Barossa Area Development Offshore Project Proposal

Submission to the Japan Bank for International Cooperation

The Barossa Offshore Development proposal is fundamentally incompatible with a safe climate. The project would contribute little tax and revenue, employ few people, and contribute negatively to the environment. The proposal should not receive financing from JBIC.

Submission

Jubilee Australia Research Centre
The Australia Institute
The Environment Centre NT

March 2021

JUBILEE AUSTRALIA RESEARCH CENTRE

The Jubilee Australia Research Centre engages in research and advocacy to promote economic justice for communities in the Asia-Pacific region and accountability for Australian corporations and government agencies operating there.

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Summary

Jubilee Australia, The Australia Institute and The Environment Centre NT welcome the opportunity to make a submission to the Japan Bank for International Cooperation (JBIC) regarding the Barossa Area Development Offshore Project Proposal.

The Barossa offshore gas development proposal is a significant, controversial and high-risk project, and it is in this light that taxpayer-backed finance facilities to support its development should be rigorously assessed and reviewed.

As research institutions with considerable experience working with economic, social and environmental issues, in particular in the extractive sectors, we have significant concerns regarding the risks and impacts of this project.

Based on our analysis, our organisations are recommending that JBIC does not proceed with this project at this time. Further assessment is needed of the local social and environmental risks it presents, as well as the risks presented by the net cost this project would have for Australians, before we could recommend this project.

The Barossa project and its associated infrastructure is located in close proximity to the Tiwi Islands, and covers an area of global significance for biodiversity. If it proceeds, it could negatively impact these islands' incredible marine life, including an internesting zone and critical habitat for Flatback and Olive Ridley turtles. It could also cause two of Australia's most important tropical fisheries to lose access to important fishing grounds and come under increased risk of seismic testing impacting fish stocks.

The Tiwi islands are occupied by more than 3000 people, 90% of whom are First Nations people, the Tiwi people. It appears the consultation process with the Tiwi traditional owners was severely lacking as there is no evidence of the proponents visiting the three main communities or providing information that is presented in an easily accessible way to an audience which does not have English as their first language. A total of seven submissions were received during the process, none of which were from the Tiwi traditional owners.

Further, the Australian public is very unlikely to benefit from this project. Our system of taxation means very little revenue would accrue to the Australian community. The public is already incurring costs for the decommissioning of offshore oil and gas, and these costs make the already dubious benefits of industry expansion smaller still.

Beyond these impacts, the Barossa Proposal could be one of the dirtiest LNG projects in the world, leading to immense harm to the environment in the immediate vicinity, and further accelerating dangerous climate change.

Due to the high climate risks associated with this project, going ahead with the financing of this project would contradict the stated purpose of JBIC which is "promoting the overseas business having the purpose of preserving the global environment, such as preventing global warming."[1]

[1] JBIC (n.d.) *JBIC Profile – Role and Function Brochure* p 2., https://www.jbic.go.jp/ja/about/role-function/images/jbic-brochure-english.pdf

Environmental and social context

BAROSSA GAS EXPORT PIPELINE CORRIDOR

The proposed Barossa Gas Export Pipeline corridor extends 260km from the Barossa gas field to the existing Bayu-Undan pipeline below the Tiwi Islands. The proposed route traverses two areas within the Oceanic Shoals Marine Park: a 30km section through the Multiple Use Zone (IUCN Category VI) and 31.5 km through the Habitat Protection Zone (IUCN Category II).[2] The Oceanic Shoals Marine Park supports rich sponge gardens, corals and a diversity of fish life, as well as providing important resting and feeding areas for breeding marine turtles. Under the sea there are carbonate (limestone-like) banks, terraces and pinnacles formed during reef-building times when sea levels were high, then exposed, weathered and cut through by rivers as sea levels fell. Submerged again today, these features support rich sponge gardens, corals, sea squirts, sea snakes and many different fish.[3]

Further south, the pipeline corridor comes within 6km of the Tiwi Islands' western coast and passes Shepparton Shoal before joining with the existing Bayu-Undan pipeline.[4]

The Tiwi Islands' Western coastline is recognised as a biologically important internesting area for Olive Ridley turtles *(Lepidochelys olivacea)* and Green turtles *(Chelonia mydas)*. A 10-year study of all turtle species on the Tiwi Islands found that the highest number of recordings occur along the southwestern corner of Bathurst Island (Cape Fourcroy), directly opposite the closest point to the proposed Gas export pipeline.[5]

BAROSSA OFFSHORE DEVELOPMENT AREA

The Barossa Offshore development area lies 100km North of the Tiwi Islands. The immediate development area is situated on a plain comprising homogenous flat, soft sediments and observed benthic macrofauna groups include octocorals (particularly sea pens) and motile decapod crustaceans (mostly prawns and squat lobsters), anemones, starfish, brittle star and soft corals. Several shoals and banks surround the development area, including Goodrich Bank, Lynedock Bank, Evans Shoal, Tassie Shoal and Marie Shoal.

[2] Barossa-Gas-Export-Pipeline-Fact-Sheet-Jan19.pdf
[3] Oceanic Shoals Marine Park | Australian Marine Parks (parksaustralia.gov.au)
[4] Barossa environment description.pdf
[5] Chatto, R, Baker. B (2008) THE DISTRIBUTION AND STATUS OF MARINE TURTLE NESTING IN THE NORTHERN TERRITORY. Technical report 77, NT Parks and Wildlife Service untitled

The shoals/banks appear to be in a healthy condition and support a diverse and varied range of benthic communities, including algae, reef-building soft corals, hard corals and filter-feeders.[6]

An EPBC Protected Matters search identified 18 listed threatened fauna species and 29 listed migratory species (17 of which are also listed as threatened species) that may occur or have habitat in the area. This includes four threatened and 12 migratory cetaceans. The pygmy blue whale (endangered) and Bryde's whale (migratory) are most likely to occur in the project area. Both species were recorded in the project area during noise monitoring undertaken for the project in 2014/2015.[7]

The area of influence of the project is much larger, extending across the Timor and Arafura seas and into the Indian Ocean. This includes the Indonesian islands of Timor and Tanimbar and Australia's Ashmore Reef and Cartier Island to the West. This is primarily due to the strong Indonesian Throughflow and Holloway ocean currents sweeping across northern Australia that would rapidly spread any contamination over a vast area.

