Information for relevant persons – commercial fishers

Santos

Eos 3D Marine Seismic Survey Environment Plan

Activity overview

This Information Sheet provides additional information on proposed on-water activities, an overview of fisheries potentially impacted by these activities and details on Santos' approach to the co-existence of marine seismic surveys and commercial fishing. This approach is defined by:

- Minimising the extent of interruption by the seismic survey activities on commercial fishing operators' activities to the lowest practicable level.
- Mitigating the effects of the interruptions.
- Application of an equitable 'commercial fishers payment claim protocol'.

In developing this information Santos acknowledges the **Guidance framework Supporting cooperative coexistence of seismic surveys and commercial fisheries in Australia's Commonwealth marine area**.

Providing feedback and activity notification

Santos recognises the importance of the offshore petroleum and commercial fishing industries to regional and national economies, as well as the rights and responsibilities of individual operators to go about their respective activities.

Commercial fishers are encouraged to contact Santos by close of business on **26 October 2023** to discuss the proposed survey acquisition sequence and ways to minimise interference with fishing operations and vessel movements.

Opportunities are also provided to establish on-water communications, including activity notifications prior to the start, during and upon completion of activities.

Please note that any feedback provided is required to be recorded in the Eos 3D MSS Environment Plan (EP) that will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for assessment. Please let us know if you would like your personal/organisational details or any part of your feedback to remain private and we will ensure this remains confidential to NOPSEMA.

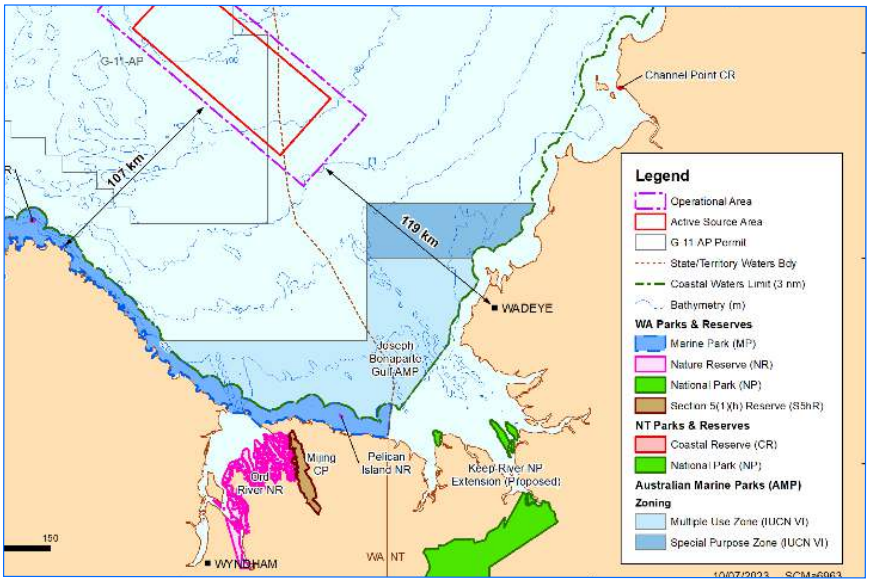

Figure 1. *Eos 3D MSS activity location*

Activity description

Activity details		
Timing	Earliest commencement of the activity is Q3 2024, however, activity may occur anytime from EP acceptance by NOPSEMA to the end of December 2026.	
Duration	• Up to 50 days to complete the activity. • The expected duration is a forecast and is subject to change based on adverse weather conditions or technical/equipment issues that may arise during the activity.	
Water depth	Operational Area 60 m to 115 m.	Active Source Area 67 m to 111 m.
Vessels	• Seismic survey vessel. • Up to two dedicated support vessels (one being a chase vessel) will accompany the seismic survey vessel to provide logistical, safety and equipment management duties. • Vessel details are unknown at this time.	
Vessel speed	Approx 4.5 knots (8.3 km/hr).	
Survey azimuth (line orientation)	North-west / south-east.	
Active source area	Total area: 4,028 km^2.	
Time to traverse a single sail line	Approx. 8 hrs and 30 mins.	
Seismic streamer length	Approx. 8 km.	
Sail line turn time	Approx. 3 – 4 hrs.	
Seismic streamer depth	Between 10 m and 30 m.	
Sail line spacing	Approx. 500 m – 700 m.	
Total seismic streamer spread width	Approx. 1,350 m.	
Volume of seismic source	Max. 3,050 in$^{3.}$	
Operating pressure	2,000 psi.	
Seismic source depth	Approx. 6 – 8 m.	
Seismic source interval	Approx. 8.33 m.	
Exclusion zone	3 nm (5.6 km) exclusion (safety) zone around the seismic vessel and trailing streamers.	
Greenhouse gas assessment permit	G-11-AP.	

