ability to repel water and insulate from the cold water, birds and mammals will die from hypothermia.
>
> Juvenile sea turtles can also become trapped in oil and mistake it for food. Dolphins and whales can inhale oil, which can affect lungs, immune function and reproduction. Many birds and animals also ingest oil when they try to clean themselves, which can poison them.
>
> Fish, shellfish, and corals may not be exposed immediately, but can come into contact with oil if it is mixed into the water column — shellfish can also be exposed in the intertidal zone. When exposed to oil, adult fish may experience reduced growth, enlarged livers, changes in heart and respiration rates, fin erosion, and reproduction impairment. Fish eggs and larvae can be especially sensitive to lethal and sublethal impacts. Even when lethal impacts are not observed, oil can make fish and shellfish unsafe for humans to eat."[19]

Oil spills also threaten our coastal communities and reliant industries including tourism and fishing. In addition to oil, drilling rigs are responsible for additional spills of toxic chemicals such as gas liquids, diesel and hydraulic fluids straight into the marine environment, again causing irreversible damage to our marine species and coastal communities.

We note that it is not just the oil spills and gas leaks that present enormous risks to marine and sea life. Scientific research shows that marine animals including sea birds are attracted to offshore drilling platforms by the lights, heat, burning flares and human food that can be scavenged. Birds have been and are likely to be killed or injured after colliding with the structures, becoming contaminated with oil and related chemicals due to their diverse foraging

[17]https://www.dpi.nsw.gov.au/fishing/marine-protected-areas/marine-parks/batemans-marine-park/life-under-the-sea/threatened-and-protected-species
[18]https://oceanservice.noaa.gov/facts/oilimpacts.html#:~:text=Oil%20destroys%20the%20insulating%20ability,mammals%20will%20die%20from%20hypothermia
[19]National Ocean Service, *How does oil impact marine life?* Accessed 30 August 2023.

strategies,[20] and in some circumstances, burned by flares.[21] In an oil spill from the platforms, birds (and other marine animals) can get coated with oil, preventing them from flying, floating, keeping warm, finding food and shelter, diminishing their ability to keep warm and survive.[22]

Vets for Climate Action supports the ban on all offshore drilling off the NSW coast because we know offshore drilling puts our oceans and the diverse, irreplaceable species that call it home at risk—we know that when you drill you spill.

5. **New offshore oil and gas will prevent the NSW Government from delivering a 50% cut in emissions by 2030, compared to 2005 and net zero by 2050.**

Vets for Climate Action celebrates the NSW Government's commitment to Net Zero and that its net zero targets are stronger than those legislated by the Federal Government in the recent *Climate Change Act 2022* (Cth) and the *Climate Change (Consequential Amendments) Act 2022* (Cth).[23] However, any new offshore oil and gas projects would prevent NSW from reaching its targets. In 2021, Fatih Birol, executive director of the International Energy Association and one of the world's foremost energy economists, said: "If governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year".[24] Similarly, earlier this year the United Nations Secretary-General Antonio Guterres said that countries must start phasing out oil, coal and gas, not just emissions.[25]

One of the successes of the 2022 UN Biodiversity Conference, COP15, was a landmark agreement to aim to reverse unprecedented destruction of nature. Following this, the Australian Government has committed to new national and global targets for Australia to:

- reverse biodiversity loss and be 'nature positive' by 2030
- protect 30% of Australia's land and seas by 2030.

We understand that on 21 October 2022 New South Wales and all other jurisdictions agreed to work collectively to support these new national commitments. We applaud the establishment of the NSW Nature Positive Advisory Panel of eminent Australians to advise on how the state can contribute to this national commitment, specifically, becoming nature positive by 2030 and conserving 30 percent of Australia's land by 2030 ('30 by 30') – in a manner that is equitable, science-based and cost effective, and optimises environmental, social and economic benefits

---

[20] Michael Pamela E., Hixson Kathy M., Haney J. Christopher, Satgé Yvan G., Gleason Jeffrey S., Jodice Patrick G. R., Seabird vulnerability to oil: Exposure potential, sensitivity, and uncertainty in the northern Gulf of Mexico, Frontiers in Marine Science, Vol 9, 2002, DOI:10.3389/fmars.2022.880750

[21] Wiese, Francis & Montevecchi, William & Davoren, Gail & Huettmann, Falk & Diamond, Tony & Linke, Julia. (2002). Seabirds at Risk around Offshore Oil Platforms in the North-west Atlantic. Marine pollution bulletin. 42. 1285-90. 10.1016/S0025-326X(01)00096-0

[22] https://environmentamerica.org/wp-content/uploads/2022/08/AME_offshoretwopager_2015_print-1.pdf

[23] There are cogent arguments that Australia should aim to reduce emissions by 75% below 2005 levels by 2030 and reach net zero emissions by 2035. This would protect Australia from the worsening effects of climate change including irreversible changes. (Will Steffen, Lesley Hughes, Simon Bradshaw, Dinah Arndt and Martin Rice, *Aim High, Go Fast: Why emissions need to plummet this decade*, The Climate Council, 2021)

[24] https://www.theguardian.com/environment/2021/may/18/no-new-investment-in-fossil-fuels-demands-top-energy-economist

[25] UN chief to fossil fuel firms: stop trying to 'knee-cap' climate progress | Reuters

for New South Wales. This Bill and the banning of any offshore gas and oil projects will aid this commitment.

Conclusion

Vets for Climate Action is working towards a world where humans and animals thrive together in a healthy climate. Climate change is increasingly an animal health and welfare issue. Animals hold no responsibility for the causes of climate change, yet they experience the consequences most strongly. Many animals have already been lost in Australia due to heatwaves and severe weather events caused by changing climate, and with current warnings of another El Nino system forming, we can expect many more animals to perish.