TIWI ISLANDS AND FIRST NATIONS PEOPLE

The Tiwi Islands are located approximately 80 kilometres north of Darwin in the Arafura Sea. The islands are occupied by more than 3,000 people, 90% of whom are First Nations people, the Tiwi people. There are three major communities on the islands, Wurrimiyanga, Pirlangimpi and Milikapiti. [8]

Tiwi people have a long and unbroken history with their Country as they have lived there for more than 18,000 years and their traditions go back more than 40,000 years. English is not their first language, as they have their own language, Tiwi. The Tiwi people do not consider themselves to be aboriginal; rather, they consider themselves to be uniquely Tiwi, which is echoed in the translation of the word Tiwi: 'we, the only people'. They share their unique culture and traditional stories through artworks such as paintings, sculptures, ceramic and jewellery, using vibrant colors.[9]

The islands are known for their rich biodiversity. They are home to at least 1,200 species of native plants, 17 frog species, 81 reptile species, 222 bird species and 36 mammal species, some of which are not found elsewhere in the world. Due to the island group's unique flora

[6] Conoco Phillips, section-5.pdf (conocophillips.com)

[7] Day Ryan D, McCauley Robert D.,Fitzgibbon Quinn P., Hartmann Klaas, Semmens Jayson M. 2019. Seismic air guns damage rock lobster mechanosensory organs and impair righting reflex. *Proc.R.Soc.B.*286201914242019142 4 http://doi.org/10.1098/rspb.2019.1424

[8] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf

[9] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf

and fauna, it has been acknowledged as a Site of Conservation Significance by the Northern Territory Government in Australia.[10]

Their natural and cultural resources have been carefully managed by Tiwi people for thousands of years. Traditionally, the resources were used for food, shelter, medicine, spiritual purposes and tools. The Tiwi people view their resources and their people as their greatest assets, which they believe are key for their long-term economic development.[11]

ENVIRONMENTAL RISKS AND IMPACTS

Seismic Testing Risks

The body of evidence detailing negative impacts on marine life from exposure to seismic testing has rapidly expanded in recent years. Research has shown that seismic testing has many severe impacts on important commercial species, including rock lobsters[6], giant squid,[12,13] marine invertebrates,[14] octopus[15] and fish.[16] Zooplankton, which consists of a great diversity of early-life stage larvae, has been shown to have substantial mortality following exposure to seismic signals.[17]

Any consideration of expanding petroleum exploration in the Timor Sea must consider the available published research in the context of the area's prevailing conditions. The Indonesian Throughflow current travels from Indonesia southwest following the NW coast and feeds into WA's Leeuwin current. Seasonally, the Holloway current also flows around the Northwest coast of Australia, feeding into the Leeuwin current. As a result of these ocean currents, recruitment of new cohorts to fisheries further south are heavily reliant on healthy fish populations in the Timor sea.

A good example of the importance of protecting zooplankton in the Northwest can be seen in the Spanish Mackerel Fishery. Larval and juvenile Spanish Mackerel born in the Northwest drift south on the Leeuwin current and restock an important commercial fishery in the

[10] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf

[11] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf

[12] Guerra A, González A, Rocha F. 2004 A review of the records of giant squid in the north-eastern Atlantic and severe injuries in *Architeuthis dux* stranded after acoustic explorations. In ICES Annual Science Conf., 22–25 September 2004, pp. 29. Vigo, Spain: ICES CM.

[13] Leite L, Campbell D, Versiani L, Nunes JAC, Thiele T. 2016 First report of a dead giant squid (*Architeuthis dux*) from an operating seismic vessel. *Mar. Biodivers. Rec.* **9**, 26. (doi:10.1186/s41200-016-0028-3)

[14] Sekiguchi H, Terazawa T. 1997 Statocyst of *Jasus edwardsii* pueruli (Crustacea, Palinuridae), with a review of crustacean statocysts. *Mar. Freshwater Res.* 48, 715-720. (doi:10.1071/MF97131)

[15] André Met al.2011Low-frequency sounds induce acoustic trauma in cephalopods. *Front. Ecol. Environ.* **9**, 489-493. (doi:10.1890/100124)

[16] McCauley RD, Fewtrell J, Popper AN. 2003 High intensity anthropogenic sound damages fish ears. *J. Acoust. Soc. Am.* 113, 638-642. (doi:10.1121/1.1527962)

[17] McCauley, R.D., Day, R.D., Swadling, K.M., Fitzgibbon, Q.P., Watson, R.A., Semmens, J.M. (2017). Widely used marine seismic survey air gun operations, negatively impact zooplankton. Nature J. Ecol. Evol.1:1-8 DOI: 10.1038/s41559-017-0195

Gascoyne region extending as far south as Geraldton. This is evident because of the absence of spawning fish below Exmouth.[18] Further studies into zooplankton composition in the area show the occurrence of larvae of commercially valuable teleost fishes, such as the Lutjanidae, Serranidae and Scombridae, highlighting the increased commercial risk of expanding seismic testing.[19]

Further research by the Australian Institute of Marine Science with the Shoals to Shore (AIMS) program studies the impacts of seismic testing on Pearl Oysters and Red Emperor in the Northwest bioregion. It is the first time in Australia that a commercial seismic vessel with a full seismic air gun array has been dedicated for use in a controlled and real-world experiment[15]. However, the AIMS Shoals to Shore program does not examine the impact of seismic testing on zooplankton populations due to a lack of funding.[20] Clearly, there are severe limitations on available research and a growing body of evidence suggesting that seismic testing has a much greater impact on marine life than previously thought.

The Australian commercial fishing industry has consistently called for a thorough enquiry into the impacts of seismic testing on fisheries because their members have consistently cited concerns about declining catches following seismic testing and the uneven playing field when assessing seismic environment plans.[21] A motion originally put forward by Tasmanian Senator Whish-Wilson calling for a Senate enquiry, was defeated. On 16 September 2019, however, the Senate referred an inquiry to the Environment and Communications References Committee on the Impact of seismic testing on fisheries and the marine environment, to report by 14 May 2020**.** On 26 March 2020, the reporting date was extended from 14 May 2020 to the second sitting Wednesday of 2021.**[22]**

Recommendation 1

No further seismic testing programs are deployed for the Barossa Offshore development proposal until the impacts are fully understood and mitigation strategies developed in a regional context. **This includes consideration of the final report of the AIMS Shoals to Shore program, and delivery of the senate enquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment.**

[18] M. Mackie Co-Investigators: D.J. Gaughan and R.C. Buckworth. Stock assessment of narrow-barred Spanish mackerel (Scomberomorus commerson) in Western Australia, 2003. FRDC Project No. 1999/151

