To:	**Environmental Impact Management Services (Pty) Ltd**
Per email:	block3b4b@eims.co.za
From:	Natural Justice and The Green Connection
Per:	Allan Basajjasubi and Melissa Groenink-Groves, Natural Justice
	Liziwe McDaid, The Green Connection
Email:	allan@naturaljustice.org; melissa@naturaljustice.org; liziwe@mweb.co.za

21 August 2023

Dear Environmental Assessment Practitioner

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED AFRICA OIL SA CORP BLOCK 3B/4B OFFSHORE EXPLORATION

EIMS REF NO: 1570

COMMENTS ON THE DRAFT SCOPING REPORT

INTRODUCTION

These submissions are made by Natural Justice and the Green Connection in response to the Draft Scoping Report published for comment by Environmental Impact Management Services (Pty) Ltd for the proposed exploration and environmental authorisation applications for Block 3B/4B on 19 July 2023. Comments are due on 21 August 2023.

Natural Justice: Lawyers for Communities and the Environment is a non-profit organisation specialising in environmental and human rights law in Africa – with a focus on the pursuit of social and environmental justice for local and indigenous communities. Natural Justice offers direct support to local and indigenous communities impacted by the ever-increasing demand for land and natural resources.

The Green Connection is a registered non-governmental organisation, that believes that economic growth and development, improvement of socio-economic status and conservation of natural resources can only take place within a commonly understood framework of sustainable development. The Green Connection aims to provide practical support to both the government and non-governmental/civil society sectors, which are an integral part of sustainable development.

The organisations have an interest in this project, in the interests of the protecting the environment, in the interests of protecting the local and indigenous peoples and communities who will be impacted, as well as in the public interest.

OBJECTION TO THE EXPLOITATION OF OIL AND GAS RESOURCES

The extraction, processing, storage, transport and end-use of oil and gas from the proposed exploration operations, and intended eventual exploitation, will result in unacceptable significant emissions of greenhouse gases (GHGs), increasing atmospheric GHG levels and resulting in increased adverse impacts on human health and well-being and on the environment (species and ecosystems). Impacts on human health and well-being are likely to include (among others) impacts from increased adverse environmental effects, impacts on food availability and affordability, loss of property due to sea-level rise, direct impacts of catastrophic weather events, and deterioration in physical and mental health and well-being. Environmental impacts are likely to include (among others) increased temperatures, worsening and prolonged droughts, longer and more intense heatwaves, increases in extreme weather events, increased ocean acidity, decline in ecosystems and habitat, and increased rates of species extinction.

These impacts are significant and unacceptable.

The exploitation of oil and gas resources, which is intended as the eventual outcome of this process, is not needed or desirable. Globally, the proven reserves of oil and gas far exceed what can be used without causing catastrophic climate change. There is already sufficient proven oil to supply over double the emissions consistent with 1.5°C, whilst already proven gas resources are nearly three times more than the 1.5°C budget.

As a party to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, South Africa has committed to limiting the increase in the global average temperature to well below 2°C and to pursue efforts to limit the temperature increase to 1.5°C. South Africa is not, however, on track to meet these commitments. According to the Climate Action Tracker, "*South Africa's climate policies and commitments need substantial improvements to be consistent with the Paris Agreement's 1.5°C temperature limit*."[1] If all countries followed South Africa's "insufficient" approach to climate mitigation, "*warming would reach over 2°C and up to 3°C*."[2] Approving more oil and gas projects, including offshore exploration and production, would push South Africa further away from achieving its international climate commitments.

As the public trustee of the environment generally, of biological diversity, of protected areas, and of coastal public property, the State must take measures to ensure that our oceans are used, managed, protected, conserved and enhanced in the interests of the whole community, for the benefit of present and future generations. The phase out of oil and gas is urgently needed to avert the climate crisis, to protect and promote the State's obligations to provide basic necessities such as water, food, shelter and an environment that is not harmful to health or well-being.

Given this, the exploration and exploitation of oil and gas is not needed, is undesirable, is locally and globally irresponsible, is contrary to South Africa's international climate change and biodiversity commitments, and contravenes the State's obligations under section 24 of the Constitution. Natural Justice and the Green Connection object to the authorisation of the proposed exploration activities.

COMMENTS ON THE DRAFT SCOPING REPORT

[1] Climate Action Tracker, South Africa, https://climateactiontracker.org/countries/south-africa/.
[2] Climate Action Tracker, South Africa, https://climateactiontracker.org/countries/south-africa/policies-action/.

