



## SCALLOP FISHERMEN'S ASSOCIATION OF TASMANIA Inc

15 November 2019

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

Dear Sir

### **Impact of Seismic Testing on Fisheries and the Marine Environment**

Thank you for the opportunity to lodge a submission to the Senate inquiry on this very important matter.

The SFAT represents the best interests of commercial scallop fishermen members from both Tasmania and Victoria who hold entitlements to take scallops in the Commonwealth managed Bass Strait Central Zone Scallop Fishery.

This fishery is managed by AFMA and is regarded as one of the best managed commercial fisheries in Australia. There is a Federal Government approved management plan and Scallop Harvest Strategy along with rotational harvesting practises which ensures that growing stocks are protected for the future.

All vessels in the fishery are equipped with satellite-based vessel monitoring systems and AFMA, researchers and industry work closely together to ensure the long-term sustainability of the fishery and to maximise the economic returns. There are significant employment benefits from this industry particularly in regional areas.

Despite strong objections and many representations to government agencies and elected representatives, GeoScience Victoria undertook an intense 2D seismic program over the Greenhouse Gas Storage Blocks (Gipp-01, 02 and 03) in Bass Strait generally north of Flinders Island starting in February 2010 for a period of two months.

This marine seismic survey covered a massive area of approximately 16500 square kilometres entirely within the Commonwealth waters of the Gippsland Basin using the vessel *MV Aquila Explorer* to run intense seismic transects across the whole permit area.

The seismic transect lines crossed immediately over known commercial scallop beds in Bass Strait that had been identified following fishery research surveys over the previous few years.

An early 2010 pre-season research survey undertaken by industry before the seismic found that scallops in the known beds were in good condition and most were suitable for harvest later that year. Other shellfish in the area were also in good condition.

As these known scallop beds were continually monitored for future harvesting we had chosen to protect all this resource and we certainly did not want seismic activity to disrupt in any way the spawning, settlement and growing cycle of scallops in this vast area. We repeatedly warned the seismic proponents of the likely impact on scallop stocks but were mostly ignored and the 2D seismic program went ahead from 19 February 2010.

Several months later in mid-June 2010 when seasonal scallop harvesting would normally commence it was immediately apparent that the very valuable scallop stocks had been impacted and were either newly dead or dying at a time when they should be in peak condition. Many surviving scallops were in a very weak condition and we believed were likely to die in the next few weeks.

Climate change was not believed to be a reason for the mortality as water temperatures had been normal all year and routine testing of scallops revealed no sign of disease. The younger age class of scallops in the area ruled out the beds dying of old age.

Significantly a southern protected area of scallops that was not in the path of the seismic activity were in the usual good condition with all classes of scallops, native oysters, razor clams and cockles showing no sign of stress or abnormal mortality.

The estimated loss of around 24,000 tonnes of scallops with a retail value in excess of \$70M had a significant impact on fishermen, processors and regional economies in both Tasmania and Victoria. There was plenty of forensic evidence with masses of dead scallop shells but no definite proof that seismic was the cause.

Scientific advice subsequently indicated that the intense and continual seismic air gun pulses may have caused the scallops to take flight with repeated startled responses exhausting them to the point of delayed mortality several months later. Several age classes were impacted so age was not a factor and other shellfish species in the impacted area also died at the same time.

The impact on highly vulnerable scallop larvae in the water column, scallop spat and juvenile scallops was not immediately known but it could be reasonably assumed that seismic resulted in total mortality. Future generations of scallops were obviously affected and limited research surveys since have shown that the impacted areas have still not recovered some nine years later with no known commercial beds of scallops in harvestable quantities in the seismic coverage areas.

To better understand the impact of this type of seismic on marine species the SFAT encouraged a collaborative research project with the Tasmanian Aquaculture and Fisheries Institute, Curtin University and other experts to study and measure the effects of seismic on unrestricted wild scallops and other marine species.

Some four years later in October 2016 the FRDC supported research projects determined that exposure to seismic surveys is associated with behavioural and physiological changes in commercial scallops and Southern Rock Lobster and a chronic reduction in animal immune systems. These physiological changes reduce the tolerance to other environmental stressors and increase the risk of mortality.

The FRDC research projects to investigate concerns about marine seismic were all completed in 2016 and are listed below -

*2012-008 Assessing the impact of marine seismic surveys on southeast Australian scallop and lobster fisheries,*

*2013-209 Optimising processes and policy to minimise business and operational impacts of seismic surveys on the fishing industry and oil and gas industry,*

*2014-041 Potential impact of low frequency sound from seismic operations on benthic communities in the Gippsland Basin.*

These reports support scallop industry observations that delayed scallop mortality occurred some 2 to 4 months after the seismic survey was conducted.

As a result of the devastation to the Bass Strait scallop fishery in 2010 there is a clear need for future regular, ongoing meaningful consultation and dialogue between the commercial fishing industry and the oil and gas sectors.

Never again should marine seismic operations be permitted that can impact on valuable marine resources where operators hold government approved fishing entitlements without full and fair compensation being paid well in advance.

Yours faithfully

**R K LISTER**  
**Executive Officer**