[19] D Holliday, L E Beckley, E Weller & A L Sutton, 2011. Natural variability of macro-zooplankton and larval fishes off the Kimberley, north-western Australia: Preliminary findings. Journal of the Royal Society of Western Australia, 94: 181–195, 2011

[20] Australian Institute of Marine Science (2019). Submission 17 to the Senate Standing Committees on Environment and Communications. Enquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment

[21] Western Australian Fishing Industry Council (2019). Submission 67 to the Senate Standing Committees on Environment and Communications. Enquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment

[22] Senate Standing Committees on Environment and Communications. Enquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/SeismicTesting

Commercial Fisheries at Risk

Several commercial fisheries are operating throughout the gas export pipeline development area, including the NT Spanish Mackeral fishery and the Northern Prawn fishery and two large commercial fisheries operating throughout the Barossa Offshore development area. The Timor Reef Fishery uses traps and lines targeting high value Goldband and tropical Snappers with a quota of 2,614 tonnes per year[23] [24]. The Demersal Fishery uses traps, lines and trawls targeting high-value Saddletail and Crimson snapper with a quota of 3800 tonnes per year.[25] Both of these fisheries are crucial to the Australian seafood market and supply the bulk of all tropical snappers to Australian consumers. Further, the fisheries rely on the fishing grounds covering the Barossa development area and surrounding waters. Nearby in the Oceanic Shoals Marine Park, there is a large commercial trawl zone to distinguish where the demersal fishery can operate within the park highlighting area's importance to the fishery.[26]

If the Barossa offshore development proposal proceeds, these two fisheries will lose access to important fishing grounds and come under increased risk from seismic testing impacting on fish stocks. Further risk lies in the advent of a major oil spill in an area prone to major cyclonic events. The 2009 Montara oil spill occurred to the west of the project area. It poured light crude oil into the Timor sea for 74 days before the well could be sealed. The resultant oil spill covered a vast area in the Timor Sea and reached the shores of Roti island near Timor. 184,000 Litres of chemicals were used to disperse the oil. However damage to the Indonesian seaweed industry has resulted in a $AUD2.7 billion lawsuit against the owners of Montara.[27]

Stochastic modelling outputs published by Conoco Phillips show the potential adverse exposure zone for various scenarios, including marine diesel spillage from a vessel collision and hydrocarbon spillage from a long term well blowout. The modelled exposure zones cover vast areas extending from the Arafura sea, across the Timor Sea and into the Indian ocean. Hydrocarbons could spill up to 805km from the source and extend along with the Indonesian islands of Timor, Roti and Tanimbar, depending on the season.[28]

These findings concur with the observed dispersion zone from the Montara disaster and are in line with the expected dispersion rates created by the predominant Indonesian Throughflow and Holloway ocean currents. It is clear that a major hydrocarbon spill from the Barossa field would be very difficult to contain and would have far-reaching

[23] Australia Bay Seafoods takes NT Government to court over proposed high seas merger - ABC News
[24] PROPOSED MANAGEMENT ARRANGEMENTS FOR THE TIMOR REEF FISHERY
[25] Demersal fishery and licences - NT.GOV.AU, see footnote 18
[26] north-management-plan-2018.pdf
[27] Montara Oil Spill Eight Years On: Timorese Livelihoods Still at Risk - Future Directions International
[28] Barossa OPP.pdf

consequences for two of Australia's most important tropical fisheries and the incredible diversity of marine life found in the area.

Further impacts on commercial fisheries are possible from the process of dewatering the gas export pipeline prior to operation. This process uses biocides, corrosion inhibitors, scale inhibitors and oxygen scavengers, with a total estimated discharge volume of 96,710m^3 being released from the pipeline 3.5m above the seafloor.[29] Some of the biocides used have been tested on Goldfish, *Carrasius arautus* and Brine shrimp, *artemia salina* in lab conditions; however toxicity testing is absent in real-world conditions on commercially important species like Goldband snapper throughout their life stages. Throughout the impact assessment and risk evaluation from dewatering operations, there is little consideration of commercial fisheries operating in the area.

Recommendation 2

The Barossa Offshore development proposal is delayed until thorough consultation with the Timor Reef and Demersal Fisheries has occurred, impact mitigation strategies are developed, adequate compensation is agreed upon and research is undertaken proving no risk to commercially important species.

Olive Ridley Turtles at Risk

Biologically Important Areas are defined as "spatially defined areas where aggregations of individuals of a regionally significant species are known to display biologically important behaviours such as breeding, foraging, resting or migration".[30] A review of the National Conservation Values Atlas determined that the gas export pipeline corridor traverses the biologically important internesting areas for Flatback and Olive Ridley Turtles, and a breeding and foraging area for the crested tern (waters offshore of the Tiwi Islands).[31]

Of particular concern is the endangered Olive Ridley Turtle *(Lepidochelys olivacea)*. There are two main breeding areas for Olive Ridley turtles in Australia, one in the Northern Territory with about 1,000 nesting females per year, and the other in the Gulf of Carpentaria with less than 100 nesting females per year.[32] The Tiwi Islands' north and west coast are listed as a major nesting area for Olive Ridley Turtles.[33] A 10-year survey by the NT Government reported Olive Ridley Turtles laying from February to September in the area,[34] and observations of occupancy all year round.[35] Olive Ridley turtles are also known to be

[29] Barossa OPP.pdf
[30] Barossa OPP.pdf
[31] Barossa OPP.pdf
[32] GBRMPA - Olive ridley turtle
[33] Chatto, R, Baker. B (2008) THE DISTRIBUTION AND STATUS OF MARINE TURTLE NESTING IN THE NORTHERN TERRITORY. Technical report 77, NT Parks and Wildlife Service untitled
[34] Chatto, R, Baker. B (2008) THE DISTRIBUTION AND STATUS OF MARINE TURTLE NESTING IN THE NORTHERN TERRITORY. Technical report 77, NT Parks and Wildlife Service untitled
[35] Barossa OPP.pdf

deep divers and primarily carnivorous, feeding on shells and crabs.[36] Mud whelks are an abundant shell species found in soft sediment and are a favourite source of food for the NT Olive Ridley population. The proposed gas export pipeline corridor traverses this very same soft-sediment seafloor which is likely to be abundant with mud whelks and an important feeding area for the Olive Ridley Turtles of the western Tiwi Islands.[37]

The recovery plan for marine turtles in Australia for Olive Ridley turtles defines an internesting buffer zone around the Tiwi Islands as being 20km.[38] Yet the gas export pipeline corridor runs for 70km parallel to the coast and comes within 6km of the shore, which clearly contradicts the national recovery plan.[39] Construction of the gas export pipeline will likely destroy the feeding habitat for Olive Ridley turtles and create a major threat from light and noise pollution for an extended period of time. For example, the highest light on the pipe laying vessel is 65m above sea level and is visible for 29km presenting a likely distraction for turtle hatchlings along one of Australia's most important areas for this species.[40]

Recommendation 3

Construction of the Gas export pipeline is disallowed to traverse the 20km internesting buffer zone around the Tiwi islands for the endangered Olive Ridley Turtle as detailed in the National marine turtle recovery plan. Further research to be conducted into the feeding grounds and prey of this important cultural species to further identify risks and threats.

