

To: National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA)

26 February 2024

Regia 3D Marine Seismic Survey

We appreciate the opportunity to provide comment on CGG Services Australia's proposal to undertake a 3D marine seismic survey in the Otway Basin.

Environment Victoria is the leading not-for-profit environmental advocacy organisation in Victoria. With 40 grassroots member groups and over 200,000 individual supporters, we've been representing Victorian communities on environmental matters for over 50 years. Through advocacy, education and empowerment, Environment Victoria seeks significant and enduring solutions that will safeguard the environment and future wellbeing of all Victorians.

There is clear and growing evidence that seismic blasting permanently and cumulatively harms a very broad range of marine life. However, Australian law does not account for this threat and seismic blasting is allowed in marine parks and other critical ocean habitats.

Recent Australian studies have shown that seismic blasts kill shellfish and zooplankton more than a kilometre away and "there is a significant and unacknowledged potential for ocean ecosystem function and productivity to be negatively impacted by present seismic technology."¹

Seismic blasting causes temporary and permanent hearing loss, abandonment of habitat, disruption to mating and feeding, beach strandings, and even death, to whales, dolphins and seals.² The Otway Basin provides important habitat for such animals including protected sanctuaries for blue whales, southern right whales, and their calves.

Recent studies funded by CGG found uncontrollable impacts from seismic blasting. Seismic blasting causes lasting injuries to lobsters as well as slowing their development and growth, and causing physiological stress.³ Another study from the same research program tested effects on octopus from

¹ Robert D. McCauley et al., 'Widely Used Marine Seismic Survey Air Gun Operations Negatively Impact Zooplankton', *Nature Ecology & Evolution* 1, no. 7 (22 June 2017): 1–8, <https://doi.org/10.1038/s41559-017-0195>.

² RP Koper and S Plön, 'The Potential Impacts of Anthropogenic Noise on Marine Animals and Recommendations for Research in South Africa' (Endangered Wildlife Trust, 2012), <https://biblioteca.biofund.org.mz/wp-content/uploads/2018/11/1542889906-F1727.Ewt%20Research%20&%20Technical%20Paper%201%20-%20Koper%20&%20Plon%20-%20Ocean%20Noise%20Pollution.Pdf>.

³ Ryan D Day et al., 'Examining the Potential Impacts of Seismic Surveys on Octopus and Larval Stages of Southern Rock Lobster - Part A Southern Rock Lobster' (Fisheries Research and Development Corporation, 2021), <https://www.frdc.com.au/sites/default/files/products/2019-051-Examining-potential-impacts-of-seismic-PART%20A-SRL-larval-stages-15July2021.pdf>.

blasting up to one kilometre away.⁴ It found that blasting cause developmental delays in octopus eggs, and exposed octopus showed significantly reduced feeding, maternal care of eggs and adventurous behaviour. Octopus' sensory systems were significantly damaged. This study was not able to determine a safe operating distance for seismic blasting.

These examples are just some of the evidence of the harms of seismic blasting. There remain information gaps about the environmental impacts of seismic blasting, and the EPBC Act is clear that the precautionary principle applies when there is a lack of scientific knowledge. Despite this CGG compensates fishers for their reduced catch⁵ rather than acting to avoid ecosystem harm.

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⁴ Ryan D Day et al., 'Physiological and Behavioural Effects of Exposure to a Commercial Seismic Survey on the Pale Octopus, *Octopus Pallidus*', in *Programme & Abstract Book* (OceanNoise 2023, Barcelona, 2023), <https://2023.oceanoise.com/wp-content/uploads/2023/05/Abstract-booklet.pdf>.

⁵ 'Victorian Fishers Say Catch Has Dropped by 80 per Cent since the Start of Seismic Surveying', *ABC News*, 7 June 2020, <https://www.abc.net.au/news/2020-06-07/seismic-testing-reducing-fishing-catch-on-east-coast/12297830>.