Commercial fishery implications

Santos has undertaken an assessment to define the environmental, social, economic and cultural features that may be affected by proposed activities.

As part of this process, we have identified commercial fisheries that have been active in the Operational Area whose functions, interests and activities may be affected by planned activities, acknowledging that seismic surveys can potentially result in:

- Behaviour changes of target species in response to underwater noise emissions and the physical presence of the seismic vessel and trailing equipment.
- Disruption or temporary physical displacement of fishing operations from preferred fishing grounds and/or damage to fishing gear due to interaction with the survey vessel and trailing equipment.

We have also identified those fisheries that are entitled to fish in the broader Environment that May Be Affected (EMBA).

Table 1 provides an overview of those fisheries active in the Operational Area and those licensed to fish in the EMBA. Our fisheries assessment is based on publicly available government managed catch and effort data, our ongoing discussions with commercial fishing representative organisations, and historic engagements for previous petroleum activities.

Fishery	Operational Area	EMBA
Commonwealth fishery		
Northern Prawn Fishery	Yes	Yes
North West Slope Trawl Fishery	No	Yes
Southern Bluefin Tuna Fishery	No	Yes
Western Tuna and Billfish Fishery	No	Yes
Western Skipjack Fishery	No	Yes
WA fishery		
Northern Demersal Scalefish Managed Fishery	Yes	Yes
Mackerel Managed Fishery	Yes	Yes
Kimberley Prawn Managed Fishery	No	Yes
West Australian Sea Cucumber Fishery	No	Yes
Pearl Oyster Managed Fishery	No	Yes
Marine Aquarium Fish Managed Fishery	No	Yes
Specimen Shell Managed Fishery	No	Yes
NT fishery		
Demersal Fishery	Yes	Yes
Spanish Mackerel Fishery	Yes	Yes
Offshore Net and Line Fishery	Yes	Yes
Aquarium Fishery	Yes	Yes
Timor Reef Fishery	No	Yes
Barramundi Fishery	No	Yes
Coastal Line Fishery	No	Yes
Trepang Fishery	No	Yes
Development – Small Pelagic	No	Yes
Coastal Net Fishery	No	Yes

Table 1. Commercial fisheries identified

The EMBA is defined by the spatial extent of activity impacts (e.g., facility presence, light, noise) and risk (e.g., hydrocarbon spill). The EMBA for this activity is the outer boundary of a worst-case marine diesel oil spill resulting from a vessel collision (see **Figure 2**).

While the EMBA represents the largest possible spatial extent that could be contacted by any of the worst-case spill events modelled, an actual spill event is more accurately represented by only one of the simulations from the modelling, resulting in a much smaller spatial footprint in the event of an actual spill. Often one or more simulation runs are selected to be representative of the 'worst-case' based on the nature and scale of the activity and the local environment. However, both the EMBA (based on numerous possible spills) and the single representative worst-case oil spill are used for the environmental risk assessment and oil spill preparedness and response planning.

Please see the **NOPSEMA Spill Modelling Video** for more information on oil spill modelling and why it is required for the preparation of Environment Plans.

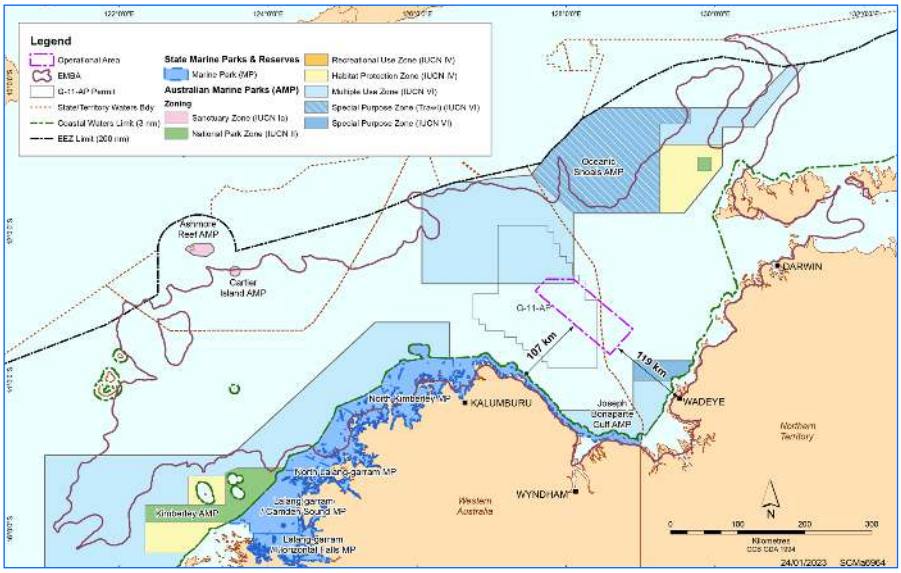

Figure 2. . Eos 3D EMBA location

Operational Area access

Commercial fishers and other marine users can access the Operational Area but are requested to avoid the 3 nm (5.6 km) exclusion (safety) zone around the seismic vessel and trailing streamers during the survey to ensure the safety of the seismic vessel and third-party vessels.

Santos has proposed the below control measures where seismic and commercial fishing activities occur concurrently:

- Santos will not restrict commercial fishing access to the Operational Area where safe to do so and concurrent operational planning will be undertaken with commercial fishers.
- Santos will develop communication protocols including direct radio contact for both parties at sea and provide operational survey plans, commencement and cessation notifications, and daily operational reports if requested.
- At a minimum the daily operational reports will include:
  - Current seismic survey vessel position.
  - Look ahead seismic survey activities and vessel positions.
  - Support vessel activities and positions.
  - Vessel contact details.
  - Santos WA management contact details.

Commercial key indicator fish species spawning

The Eos 3D MSS EP will include an assessment of potential temporal overlap between spawning periods for commercial key indicator fish species and acquisition of the survey. Control measures are presented in the following text. A summary is provided in **Table 2**.

Commercial prawn and indicator fish species spawning	J	F	M	A	M	J	J	A	S	O	N	D	Source
Banana prawn spawning													AFMA 2020
Juvenile banana prawn migration													Longeran et al. 2002
Brown tiger prawn spawning													AFMA 2020
Grooved tiger prawn spawning													AFMA 2020
Blue endeavour prawn spawning													AFMA 2020
Red endeavour prawn spawning													AFMA 2020
Red emperor													DPIRD 2019
Goldband snapper													DPIRD 2019
Spanish mackerel (Kimberley stock)													DPIRD 2019

Key

Sensitivity/activity occurs

Extended peak spawning period

Peak spawning/migration period

Commercial fishers payment claim protocol

The survey will potentially impact commercial fishers whose fishing operations overlap with the seismic survey.

Santos has a process to enable commercial fishers to lodge evidence-based payment claims for temporary loss of fish catch, displacement costs and equipment damage or loss directly caused by the seismic survey. Santos will also assess requests for administrative support to help fishers collate historical fishing data required for an evidence-based payment claim.

The control measures identified within the draft Environment Plan, to outline how the potentially competing demands of commercial fishing operators and Santos' seismic survey may be managed, are consistent with those adopted for other Santos marine seismic surveys.

Consultation

All greenhouse gas activities in Commonwealth waters must have an Environment Plan (EP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) before any activities can take place.

Under Commonwealth Environmental Regulations, Santos is required to consult with relevant persons about proposed activities when preparing an EP. A relevant person includes authorities, persons or organisations whose functions, interests or activities may be affected by the proposed activity.

Consultation provides Santos with an opportunity to receive feedback from authorities, persons and organisations whose functions, interests or activities may be affected by proposed activities.

This feedback helps us to refine or change the management measures we are planning to address potential activity impacts and risks. Santos' objective for proposed activities is to reduce environmental impacts and risks to a level that is As Low As Reasonably Practicable (ALARP) and acceptable over the life of the activity.

Consultation also helps us to identify values and sensitivities where information is not publicly available, such as first-hand feedback on commercial fishing activities and interests.

Providing feedback

If you consider that you have commercial fishing functions, interests or activities that may be affected by our proposed activity, you may be a relevant person. Please contact us by **26 October 2023** to allow Santos time to initiate consultation with you, so you can tell us how you would like to be consulted throughout this process or if you need additional information.

The merits of relevant person feedback provided through the consultation process will be considered during EP development, with a summary of responses summarised and included in the EP submitted to NOPSEMA for assessment.

More information about how community members can participate in environmental approvals for activities proposed in Commonwealth waters has been published in a **brochure** by NOPSEMA.

Contact

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