SOCIAL RISKS AND IMPACTS

Oceanic Shoals Marine Park

In 2018, the network of Commonwealth Marine Parks was finalised after more than a decade of development and consultation. The network includes the Oceanic Shoals Marine Park, the largest and furthest offshore park in the North network and the only park with a National Park (green) zone. This area has been protected as a marine park as it contains a vast and highly

[36] Barossa OPP.pdf
[37] Pers comm M Guinea, CDU 2018.
[38] Recovery Plan for Marine Turtles in Australia 2017–2027 (environment.gov.au)
[39] Barossa FOI.pdf
[40] Page1 (nespmarine.edu.au)

significant mosaic of submerged terraces, banks and pinnacles separated by deeply incised canyons.[41] These diverse habitats contain species and ecological communities associated with the Northwest Shelf Transition.[42] The marine park has sponge gardens with incredibly high levels of diversity with modelling indicating around 900 species may be present.[43]

In 2012, intensive high-resolution sonar mapping led by the National Environmental Research program revealed 41 new banks and pinnacles covering an area of 152km^2, an increase of 33% from the 105km^2 found in the previous survey.[44] Considering the marine park covers an area of 71,743 km^2, with only 10% mapped to high resolution, many discoveries are likely to occur in the future.

Key Ecological Features are part of the marine environment that are considered regionally important for biodiversity or ecosystem function and integrity. Van Diemen Rise's carbonate banks and terraces are listed as a key ecological feature. As such, they have been placed into a habitat protection zone (to prevent any damage to the seafloor) and a smaller, highly protected national park zone that restricts any extractive activity.[45]

In the current Barossa development proposal, the gas export pipeline will traverse two areas within the Oceanic Shoals Marine Park: a 30 km section through the Multiple Use Zone (IUCN Category VI) and 31.5 km through the Habitat Protection Zone (IUCN Category II).[46] In the North Marine Park Management Plan mining in a habitat protection zone is clearly disallowed,yet construction of structures and works (like gas pipelines) is allowable through class approval. This is not consistent with the stated intention of a habitat protection zone as, clearly, the key ecological feature of the Van Diemen Rise will be subject to habitat modification. An application to construct and operate the pipeline within the Habitat Protection Zone was made to the Director of National Parks, who gave in-principle authorisation for the proposed route.[47] At no point did the (now dismissed) Director of National Parks consult with the broader Australian community regarding this authorisation, instead leaving the matter to the proponent who presented the approval as a done deal.

Sentiment throughout the Australian public is such that the network of marine parks is in place to protect a portion of the Australian maritime estate. At no point has the petroleum industry gained the social license to operate in these marine parks as is clearly evident in the extensive 2016 public submission process. Of 54,322 submissions received, the vast majority called for stronger protections, while only 6 submissions were provided by the petroleum industry seeking greater access within Australia's network of marine parks.[48]

[41] Recovery Plan for Marine Turtles in Australia 2017–2027 (environment.gov.au)
[42] Oceanic Shoals Marine Park | Australian Marine Parks (parksaustralia.gov.au)
[43] Barossa FOI.pdf
[44] Barossa FOI.pdf
[45] Oceanic Shoals Marine Park | Australian Marine Parks (parksaustralia.gov.au)
[46] Barossa-Gas-Export-Pipeline-Fact-Sheet-Jan19.pdf
[47] Barossa OPP.pdf
[48] Summary of submisisons on intent to prepare Commonwealth Marine Reserve management plans (parksaustralia.gov.au)

No new class approvals should be offered within park boundaries and all current destructive activity should be ceased until the petroleum industry gains a social license to operate within Australia's marine parks.

Recommendation 4

The in-principle approval for the Barossa Gas export Pipeline traversing the Oceanic Shoals Marine Park Habitat Protection Zone be withdrawn until such time as extensive public consultation on the matter shows conclusively that the proponent has a social license to modify habitat and construct the pipeline within the marine park

Tiwi Cultural Aspirations

The Tiwi people have carefully managed Tiwi Islands' natural and cultural resources for thousands of years. Tiwi Traditional Owners are well aware of the overwhelming significance of their country for national cultural heritage and biodiversity conservation. They have not previously considered the declaration of national parks or nature reserves necessary for their sustainable management of their country. Now however, Traditional Owners have directed that an application be submitted as the momentous first step towards the planning, dedication and management of an Indigenous Protected Area (IPA) for the Tiwi Islands.[49]

In October 2019, the IPA funding application was successful, with $322,240 provided from the National Landcare Program to develop the IPA and management plan.[50] The IPA proposal covers 747,211 hectares of the Tiwi islands and coasts under two International Union for Conservation of Nature (IUCN) categories. Category VI would be applied to areas where conservation and cultural heritage protection will be the paramount land use. Category V would be applied for areas where Tiwi envisage significant sustainable use of natural resources in parallel with conservation. The project will be managed by the Tiwi people and supported by the Tiwi Indigenous Ranger Team. Inclusion of surrounding marine areas beyond the intertidal zone is envisaged as a second stage of the IPA. Tiwi people regard these waters as their traditional sea country and hope to manage them through a combination of rights and other arrangements. Their rights here exist in relation to registered marine sacred sites and as yet un-determined native title. Management by other

[49] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf
[50] Expanding Indigenous protected areas | Ministers Media Centre (pmc.gov.au)

means currently occurs through the rangers' formal involvement in policing recreational and commercial fishing, quarantine and border surveillance.[51]

Currently the Tiwi IPA is progressing through the following process:

1) Community-based participatory planning – for natural and cultural resource management.
2) Development and distribution of an IPA draft plan of management – integrating and updating the existing Tiwi Islands Regional Natural Resource Management Strategy.
3) Traditional Aboriginal Owner consultations – to finalise the IPA boundary and secure statutory endorsement for the dedication of an IPA.[52]

On 13th July, 2017 the Barossa Offshore Project Proposal was published by NOPSEMA and the public consultation period began.[53] A total of 7 submissions were received, none of which were from the Tiwi traditional owners.[54] Contact with the Tiwi Land Council and Tiwi Island Marine Rangers has been mainly in response to consultation letters and requests for comment on authorisations.[55] It appears the consultation process with the Tiwi traditional owners was severely lacking as there is no evidence of the proponents visiting the three main communities of Wurrimiyanga, Pirlangimpi and Milikapiti or providing information that is presented in an easily accessible way to an audience which does not have English as their first language.