The scientific evidence is unequivocal, and it is clear we must act now to reduce emissions, and under no circumstances begin new gas or oil projects of any nature. The ongoing expansion of the fossil fuel industry will inevitably lead to more damage to the environment, more animal extinctions with loss of biodiversity as well as increasingly severe climate impacts on livestock.

Vets for Climate Action supports the *Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023* and the ban on offshore oil and gas, and associated structures in NSW waters. Our concern as veterinarians, vet nurses and animal care professionals is about the impacts and risks to all animals, including protected and threatened marine species, ecosystems and food webs if offshore oil and gas projects proceed in NSW waters.

Yours sincerely,

Signed:

Stefany Goldring
Acting CEO
Vets for Climate Action
E: [redacted]
W: www.vfca.org.au

APPENDIX 1

AUSTRALIAN ANIMALS SUFFER AND DIE DUE TO CLIMATE CHANGE

An Australian rodent in the Torres Strait Islands, the Bramble Cay melomys, is the first mammal to become extinct due to climate change. Rising sea levels and storm surges resulted in loss of habitat.

Coral on the Great Barrier Reef has been killed by successive mass bleaching events due to rising ocean temperatures. This brings long term risks not only to the reef itself but to the diversity of marine fauna living within the reef, including dugong and marine turtles.

Green turtles are at risk of extinction as their gender ratio becomes distorted.[26] The sex of a sea turtle is determined by the temperature of the sand incubating the eggs. Warmer temperatures of 29.1 degrees Celsius and above produce females and cooler temperatures produce males. Global warming means more females are born, disrupting the natural gender ratio. It is possible that sea turtle hatchlings could be completely female in the near future.

Over 3 billion animals died or were displaced during the 2019-2020 bushfires:

- 143 million mammals;
- 2.46 billion reptiles;
- 180 million birds; and
- 51 million frogs.[27]

'This ranks as one of the worst wildlife disasters in modern history,' reported the WWF.

More than 23,000 spectacled flying foxes were killed[28] in far north Queensland, when temperatures were over 42°C, equating to almost one in every three individual animals in the population, which is listed as endangered under the EPBC Act.

127 ringtail possums died[29] after they became so dehydrated they drank sea water after 4 days of temperatures in the high 30s, in the Mornington Peninsula, Victoria in early 2019.

Floods in Far North Queensland killed over 600,000 cattle in 2019.[30] Those that didn't drown died of cold exposure in the summer month of February. The damage bill was estimated at $2 billion.

Flooding in NSW and southern Queensland in 2022 affected an estimated 475,000 cattle

---

[26] Craig Welch, *Rising Temperatures Cause Sea Turtles to turn Female*, National Geographic, 9 Jan 2018, access 28 October 2022.
[27] p. 2, *Interim Report: Australia's 2019-2020 Bushfires: The Wildlife Toll*, WWF, 28 July 2020, accessed 28 October 2022
[28] Sharnie Kim & Adam Stephen, *Extreme heat wipes out almost one third of Australia's spectacled flying fox population*, ABC News, 19 Dec 2018, accessed 28 October 2022
[29] Lisa Cox, 'Falling out of tree':dozens of dead possums blamed on extreme heat stress, The Guardian, 7 March 2019, accessed 28 October 2022
[30] Tom Major, *Cattle, infrastructure losses following Queensland floods could near $2b, farm lobby says*, ABC News, 16 April 2019, accessed 28 October 2022

(or about 2% of the national herd).[31] It also impacted food and feed crops.

Severe flooding in eastern Australia in 2022 trapped and drowned wombats and echidnas (and other burrowing animals) in their burrows. An estimated 475,000 grazing animals **(**or about 2% of the national herd)[32] were swept away or starved when dirty water contaminated their pastures. It also impacted food and feed crops. Even marine species, turtles and seabirds were displaced when floodwaters reached the ocean.

Dogs or other pets can develop severe heat stress, brain damage and die in as little as 4 to 6 minutes if left unattended in a vehicle. The risks of this are increasing with more heat waves, as is the probability of dogs burning their footpads when walking, as roads and footpaths heat up so much more than the air.

A United Nations report has determined that about one million animal and plant species are threatened with extinction, many within decades, more than ever before in human history. Biodiversity is essential for the processes that support all life on Earth, including human life. An average 69% decline in monitored wildlife populations has been recorded around the world between 1970 and 2018.[33]

Climate change brings new disease threats

One Health is the connection between the health of the environment, people and animals. Climate change will alter disease prevalence, especially when vectors are involved. In the past two years, mosquitoes have moved south in Australia, carrying Japanese encephalitis virus, infecting piggeries and resulting in cases and deaths in humans.[34]

Fruit bats are likely to respond to climate change and extreme temperatures by migrating to more suitable areas. Hendra virus, found naturally in fruit bats, has had a huge impact in Queensland and NSW, with fatalities in horses as well as people.[35] The virus responsible for the COVID-19 pandemic is thought to have originated from bats with pangolins as an intermediate host.[36]

---

[31] Natasha May, *Floods and livestock losses leave NSW and Queensland farmers reeling from third disaster in three years,* The Guardian, 2 March 2022, accessed 28 October 2022

[32] Natasha May, *Floods and livestock losses leave NSW and Queensland farmers reeling from third disaster in three years,* The Guardian, 2 March 2022, accessed 28 October 2022

[33] *UN report on biodiversity loss*

[34] https://www.health.gov.au/health-alerts/japanese-encephalitis-virus-jev/japanese-encephalitis-virus-jev

[35] https://www.cdc.gov/vhf/hendra/index.html

[36] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9408936/#:~:text=According%20to%20our%20%20current%20%20understanding,are%20still%20unaddressed%20%5B9%5D .