

# Senate Environment and Communications References Committee

## Impact of seismic testing on fisheries and the marine environment

Submission from the Government of South Australia

December 2019



## Introduction

This is a whole-of-government submission from the Government of South Australia to the Senate Environment and Communications References Committee.

Since 2012, the National Offshore Petroleum Safety and Environmental Management Authority (“NOPSEMA”) has been the sole regulator of health and safety, well integrity and environmental management for offshore oil and gas operations in Commonwealth waters.

NOPSEMA’s approach to the regulation of seismic surveys and other offshore petroleum-related activities is one of the most robust and precautionary in the world.

The Government of South Australia has full confidence in NOPSEMA’s expertise, processes and decision-making.

The Government of South Australia supports the continued oversight by NOPSEMA of offshore oil and gas operations in Commonwealth waters.

## General comments on marine seismic surveys

- South Australia has a long experience of well-regulated, safe and environmentally sustainable exploration in its offshore basins including Commonwealth waters.
- Explorers have carried out marine seismic surveys in Australian waters for more than 50 years and requirements under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (“EPBC Act”) have been in place for 20 years.
- A well-regulated offshore petroleum industry in Australia continues to make a significant contribution to both Australian society and the national economy.
- Experience in Australia and worldwide shows that fisheries and seismic surveying with appropriately robust regulation do successfully co-exist.
- This experience includes 130 seismic surveys safely conducted in offshore South Australia comprising more than 148,800 kilometres of 2D and more than 45,000 square kilometres of 3D marine seismic surveys.
- Explorers use marine seismic surveys to create detailed images of the subsurface to assist in the identification of possible hydrocarbon accumulation targets for exploration wells and to map the extent of discoveries to optimise their development.
- No other technology is currently capable of providing the necessary level of detail generated by marine seismic surveys.
- Industry and academia have been researching possible alternative sound-sources such as marine vibrators and the Government of South Australia encourages further research and development efforts.
- The Government of South Australia strongly supports appropriate and effective community engagement during the approvals process for petroleum-related activities.
- The Government of South Australia takes seriously any impacts of marine seismic surveys to the migratory patterns of fish species given the importance of the Southern Bluefin Tuna fishery and aquaculture industries to the State.
- A report prepared for the Department of Primary Industries and Regions South Australia (“PIRSA”) estimates marine industries in South Australia contributed about \$1.9 billion in value add to the state economy, representing about 2 percent of gross state product.
- In 2017-18, South Australia produced 70,000 tonnes of seafood through fisheries and aquaculture generating gross food revenue of \$925 million.

- Southern Bluefin Tuna ranching comprises about 95 percent of the Australian market with 90 percent of the catch exported mostly to Japan.
- Wild fish captured in nets in waters off Port Lincoln are fattened in pens before harvest.
- PIRSA estimates South Australia annually produces up to 9000 tonnes of gilled and gutted Southern Bluefin Tuna with a gross value of up to \$300 million.
- Similarly, the Government of South Australia would seriously regard any impact offshore exploratory activity had on large marine fauna.
- The migration of southern right whales to South Australian waters are a visitor drawcard that supports a local marine tourism industry on the Great Australian Bight and Fleurieu Peninsula.
- Marine tourism, which includes whale and dolphin watching, is valued at \$615.3 million a year in South Australia. About \$9.8 million of marine-related tourism occurs on South Australia's West Coast and \$326.7 million on the Gulf St Vincent and Kangaroo Island.
- The Government of South Australia supports minimising the potential impacts on fisheries by avoiding seismic surveys in summer-autumn when Southern Bluefin Tuna and other migratory marine fauna are abundant in the Great Australian Bight.
- The Government of South Australia supports the existing precautionary cetacean-related requirements for marine seismic surveys and encourages further research so science-driven updates can be made as necessary to Commonwealth regulations.
- The Government of South Australia believes that data and reports from all seismic-related marine fauna monitoring activities in Australian waters and worldwide should routinely be made public, even if publication is not mandated by regulations.
- The Government of South Australia looks forward to analysing the final results of the comprehensive Australian Institute of Marine Science's Northwest Shoal to Shore study, which is due to finish in mid-2020.
- The Government of South Australia would strongly support further carefully designed, field-based research under realistic conditions into the effects of seismic surveys on marine fauna, while noting the challenges and costs related to such research.
- Information from this research would allow the existing science-driven exposure guidelines for fish and other marine species to be refined and inform NOPSEMA's regulatory processes and location-specific survey design.

## The regulation of seismic testing in Commonwealth and State waters

- Commonwealth legislation in relation to offshore exploration in Australian waters comprises the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (“OPGGS Act”) and the *EPBC Act*.
- In South Australia, legislation affecting offshore exploration and oil and gas activities in State waters comprises the *Petroleum (Submerged Lands) Act 1982* and the *Petroleum and Geothermal Energy Act 2000*.
- The *OPGGS Act* requires consultation by permit holders with all “Relevant Persons” during the preparation of environment plans (“EPs”) for seismic surveys.
- Relevant Persons include industries potentially affected by a marine seismic survey.
- Consultation with relevant persons helps identify location-specific seasonality issues that permit holders are required to mitigate within the EPs submitted to NOPSEMA for assessment.
- NOPSEMA is empowered to return EPs for modification if permit holders omit to consult any key stakeholders or if the levels of consultation are deemed unsatisfactory.
- NOPSEMA will only accept an EP for a seismic survey or any other petroleum activity if it is satisfied all impacts and risks to the environment are at acceptable levels and are reduced to ‘As Low As Reasonably Practicable’ (“ALARP”).
- NOPSEMA acceptance also requires demonstrable plans for full compliance with the *EPBC Act* and, in particular, *EPBC Act Policy Statement 2.1: Interaction between offshore seismic exploration and whales*.
- Compliance requirements include the use of soft-start procedures, deployment of Marine Fauna Observers on data acquisition vessels and power down and stop work provisions within defined precaution zones.
- Soft start procedures require a sequential ramp-up of the acoustic source, which allows for a slow increase in acoustic energy.
- Permit holders must also consider the American National Standards Institute’s (“ANSI”) sound exposure guidelines for fish in EPs submitted to NOPSEMA for surveys in Australian waters.
- When appropriate (depending on water depths, critical habitats, expected species etc.), the EP must clearly demonstrate that the survey will not exceed the critical sound exposure levels in the ANSI guidelines for the various species of fish that are expected to be in the survey area. This requires area-specific sound attenuation modelling.

- The Government of South Australia supports NOPSEMA's approach to the regulation of seismic surveys and other petroleum-related activities and the EPBC Act Policy Statement in relation to interaction between offshore seismic activities and whales.
- NOPSEMA's approach is one of the most robust and precautionary in the world, and the Government of South Australia has full confidence in NOPSEMA's expertise, processes and decision-making.
- A review by Australia's Chief Scientist Alan Finkel independently confirmed NOPSEMA's competence in regulating offshore drilling activities.
- The Government of South Australia supports the current offshore regulatory regime for marine seismic surveys.
- The regime has consistently ensured environmentally responsible outcomes and has appropriately balanced offshore petroleum-related activities with the needs of other co-existing industries.
- The Government of South Australia does not support undue restrictions on or prevention of the acquisition of appropriately regulated marine seismic surveys.
- The Government of South Australia would not support unnecessarily prescriptive or restrictive revisions to the current regulatory regime.
- There are no current offshore petroleum tenements in South Australian State waters.
- In the event that the Government of South Australian granted such tenements, it would be confident in conferring its regulatory powers and functions to NOPSEMA.