The Tiwi traditional owners have been managing their land and sea country for thousands of years and have recently made solid steps towards protecting their sea country. If effective consultation was apparent, many submissions from Tiwi islanders would have been forthcoming considering the massive scale of this development proposal on their doorstep and the risks of catastrophic environmental consequences and increased social disturbance.

On the 28th May 2020, Santos announced they had completed the acquisition of the Barossa Offshore Proposal from Conoco Phillips. Santos Managing Director and CEO, Kevin Gallagher, stated "We are delighted to assume operatorship and continue to progress the Barossa project so that a final investment decision can be made when market conditions permit."[56] It would appear that no final investment decision can be made with the knowledge that an initial failed consultation process was undertaken and solid developments by traditional owners towards protecting sea country, covering the proposed gas export pipeline corridor, are now underway.

[51] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf
[52] Tiwi Land Council, 2019. *Towards a Tiwi Island Indigenous Protected Area*, https://tiwilandcouncil.com/documents/Uploads/TLC_Towards-a-Tiwi-Islands-IPA.pdf
[53] Barossa Area Development Offshore Project Proposal » NOPSEMA
[54] Barossa Area Development Offshore Project Proposal » NOPSEMA, Page1 (nespmarine.edu.au)
[55] Page1 (nespmarine.edu.au)
[56] PROPOSED MANAGEMENT ARRANGEMENTS FOR THE TIMOR REEF FISHERY

Recommendation 5

A thorough consultation process with the Tiwi traditional owners is undertaken using the principles of Free, Prior and Informed consent as outlined in JBIC's guidelines, and IPA aspirations are respected before any final investment decision is made.

Recommendation 6

A full disclosure of an indigenous peoples plan as outlined in JBIC's guidelines, outlining the potential adverse impacts on the Tiwi traditional owners, before any final investment decision is made.

Recommendation 7

A full disclosure of the record of any consultations with local residents, including dates, language the consultations were held in, and meeting minutes, before any final investment decision is made.

Climate impacts

An extreme climate is already proving to be a threat to ecosystems. The Black Summer bushfires in Australia and yet another mass bleaching of the Great Barrier Reef were driven just by the 1.1°C of global heating that has occurred to date.[57]

Given the critical juncture at which the world finds itself in relation to limiting the worst impacts of human-induced climate change, it is important that the carbon risks posed by projects such as the the Barossa project are adequately considered. This is also echoed in JBIC's Guidelines for Confirmation of Environmental and Social Considerations, which state that the environmental impact of a project must be considered, including greenhouse gas emissions.[58]

Gas extraction, production and use is incredibly harmful – and in some cases worse than other fossil fuel types. The primary component of gas, methane, is around 100 times more potent than $C0_2$ in the short term and is emitted in large quantitites across the entire gas supply chain. Any new fossil fuel infrastructure is incompatible with remaining under 2°C of heating, as agreed to under the Paris Agreement.

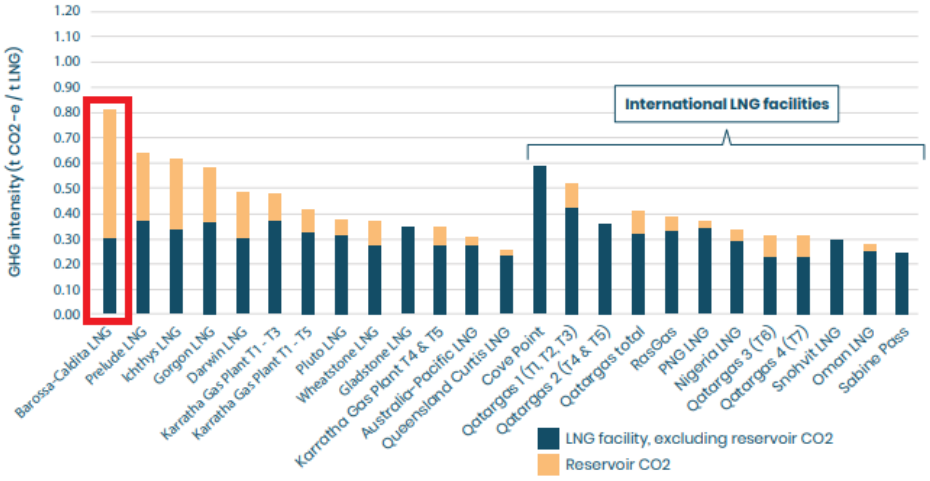
If approved, Barossa could produce the most carbon intensive LNG in Australia, potentially amongst the most polluting LNG projects in the world. Adding to the processing emissions, the Barossa gas field has very high levels of of CO_2 (16-20%), which would be vented into the atmosphere.[59]

[57] Climate Council (2020) *Passing Gas: Why Renewables Are The Future*, https://www.climatecouncil.org.au/resources/passing-gas-renewables-are-future/

[58] JBIC (2015) *Japan Bank for International Cooperation: Guidelines for Confirmation of Environmental and Social Considerations,* https://www.jbic.go.jp/wp-content/uploads/page/2013/08/36442/Environemtal_Guidelines2015.pdf

[59] Clean State, *Why Woodside's Burrup Hub developments should not proceed.* https://d3n8a8pro7vhmx.cloudfront.net/ccwa/pages/11680/attachments/original/1586154175/CCWA_Clean-State_Burrup-Hub_Report_WEB-READER.pdf?1586154175

Figure 2: Emissions intensity of Australian and global LNG projects[16]



Source: Clean State, *Why Woodside's Burrup Hub developments should not proceed.* Page 9 https://d3n8a8pro7vhmx.cloudfront.net/ccwa/pages/11680/attachments/original/1586154175/CCWA_Clean-State_Burrup-Hub_Report_WEB-READER.pdf?1586154175

The Barossa Proposal currently lacks detail as to any carbon mitigation schemes or general offset abilities. One proposal put forward by other LNG projects has been carbon sequestration. This technology currently does not work.