Notwithstanding the above, we provide further comments on the Draft Scoping Report. In our view, upon full and proper assessment, the impacts associated with exploration will be found to be highly significant and unacceptable, and the environmental authorisation should be refused.

1. Inadequate consideration of the appropriateness of opening an offshore area to hydrocarbon exploration

1.1. For the reasons stated above, the project is unnecessary, undesirable, and contrary to South Africa's climate change commitments. The Scoping Report fails to consider the project's impacts holistically, in the context of its contribution to climate change, as well as South Africa's policies and global commitments. While the Scoping Report repeatedly states the EIA will include an assessment of "air quality and climate change" impacts, no details are provided as to what the assessment will evaluate. The EIA must evaluate the project's acute air quality impacts (e.g., emissions of particulate matter and other pollutants from vessels and operations) independent from the project's climate impacts. The assessment must include a full life-cycle assessment of the climate impacts that would result not only from the exploration process, but also from the exploitation and downstream combustion of hydrocarbons that would be produced should the project move forward into its next phases.

1.2. The Scoping Report further fails to consider how the project might aggravate the impacts of climate change in the area, both on people and marine and coastal ecosystems. Impacts of the project beyond its eventual greenhouse gas (GHG) emissions may operate as a threat multiplier, either reducing the resilience of communities to climate change, or exacerbating their challenges that climate change is making worse. For example, small-scale fishers may already be struggling with catches because of warming waters affecting fish spawning, recruitment, and fitness, while the project's planned noise pollution, drilling and produced water discharges, unplanned but catastrophic oil spill impacts may further reduce fish breeding and juvenile success. Importantly, the Benguela Upwelling Zone is home to several MPAs and CBAs that serve as nurseries for fish and shellfish. While the Scoping Report lists that the ESIA will include an Air Quality and Climate Change Impact Assessment, the brief Terms of Reference do not indicate that the specialist study will describe how the project will interact with and potentially exacerbate these vulnerabilities. The cumulative harm of the additional emissions on the natural environment and the livelihoods of people in South Africa who rely heavily on natural resources must be evaluated.

2. The ESIA must comprehensively assess the cumulative impacts to marine life

2.1. Block 3B/4B lies within the Orange Basin, which extends from South Africa as far north as the Lüderitz Arch in Namibia.[3] The Block has been subjected to multiple previous exploration activities, including 2D and 3D seismic surveys[4], and more than 38 exploratory wells have already been drilled on the shelf east of the Block.[5] The Scoping Report acknowledges the possibility of future exploration in nearby blocks, including further proposed exploration well drilling near PEL39, in the Namibian extent of the Orange Basin.[6] Beyond exploration, there is the intended realisation of production in Block 3B/4B

[3] Scoping Report at 14.
[4] Scoping Report at 7.
[5] Scoping Report at 14.
[6] Scoping Report at 293. See also https://www.offshore-energy.biz/shell-makes-another-deepwater-oil-discovery-offshore-namibia/ and https://www.petroleumafrica.com/shell-makes-another-oil-find-in-namibias-orange-basin/

if a significant discovery is made. The same holds true in other blocks in the Orange Basin in both South African and Namibian waters, meaning that the area could continue on a path to high offshore oil and gas industrialisation.

2.2. Despite the high volume of past, current, and potentially future oil and gas exploration activities in the region, the Scoping Report appears not to comprehensively assess the cumulative marine impacts of the project in conjunction with other activity the area and does not assess all "*past, present and reasonably foreseeable future developments or impacts*". The National Environmental Management Act, 107 of 1998 (NEMA), together with the EIA Regulations, requires that EIAs include, amongst other things, an assessment of the nature, extent, duration and significance of the consequences for or the impacts on the environment of that activity, including the cumulative impacts.

2.3. It does not even try. The Scoping Report declines to assess the cumulative environmental impacts that could arise from further exploration or production activities in the area. Instead, the Scoping Report maintains that "[a]s these cannot at this stage be reasonably defined, it is not possible to undertake a reliable assessment of the potential cumulative environmental impacts."[7]

2.4. It is reasonably foreseeable that the proposed exploration activities may lead to eventual production activities, as is their intent. Similarly, it is reasonably foreseeable that proposed or approved seismic surveys (TGS Orange Basin Reconnaissance Permit); exploration (Deep Water Orange Basin Licence Block 12/3/343; TotalEnergies EP South Africa Block 567; Sezigyn ER340; PEL39 in Namibian waters); and production (Sunbird and PetroSA Block 2A) could contribute, along with the proposed exploration, to additive stressors on marine life in the region. Inshore to Block 3B/4B in the Orange Basin, Eco (Atlantic) Oil & Gas has already commenced with exploratory drilling in Block 2B (as of October 2022)[8].

