

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

By email: ec.sen@aph.gov.au



Dear Committee Secretary,

Inquiry into the impact of seismic testing on fisheries and the marine environment

The Australian Academy of Science welcomes the opportunity to provide a submission to the Senate Inquiry into the impact of seismic testing on fisheries and the marine environment. The Academy's submission relates to terms of reference a (the body of science and research into the use of seismic testing) and b (the regulation of seismic testing in both Commonwealth and state waters).

The Academy believes strongly that policy decisions should be well informed and made according to the best possible scientific advice. It is important that regulation processes be designed to allow decisions to be revised as new information is made available.

A recent audit of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) by Australia's Chief Scientist Alan Finkel found that the regulator is appropriately structured and resourced.¹ The audit considered NOPSEMA's legislative and governance frameworks, its processes and practices, its stakeholder engagement mechanisms and its use of scientific and technical information. The Academy supports the findings of the Chief Scientist that NOPSEMA is "a highly skilled regulator well-equipped to give appropriate consideration to its regulatory obligations in assessing environment plans submitted to it." The Academy further supports the audits recommendations regarding further building community confidence.

The Academy is aware of research on the environment by seismic testing by publicly funded research agencies (including the Australian Institute of Marine Science, the Commonwealth Scientific and Industrial Organisation and Geoscience Australia), as well by as academics at the University of Tasmania Institute of Marine and Antarctic Science and at Curtin University. The Academy recommends the Senate Committee has regard to the submissions from these research groups. It is appropriate for this research to be supported and for its findings to be made public. It is important that NOPSEMA has the opportunity to consider this research, and that its decisions are made with due regard to the outcomes of this research. Where exploration using seismic testing is shown to have negative environmental impacts, these impacts must be managed to prevent irreversible damage to the environment and to commercially important fisheries. It is important that these processes are open and subject to public scrutiny.

¹ <https://www.industry.gov.au/sites/default/files/2019-09/independent-audit-of-nopsemas-consideration-of-exploration-in-the-great-australian-bight.pdf>

A recent review² by researchers at Geoscience Australian, CSIRO and Curtin University provides guidance on current gaps in knowledge and makes recommendations for future research priorities, including collaboration between researchers and industry. A copy of this review article is attached.

Based on the Chief Scientist's audit report, the Academy is satisfied that NOPSEMA has due regard for science, and incorporates new research into its regulatory processes. Environmental Impact Assessments prepared under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* are open to public scrutiny, and can be challenged when new information comes available.

It is often necessary for regulators such as NOPSEMA to make regulatory decisions with limited information, including limited scientific information. Science gives us tools to make discoveries about the world we live in, and these discoveries can cause us to consider our practices and alter them. Uncertainty – the unknown – is at the heart of science. Regulatory practices informed by science must manage this uncertainty.

But management of scientific uncertainty should not mean halting all activity until “the science is settled”. There is always more to learn. Decisions should be made in good faith based on the best available information, with strong and rigorous processes for making these assessments. This must be accompanied by an ongoing commitment to enriching the knowledge base through research, and to revising decisions fearlessly based on reliable information as it comes to hand.

As we noted in our submission to the Senate Legal and Constitutional Affairs Committee Inquiry into Nationhood, National Identity and Democracy, the Senate's recent inquiries into science itself are of concern to the Academy. These inquiries seek to question science through a political lens, and so cast doubt on the reliability of the scientific method according to the palatability of its results rather than the truth of the underpinning evidence. Political decisions should be based on reliable evidence. The evidence should not be chosen or discarded depending on whether it suits a particular decision.

A final point must be made: any policy relating to exploitation of fossil fuels must have regard to the urgent need to reduce greenhouse gas emissions and prevent catastrophic climate change. As stated in the *Commonwealth Academies of Science Consensus Statement on Climate Change*, avoiding the worst impacts of climate change will require concerted global action to reduce atmospheric carbon. While NOPSEMA is able to regulate oil and gas exploration within its remit, reducing the impacts of climate change will require more robust action on the part of the Australian Government.

If you would like to discuss any aspect of this submission, please contact Mr Christopher Anderson, Director of Policy, Australian Academy of Science (chris.anderson@science.org.au).

² A.G. Carroll, R. Przeslawski, A. Duncan, M. Gunning, and B. Bruce, A critical review of the potential impacts of marine seismic surveys on fish & invertebrates (2017). *Marine Pollution Bulletin*, v114(1), p9-24.
<https://doi.org/10.1016/j.marpolbul.2016.11.038>