Under an environmental agreement to operate, Chevron stated that it would store 40% of emissions from its Gorgon LNG project in Western Australia underground through sequestration. Despite promises, this technology has not been functioning and shows no signs of doing so in the near future – leading to all emissions being vented directly into the atmosphere, wiping out the benefit of the entire nation's collective rooftop solar emisions-free energy use.[60]

Despite $60 million taxpayer subsidy to its carbon capture and storage project, Gorgon has released millions of tonnes of CO_2 that were meant to be sequestered. In 2017, this failure represented half of the national increase in emissions, and yet appears to have resulted in no penalty.[61] Gorgon is an ongoing, multi-decade project that continues to pollute Australia,[62] while paying so little tax that Chevron's consultants did not bother to model the project's petroleum resource rent tax (PRRT) payments.[63] At full production the five

[60] Diss (2018) *How the Gorgon gas plant could wipe out a year's worth of Australia's solar emissions savings,* https://www.abc.net.au/news/2018-06-21/gorgon-gas-plant-wiping-out-a-year-of-solar-emission-savings/9890386

[61] Swann (2018) *Gorgon-tuan Problem,* https://australiainstitute.org.au/wp-content/uploads/2020/12/P635-Gorgon-tuan-Problem-Web.pdf

[62] Young (2021) *WA's Gorgon project fails to deliver on pollution deal, adding millions of tonnes of carbon a year,* https://www.smh.com.au/national/millions-of-tonnes-of-carbon-added-to-pollution-as-gorgon-project-fails-capture-deal-20210215-p572na.html

[63] ACIL Allen (2018) *Economic contribution of Chevron in Australia*, https://australia.chevron.com/-/media/australia/publications/documents/acil-allen-report-snapshot.pdf

operating LNG facilities in Western Australia emit 32 million tonnes of greenhouse gas emissions per year from gas used in processing alone.[64]

Financing Barossa would be incompatible with the binding international commitments that Japan has made on climate change and the Japanese government's goal of net zero emissions by 2050 – which was also echoed by Prime Minister Suga Yoshihide in a joint statement from the first leaders' meeting of the Quadrilateral Security Dialogue on March 14. Mr Suga stated*:*

> "It is clear that climate change is both a strategic priority and an urgent global challenge, including for the Indo-Pacific region. That's why we will work together and with others to strengthen the Paris agreement and enhance the climate actions of all nations."*[65]*

[64] Caruso & Clean State (2019) *Runaway Train*: *The impact of WA's LNG industry on meeting our Paris targets and national efforts to tackle climate change*, https://d3n8a8pro7vhmx.cloudfront.net/ccwa/pages/11567/attachments/original/1576569041/Clean_State_LNG_Report_DIGITAL.pdf?1576569041

[65] Biden, Modi, Morrison & Suga (2021) *Our four nations are committed to a free, open, secure and prosperous Indo-Pacific region,* https://www.washingtonpost.com/opinions/2021/03/13/biden-modi-morrison-suga-quad-nations-indo-pacific/

Offshore gas presents a net cost to Australians

OFFSHORE RIG ABANDONMENT

Australia is already facing major environmental and financial costs from the need to clean up after its offshore oil and gas industry. Australian taxpayers are currently paying millions of dollars per week to maintain the safety of a floating gas facility called the Northern Endeavour, while its decommissioning process commences. The decommissioning of the Northern Endeavour floating production storage facility as a result of it being riddled with rust and at risk of a major accident[66] demonstrates the costs of offshore oil rig abandonment. While the true costs have not been disclosed, reports estimate costs going into the hundreds of millions.[67]

Further, the cost of decommissioning Australia's offshore oil and gas infrastructure over the next 40 years is conservatively estimated to be over $40 billion, some of which will likely be picked up by the taxpayer.[68] While there is little precedent for closing down offshore oil and gas infrastructure in Australia, the country has more than a century of experience in decommissioning onshore mining projects. Australia already has a poor record for rehabilitating mines, with 60,000 currently abandoned mine sites. [69] While many of Australia's abandoned mines are legacy sites, modern mines are abandoned every year in Australia.[70] Without strong regulation and enforcement, offshore oil and gas will follow this pattern in the decades to come. Therefore, the full life-cycle of offshore oil and gas must be taken into account when assessing its costs to the Australian community.

[66] Iggulden (2019) *Taxpayers could face $200m bill if buyer cannot be found for rust-riddled oil platform*, https://www.abc.net.au/news/2019-11-11/offshore-oil-rig-timor-sea-operations-cease-environment-safety/11691040

[67] Milne (2020) *Northern Endeavour debacle hits $209M with much more to come*, https://www.boilingcold.com.au/northern-endeavour-debacle-hits-209m-with-much-more-to-come/

[68] Khan (2018) *Decommissioned rigs: Precious marine habitats or giant lumps of ocean waste?*, https://www.abc.net.au/news/science/2018-06-13/decommissioned-rigs-precious-marine-habitat-or-more-ocean-waste/9833084

[69] Unger et al (2012) *Mapping and Prioritising Rehabilitation of Abandoned Mines in Australia*, https://www.researchgate.net/publication/236900961_Mapping_and_Prioritising_Rehabilitation_of_Abandoned_Mines_in_Australia/; Campbell et al (2017) *Dark side of the boom. What we do and don't know about mines, closures and rehabilitation*, https://australiainstitute.org.au/report/dark-side-of-the-boom/

[70] Unger et al (2012) *Mapping and Prioritising Rehabilitation of Abandoned Mines in Australia*, https://www.researchgate.net/publication/236900961_Mapping_and_Prioritising_Rehabilitation_of_Abandoned_Mines_in_Australia/; Campbell et all (2017) *Dark side of the boom: What we do and don't know about mines, closures and rehabilitation*, https://australiainstitute.org.au/report/dark-side-of-the-boom/

OIL AND GAS COMPANIES PAY LITTLE TAX

The economic benefit of oil and gas extraction to Australia is small. The oil and gas industry pays a small amount of tax overall, and many large international companies pay no tax at all in most years, as shown in Table 1 below:

Table 1: Income and company tax paid by oil and gas companies in Australia 2018-19