2.5. The cumulative impact of increased background anthropogenic noise levels in marine environments is an ongoing and widespread issue of concern. Impacts across large spatial scales or multiple species are rarely considered, but recent research indicates that repeat seismic surveys reduce cetacean occurrence across large marine ecosystems.[9] Repeat seismic surveys may also disrupt fish migration patterns, as is suspected in Southern Namibian tuna fishing grounds, where catches have severely declined since 2011, and in 2017 dropped off to non-commercial catch rates.[10]

2.6. The ESIA must assess the immediate and chronic impacts of cumulative sonar and seismic surveys and drilling activities in the area, not just from a singular exploration project. The ESIA must carefully examine the full footprint of impacts from sonar surveys and drilling activities in the context of their additive nature.

2.7. The ESIA must also evaluate the condition of existing well plugs. Concrete used in well casings and plugging degrades over time, especially in seawater. Consequently, the ESIA

[7] Scoping Report at 293.

[8] https://thelundingroup.com/lundin-group-of-companies/africa-energy-corp/news/africa-energy-commences-operations-on-block-2b-off-122637/

[9] A. S. Kavanagh *et al.*, *Seismic surveys reduce cetacean sightings across a large marine ecosystem*, 9, Sci. Rep., 19164 (2019).

[10] Russell, D. '*Assessing the Impact of Seismic Surveys on South African Fisheries*' (5 April 2018) at 6. Available online at: www.rfalliance.org.za/wp-content/uploads/2018/10/Assessing-Impact-of-Seismic-Surveys-on-South African-Fisheries-April-2018.pdf

must account for the cumulative effects of the degradation of existing plugs resulting from prior exploration endeavours, as well as the degradation of this project's well plugs over the years. These impacts should be taken into consideration alongside ongoing and forthcoming activities.

2.8. The ESIA must also provide a comprehensive explanation of the baseline environment, which includes analysis of past impacts and current threats in conjunction with the impacts that are likely to result from the proposed activities. Despite this requirement, the Scoping Report fails to list in the Marine Ecology terms of reference any analysis of the cumulative impacts of climate change in conjunction with the impacts of the proposed exploration activities.

3. The project would carry an unacceptable risk of a catastrophic oil spill

3.1. Exploratory well drilling can have devastating, widespread consequences to marine life and coastal communities.

3.2. One of the greatest environmental threats from offshore drilling operations is a major spill of crude oil and/or natural gas occurring either from a loss of well control or blow-out.

3.3. Exploratory drilling carries an increased risk of blow-out. The risk of a catastrophic oil spill is highest at the exploratory drilling stage, and despite reassurances from regulators and companies, happen all too often. For example, the 2010 BP Deepwater Horizon was an exploratory well 1,500 metres deep that spilled 200 million gallons of oil into the Gulf of Mexico, with devastating impacts on ocean ecosystems, the livelihoods of coastal communities, and the tourism industry. The spill caused the massive killing of marine mammals[11], fish[12], and birds.[13] The Gulf region experienced precipitous and long-term declines in fisheries and tourism revenue; in the 10 years after the spill, commercial and recreational fishing industries alone lost roughly 25,000 jobs and $2.3 billion in industry output.[14] BP and its partners have spent over 70 billion dollars to mitigate the disasters impacts.

3.4. The Deepwater Horizon disaster is not anomalous. At least 711 offshore blowouts and/or well releases have occurred world-wide since 1955[15], though this is certainly an underestimate given data gathering limitations and records, not to mention releases from abandoned wells. Other major well blowouts include the 126-million-gallon Ixtoc I exploratory well blowout in 1979 in the Gulf of Mexico, the Chevron Campos Basin well rupture in deep waters off the coast of Brazil in 2011, and the ongoing 19-year Taylor

[11] Lori H. Schwacke *et al.*, *Health of Common Bottlenose Dolphins (Tursiops truncatus) in Barataria Bay, Louisiana, Following the Deepwater Horizon Oil Spill*, 48, Environ. Sci. Technol., 93–103 (2014).
[12] Cameron H. Ainsworth *et al.*, *Impacts of the Deepwater Horizon oil spill evaluated using an end-to-end ecosystem model*, 13, PLoS ONE, e0190840 (2018).
[13] J. Christopher Haney, Harold J. Geiger & Jeffrey W. Short, *Bird mortality from the Deepwater Horizon oil spill. II. Carcass sampling and exposure probability in the coastal Gulf of Mexico*, 513, Mar. Ecol. Prog. Ser., 239–252 (2014).
[14] Christa Court *et al.*, *Effects of the Deepwater Horizon Oil Spill on Human Communities: Catch and Economic Impacts*, *in* DEEP OIL SPILLS: FACTS, FATE, AND EFFECTS 569–580 (Steven A. Murawski et al. eds., 2020), https://doi.org/10.1007/978-3-030-11605-7_33.
[15] SINTEF Offshore Blowout Database, , SINTEF (2021), https://www.sintef.no/en/projects/2021/sintef-offshore-blowout-database/.

Energy spill, which continues to leak as much as 700 barrels (bbl) of oil each day into the Gulf of Mexico.[16]

3.5. As energy companies increasingly move to drilling in deeper waters globally[17], they are creating even more risk of another catastrophic spill. Drilling in deeper waters raises the risk of accidents due to higher bottom water pressure as well as higher pressure within the oil and gas pockets. The deeper the well, the higher the likelihood of encountering high pressure/high temperature hydrocarbon bearing formations like that involved in the Deepwater Horizon disaster.[18] By definition, a blowout is the uncontrolled release of crude oil and/or gas from a well after pressure control systems have failed. The higher hydrocarbon formation pressures faced in deep sea drilling mean pressure control systems must be stronger than those in many shallower drilling scenarios to withstand and counteract these extreme conditions.[19]

3.6. While the Deepwater Horizon disaster occurred during "deep" exploratory drilling (800-2400 m depth), AOSAC's plan in the Block 3b/4b is to drill up to five wells between 1000 and 3000 m, extending past the "deep" drilling range and into the "ultra-deep" range (below 2400 m depth).[20]

3.7. The probability of industry-reported serious accidents, fatalities, injuries, explosions, or fires grows by 8.5 percent with every additional 100 feet (~30 m) of depth at which an offshore platform operates.[21] This means that the risk from drilling the deepest well proposed for Block 3b/4b (3000 m) could increase the risk of a serious accident by **over 450%** compared to the well at issue in the Deepwater Horizon accident (given that the Macondo 252-1 well was in waters 1500 m deep).[22]

3.8. High technological and logistical barriers to accessing and capping deep well blowouts or leaks also increase risks. Increasing depth means increasingly cold temperatures, increasingly higher pressures, and increasingly difficult working conditions that necessitate the use of specialised remotely-operated vehicles capable of withstanding high bottom water pressures (as would be the case in the deeper sections of the area of interest).[23]

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[16] Andrew L. Mason, *An Integrated Assessment of Oil and Gas Release into the Marine Environment at the Former Taylor Energy MC20 Site*, https://repository.library.noaa.gov/view/noaa/20612.

[17] Steven A. Murawski *et al.*, *Deepwater Oil and Gas Production in the Gulf of Mexico and Related Global Trends*, *in* SCENARIOS AND RESPONSES TO FUTURE DEEP OIL SPILLS: FIGHTING THE NEXT WAR 16–32 (Steven A. Murawski et al. eds., 2020), https://doi.org/10.1007/978-3-030-12963-7_2.

[18] United States National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Macondo: The Gulf Oil Disaster : Chief Counsel's Report (2011); F. William M. Pinkston & Peter B. Flemings, *Overpressure at the Macondo Well and its impact on the Deepwater Horizon blowout*, 9, Sci. Rep., 7047 (2019).

[19] P. K. Mishra, *Ultradeepwater Cementing: Challenges and Solutions* (2006), https://onepetro.org/speidtc/proceedings-abstract/06IDTC/All-06IDTC/139728; Zhaoguang Yuan, Yahya Hashemian & Daniel Morrell, *Ultra-deepwater blowout well control analysis under worst case blowout scenario*, 27, J. Nat. Gas Sci. Eng., 122–129 (2015).

[20] Jason Lavis, *Shallow, mid to ultra deepwater definitions*, Drillers (2018), https://drillers.com/shallow-mid-to-ultra-deepwater-definitions/.

[21] Lucija Muehlenbachs, Mark A. Cohen & Todd Gerarden, *The impact of water depth on safety and environmental performance in offshore oil and gas production*, 55, