

Barossa Development

Production Operations Environment Plan

Santos

Additional information for commercial fisheries

In addition to the Santos Barossa Production Operations Environment Plan June Fact Sheet, the following supplementary information is for commercial fishers active in the region.

Based on designated fishing zones, available historical catch data and previous consultation, the proposed activity has the potential to affect the following commercial fisheries:

Commonwealth managed fisheries

- Northern Prawn Fishery
- Southern Bluefin Tuna Fishery
- Western Skipjack Tuna Fishery
- Western Tuna and Billfish Fishery

Northern Territory (NT) managed fisheries

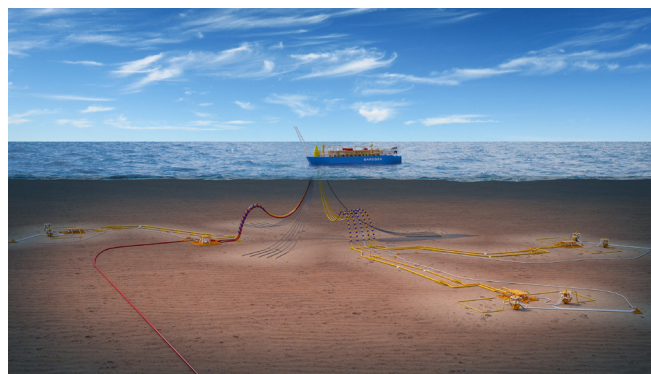
- Aquarium Fishery
- Spanish Mackerel Fishery
- Timor Reef Fishery
- Demersal Fishery

Commonwealth and NT managed commercial fisheries are illustrated in **Figure 1** and **Figure 2**, and bathymetric contours are illustrated in **Figure 3**. A summary of Santos' knowledge of fishing effort in these fisheries in relation to the Barossa Field and Barossa Gas Export Pipeline (Barossa GEP) is provided in **Table 1** and **Table 2**.

A summary of issues and concerns raised with Santos relevant to commercial fisheries during consultation on other proposed activities in the Barossa Development Area is provided in **Table 3**.

These include:

- Interference with commercial fishing activities and exclusion from fishing areas.
- Introduction of Invasive Marine Species (i.e., marine pests).
- Vessel collision and hydrocarbon and chemical transfer incidents.



Feedback

Santos is committed to working together with the commercial fishing industry with the intent that each can proceed with their business in a safe and efficient manner, without loss or conflict.

To this end, if you have any objections, claims or information requests regarding this activity please contact us by 15 July 2022 via phone or email. Santos

would be pleased to meet in person, or to arrange an online forum, to discuss further. Santos will endeavour to address all stakeholder feedback prior to the Environment Plan being submitted to NOPSEMA.

Equally, if you do not wish to receive further information from Santos on this activity, please advise directly or through your representative body. Consultation for this activity will be ongoing post regulatory acceptance and throughout the period of the operations.

Contact

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Table 1: Summary of Commonwealth Managed Fisheries

FISHERY	SUMMARY OF FISHERY IN RELATION TO THE BAROSSA PRODUCTION OPERATIONS AREA	ASSESSMENT OF POTENTIAL IMPACTS
Northern Prawn Fishery	<p>The Northern Prawn Fishery management area extends over Australia's northern coast, between Cape York in Queensland and Cape Londonderry in WA, from the low water mark to the outer edge of the Australian Fishing Zone (AFZ). The majority of the fishing effort within the Northern Prawn Fishery, which is undertaken using trawling nets, occurs in the areas of the Gulf of Carpentaria, Joseph Bonaparte Gulf and along the Arnhem Land coast. The key target species are banana prawns, tiger prawns and endeavour prawns.</p> <p>There are two fishing seasons, with the season end date dependent on catch rates:</p> <ul style="list-style-type: none"> Season 1 (mainly banana prawns caught): 1 April – 15 June Season 2 (mainly tiger prawns caught): 1 August – end of November <p>The areas of low, medium and high fishing effort are distant from the Barossa Field. Based on previous industry consultation prawn fishing is not expected in water depths greater than ~130 m. The fishery is expected to be active in the pipeline operational area during the permitted fishing seasons. Scampi are targeted in deeper waters north of the Barossa Field. There is a low level of scampi fishing spread across two to three months of the year.</p>	<p>FPSO and subsea infrastructure: No impact to the prawn fishery expected given the location and water depth within the Barossa Field.</p> <p>Scampi fishing occurs in deeper waters (>250 m) with recorded fishing effort to the north of the Barossa Field. The activities are not expected to displace trawl fishers or affect scampi catch.</p> <p>GEP: No impact to the fishery expected. Fishing activities are not restricted near pipelines during operations. The pipeline location will be clearly marked on nautical charts.</p>
Southern Bluefin Tuna Fishery	<p>The Southern Bluefin Tuna Fishery operates around Australia and extends to the high seas fishing zone (out to 200 nm from the coast). The fishery targets southern bluefin tuna only. Fishing activity is focused in southern Australian waters with no activity expected within the Operational Area (OA).</p>	No impact to the fishery expected within the OA.
Western Skipjack Tuna Fishery	<p>The Western Skipjack Tuna Fishery extends west from Cape York Peninsula and around Australia to the South Australian / Victorian border, out to the edge of the AFZ.</p> <p>Little fishing activity has been undertaken in this fishery since 2008. No fishing activity associated with this fishery is expected to occur within the Operational Area.</p>	No impact to the fishery expected within the OA.
Western Tuna and Billfish Fishery	<p>The Western Tuna and Billfish Fishery management area extends over a large area westward from Cape York Peninsula off Queensland, around the west coast of WA and eastward, across the Great Australian Bight to 141°E at the South Australian/Victorian border.</p> <p>The fishery has operated at low levels of effort since the early 2000's due to economic conditions. Target species include albacore, bigeye tuna, yellow fin tuna, swordfish and striped marlin. No fishing activity associated with this fishery is expected to occur within the Operational Area.</p>	No impact to the fishery expected within the OA.

Figure 1: Commonwealth Managed Fisheries

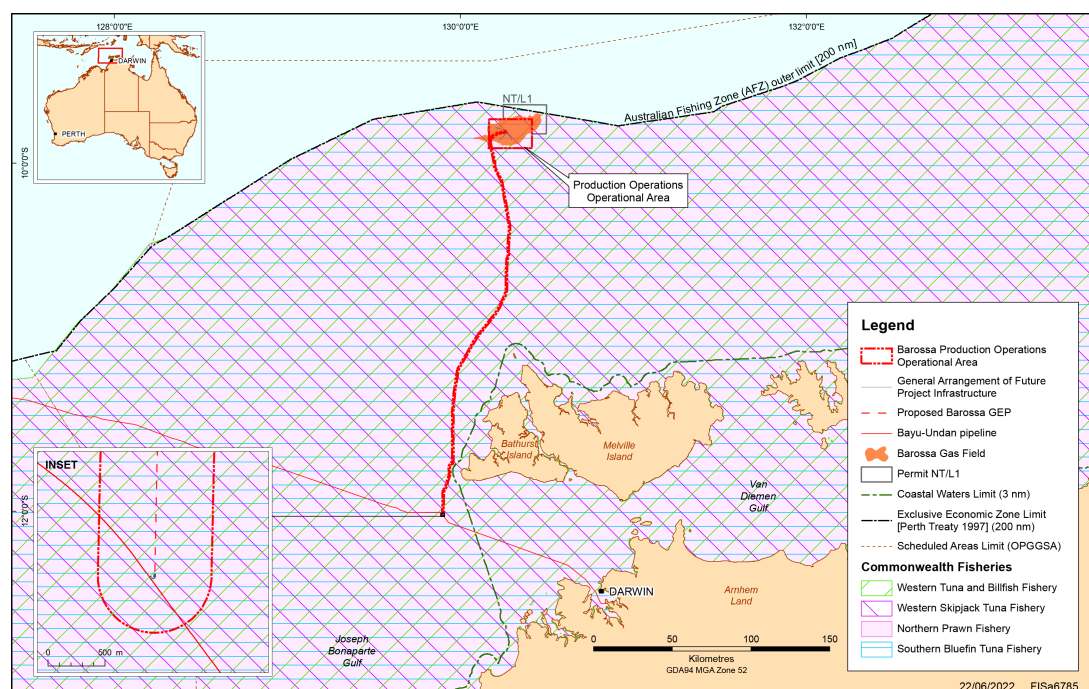


Table 2: Summary of Northern Territory Managed Fisheries

FISHERY	SUMMARY OF FISHERY IN RELATION TO THE BAROSSA PRODUCTION OPERATIONS AREA	ASSESSMENT OF POTENTIAL IMPACTS
Aquarium Fishery	<p>The Aquarium Fishery is a small-scale, multi-species fishery that prospects freshwater, estuarine and marine habitats to the outer boundary of the AFZ. The harvest of most marine species, via small skimmer nets and pots, occurs within 100 km of Nhulunbuy and Darwin, though one license holder does occasionally collect from offshore locations, including at Evans Shoal (approximately 65 km west of the Barossa Field).</p> <p>Some fishing activity may occur near the Operational Area on limited occasions at shoals either west of the Barossa Field or near the GEP.</p>	<p>FPSO and subsea infrastructure: No impact to the fishery expected.</p> <p>GEP: Fishing activities are not restricted near pipelines during operations. The pipeline location will be clearly marked on nautical charts.</p>
Spanish Mackerel Fishery	<p>The fishery extends seaward from the high-water mark to the edge of the AFZ. The majority of the fishing effort occurs in the vicinity of reefs, headlands and shoals and includes waters near Bathurst Island, New Year Island, northern and western Groote Eylandt, the Gove Peninsula, the Wessel Islands, the Sir Edward Pellew Group and suitable fishing grounds on the western and eastern mainland coasts. Fishing methods used are troll or hand lines, rods or small mesh nets. Fishing activity in the Operational Area is only expected to occur near the southern end of the GEP.</p>	<p>FPSO and subsea infrastructure: No impact to the fishery expected.</p> <p>GEP: No impact to the fishery expected. Fishing activities are not restricted near pipelines during operations. The pipeline location will be clearly marked on nautical charts.</p>
Timor Reef Fishery	<p>The Timor Reef Fishery (TRF) extends north-west of Darwin to the WA-NT border and to the outer limit of the AFZ. Fishing occurs primarily in the 100m to 200m depth range.</p> <p>Previous consultation indicates that the main target species is goldband snapper, with other tropical snappers (e.g., crimson snapper and saddletail snapper) also making up part of the catch. There are two active fishing licence holders currently operating in the fishery. The main fishing method is trap fishing (some trawl). The fishery is most productive between October and May, with less activity during the dry season months of June-August due to strong northerly winds. Fishing activity in the Operational Area only occurs near the northern end of the GEP.</p>	<p>FPSO and subsea infrastructure: No impact to the fishery expected.</p> <p>GEP: No impact to the fishery expected. Fishing activities are not restricted near pipelines during operations. The pipeline location will be clearly marked on nautical charts.</p>
Demersal Fishery	<p>The fishery extends from waters 15 nm from the low water mark to the outer limit of the AFZ, excluding the area of the Timor Reef Fishery. Some fishing activity may occur in the Operational Area near the GEP. The fishery targets species such as goldband snapper, red snapper and red emperor and fishing methods are via vertical, drop or long lines, baited traps and semi-demersal trawl nets in some areas.</p>	<p>FPSO and subsea infrastructure: No impact to the fishery expected.</p> <p>GEP: No impact to the fishery expected. Fishing activities are not restricted near pipelines during operations. The pipeline location will be clearly marked on nautical charts.</p>

Figure 2: Northern Territory Managed Fisheries

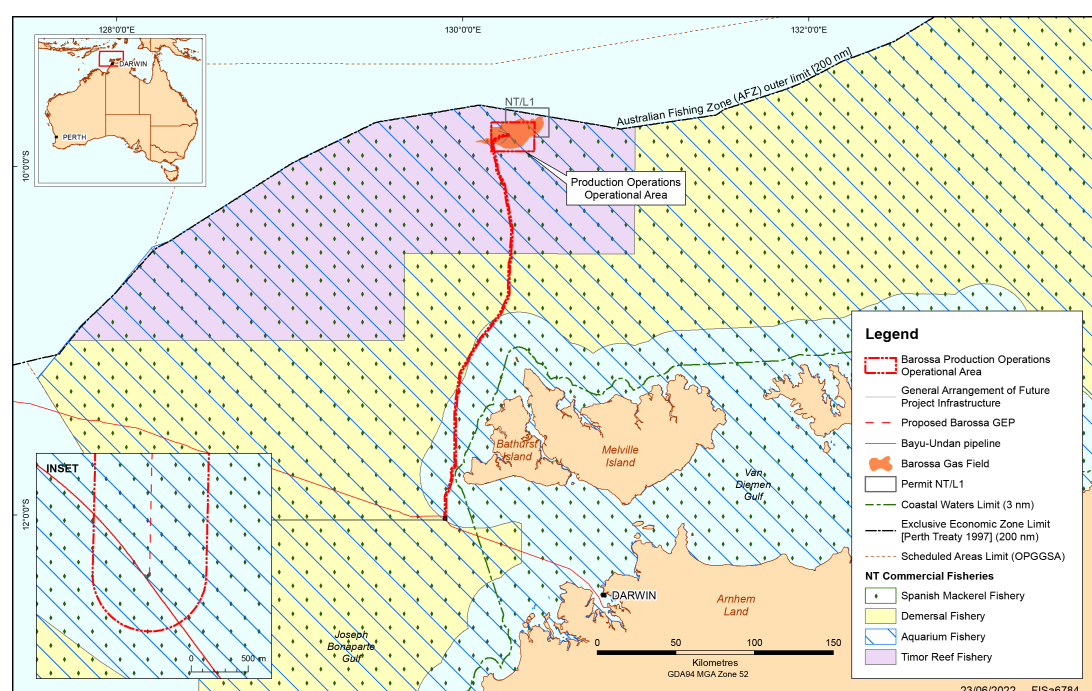


Table 3: Summary of potential impacts to commercial fisheries from Production Operations activities and proposed control measures

POTENTIAL IMPACT	PROPOSED CONTROL MEASURES
Interference with commercial fishing activities and exclusion from fishing areas	<ul style="list-style-type: none"> The Northern Prawn and Timor Reef fisheries are the two fisheries potentially affected by movement of the FPSO vessel to its location in the Barossa Field. Relevant commercial fishing licence-holders will be notified in advance of the operations commencing, and Santos commits to ongoing communications with licence holders as requested. Australian Hydrographic Service (AHS) Notice to Mariners and AMSA Maritime Safety Information (MSI) will also be notified in advance of the operations commencing. Petroleum Safety Zones (approx. 500 m radius) around installed relevant subsea equipment (wells, manifolds/terminations, risers and moorings), subject to NOPSEMA acceptance and gazettal. A Precautionary Safety Zone within the Operational Area will also be requested (via AMSA process). Santos will not restrict commercial fishing access to the Barossa Field, other than within Petroleum Safety Zones and is committed to concurrent operations where safety is not compromised. Transiting support vessels will avoid commercial vessels that are actively fishing. Location of the GEP will be marked on nautical charts. No restrictions on commercial fishing activity near the pipeline.
Introduction of Invasive Marine Species (i.e. exotic marine pests)	<ul style="list-style-type: none"> Vessels are managed to low risk in accordance with the Santos Invasive Marine Species Management Plan. Pursuant to the Biosecurity Act 2015 and Australian Ballast Water Management Requirements 2020, vessels shall manage ballast water so that marine pest species are not introduced. Vessels will have a suitable anti-fouling coating in accordance with the Protection of the Sea (Harmful Anti-fouling Systems) Act 2006.
Vessel collision and hydrocarbon and chemical transfer incidents	<ul style="list-style-type: none"> The FPSO will have an Automatic Identification System (AIS) to aid in its detection at sea and will be double-hulled. The FPSO and visiting vessels will be equipped with an AIS and radar. FPSO will monitor the Petroleum Safety Zone (exclusion) at all times to identify approaching third-party vessels and communicate with the vessels. Visiting vessels will be equipped and crewed in accordance with the Navigation Act 2012 and Marine Orders. All vessels will have a dedicated Ship Oil Pollution Prevention Plan (SOPEP). Hydrocarbon and chemical transfer (vessel to vessel transfer of Production chemicals, Marine Diesel Oil and Condensate) will be undertaken under a Permit-to-Work System and procedures to reduce the risk of a release to sea. An Oil Pollution Emergency Plan (OPEP) will be prepared and implemented as required.

Figure 3: Activity Operational Areas