Company	Total Income ($)	Taxable Income ($)	Tax Paid ($)
Woodside Petroleum Ltd	8,199,321,733	1,991,703,841	0
Sinopec Oil and Gas Australia Pty Ltd	370,722,823		0
Shell Energy Holdings Australia Ltd	5,531,026,873	318,645,923	0
Santos Limited	4,360,612,850	8,328,076	0
*Santos WA Energy Holdings Pty Ltd**	*961,699,883*	*37,961,838*	*3,112,393**
QGC Upstream Holdings Pty Limited	3,985,352,867		0
Petronas Australia Pty Limited	1,107,168,028		0
Origin Energy Limited	15,894,540,753	634,652,763	179,955,804
Kogas Australia Pty Ltd	667,825,073		0
ConocoPhillips Australia Gas Holdings Pty Ltd	1,592,059,105	29,214,658	0
CNOOC Gas and Power (Aus) Investment Pty Ltd	1,768,560,195		0
*CNOOC Australia Energy Capital Management Pty Ltd**	*332,246,043*	*117,661,600*	*35,298,480**
Chevron Australia Holdings Pty Ltd	11,986,037,153	900,117,295	0
Arrow Energy Holdings Pty Ltd	338,460,793		0
ExxonMobil Australia Pty Ltd	13,293,222,200		0

Source: ATO (2020) *2018-19 Report of Entity Tax Information,* https://data.gov.au/data/dataset/corporate-transparency/resource/827f68ea-83c0-440e-bb6d-4118644b7efd

*These companies are subsidiaries or affiliates of larger entities. While they have contributed to Commonwealth revenue, consideration should be given to the much larger income and non-payment of tax by their associated companies.

Table 1 shows that many oil and gas companies pay little to no company tax, and PRRT revenues are similarly modest. In other words, many oil and gas projects exploit a resource without paying its owners, the Australian public.

Despite this, Australians have an exaggerated view of the tax paid by the oil and gas industry. Australia Institute polling shows that, on average, Australians estimate that the oil and gas industry (via the PRRT) contributed 10.8% to the Commonwealth budget in 2018–19 (excluding those who said they do not know).[71] In reality, the PRRT contributed around 0.2%

[71] Quicke and Bennett (2020) *Climate Of The Nation 2020,* p 18, https://australiainstitute.org.au/report/climate-of-the-nation-climate-change-concern-hits-82/

to the Commonwealth budget, $1.15 billion of the total $485 billion,[72] meaning that Australians overestimate the oil and gas industry's contribution to Commonwealth revenue by a factor of forty-six.

While many factors influence the revenue raised from oil and gas, the current PRRT system is fundamentally broken. One partial remedy to this was proposed by The Australia Institute and others during the 2019 review of transfer pricing. A shift in the way transfer prices are estimated between a project's upstream extraction and downstream liquefaction parts to 'netback only' could increase revenue by $89 billion between 2023 and 2050.[73]

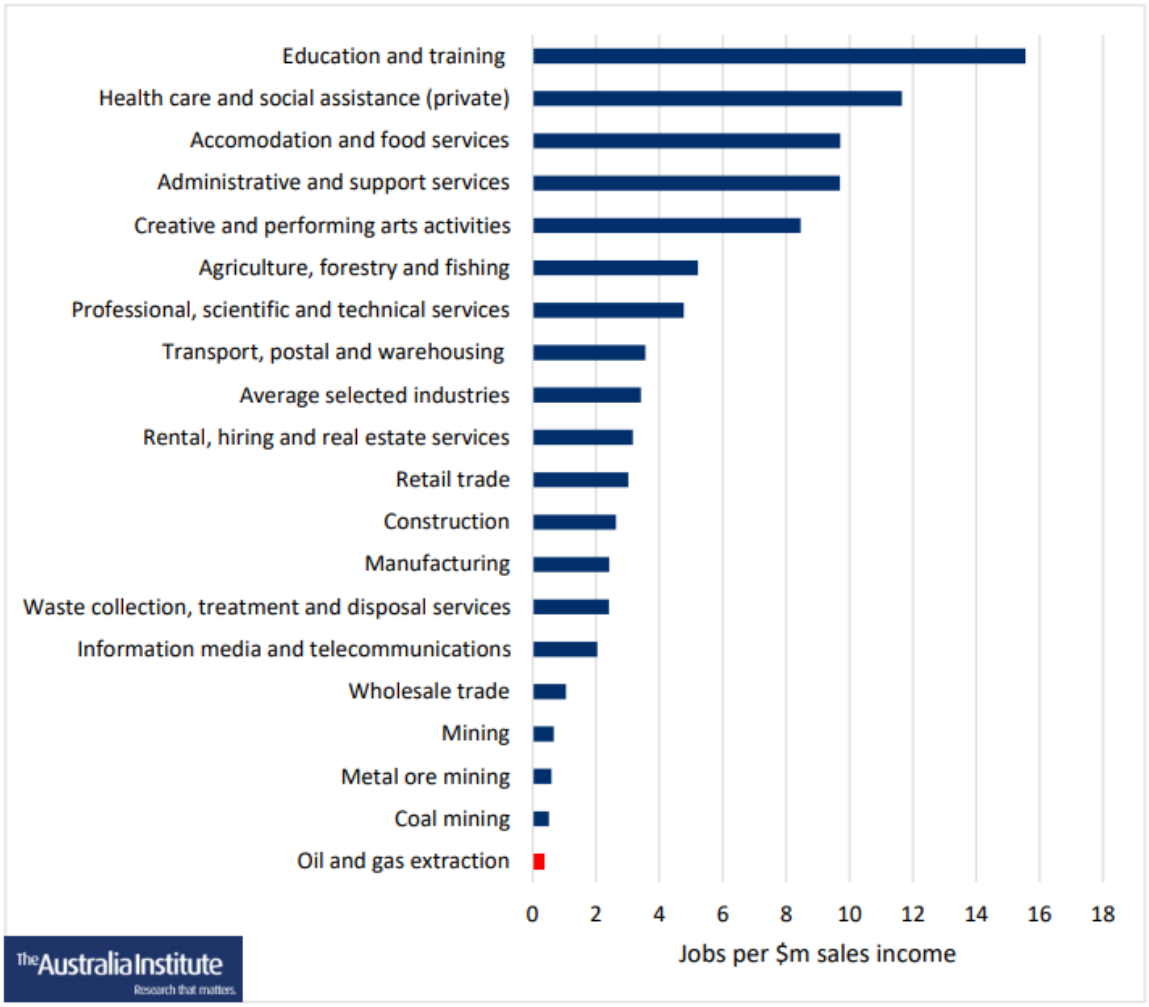
OIL AND GAS COMPANIES CREATE FEW JOBS

Oil and gas extraction is highly capital intensive, using a lot of machinery but employing very few people. As an industry, it has one of the lowest job intensity rates in Australia. When industries are examined for the number of jobs relative to sales income, oil and gas extraction produces fewer jobs than top performing industries such as education and training by a factor of around fifteen, as demonstrated in Figure 1:

[72] Commonwealth Government (2020) *Budget Paper No. 1: Budget Strategy and Outlook 2018-19,* Statement 4: Revenue

[73] Campbell (2019) *Petroleum Resource Rent Tax Gas Transfer Pricing Review,* https://australiainstitute.org.au/report/submission-prrt-transfer-pricing/

Figure 1: Job intensity of selected Australian industries (jobs per $m sales income)



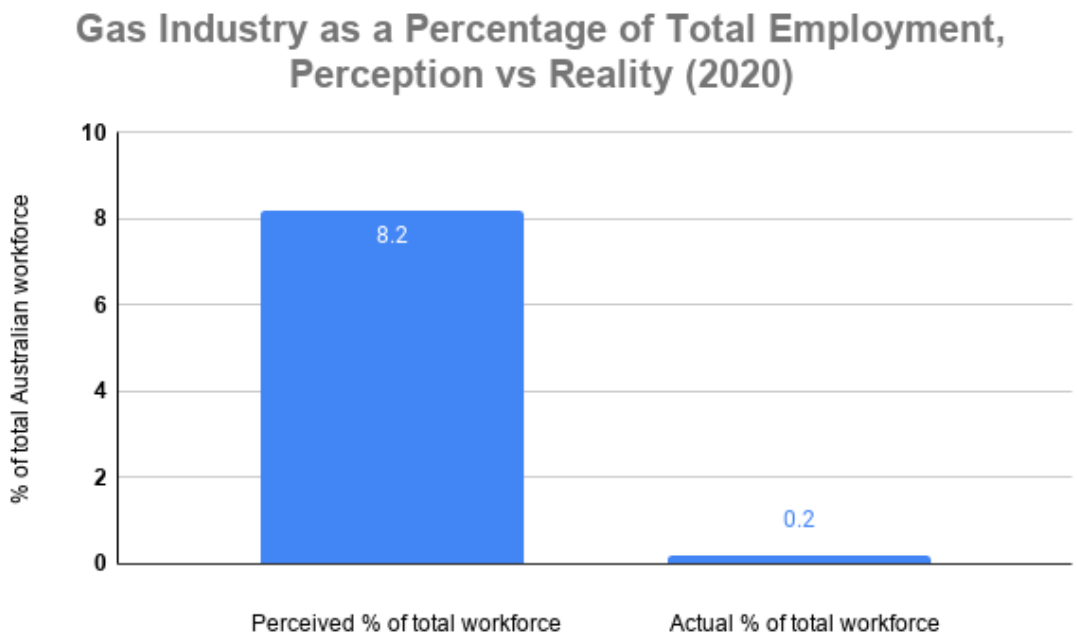
Source: ABS (2020) 81550DO002_201718 Australian Industry, 2017-18, https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8155.02017-18?OpenDocument

Australians perceive the gas industry as a far greater employer than it actually is. Australians on average believe that gas mining and exploration employs 8.2% of the total workforce – however in reality it employs only 0.2% of the 12.5 million people employed in Australia,[74] as shown in Figure 2.[75]

74 Average figure for oil and gas extraction employment for year to May 2020 in ABS (May 2020) *Labour Force, Australia, Detailed, Quarterly, Table 06.* Separate petroleum exploration data is only available in five-yearly census data. The 2016 Census found 1,997 people worked in petroleum exploration.

75 Quicke and Bennett (2020) *Climate Of The Nation 2020,* p 18, https://australiainstitute.org.au/report/climate-of-the-nation-climate-change-concern-hits-82/

Figure 2: Australians' skewed perception of gas industry employment



Source: Quicke and Bennett (2020) *Climate Of The Nation 2020,* p 18, https://australiainstitute.org.au/report/climate-of-the-nation-climate-change-concern-hits-82/

Recommendations and Conclusion

The Barossa project could be one of the dirtiest LNG projects in the world, and it is proposed in an area known for its incredibly biodiverse and sensitive ecosystems that Tiwi people have managed for thousands of years.

In particular, risks and concerns of the Barossa project include:

- Impacts on livelihoods and globally significant biodiversity, including an internesting zone and critical habitat for Flatback and Olive Ridley turtles and loss of access to important fishing grounds for two of Australia's most important tropical fisheries.
- It appears the consultation process with the Tiwi traditional owners was severely lacking as there is no evidence of the proponents visiting the three main communities or providing information that is presented in an easily accessible way to an audience which does not have English as their first language.
- Significant carbon emissions and contribution to climate change that is incompatible with the globally agreed goal of limiting warming to no more than 1.5 degrees Celsius, and the Japanese government's goal of net zero emissions by 2050.
- A lack of economic benefits for Australians as it would contribute little tax and revenue and employ few people.

Jubilee Australia, The Australia Institute and The Environment Centre NT therefore strongly urge JBIC not to proceed with this project.

If JBIC does intend to further consider funding this project, we recommend the following:

1. No further seismic testing programs are deployed for the Barossa Offshore development proposal until the impacts are fully understood and mitigation strategies developed in a regional context. This includes consideration of the final report of the AIMS Shoals to Shore program, and delivery of the senate enquiry into the Impact of Seismic Testing on Fisheries and the Marine Environment.
2. The Barossa Offshore development proposal is delayed until thorough consultation with the Timor Reef and Demersal Fisheries has occurred, impact mitigation strategies are developed, adequate compensation is agreed upon and research is undertaken proving no risk to commercially important species.
3. Construction of the Gas export pipeline is disallowed from traversing the 20km internesting buffer zone around the Tiwi islands for the endangered Olive Ridley Turtle, as detailed in the National marine turtle recovery plan. Further research to be conducted into the feeding grounds and prey of this important cultural species to further identify risks and threats.

4. The In-principle approval for the Barossa Gas export Pipeline traversing the Oceanic Shoals Marine Park Habitat Protection Zone be withdrawn until such time as extensive public consultation on the matter shows conclusively that the proponent has a social license to modify habitat and construct the pipeline within the marine park.
5. A thorough consultation process with the Tiwi traditional owners is undertaken using the principles of Free, Prior and Informed consent as outlined in JBIC's guidelines, and IPA aspirations are respected before any final investment decision is made.
6. A full disclosure of an indigenous peoples plan as outlined in JBIC's guidelines, exploring the potential adverse impacts on the Tiwi traditional owners, before any final investment decision is made.
7. A full disclosure of the record of any consultations with local residents, including dates, language the consultations were held in, and meeting minutes, before any final investment decision is made.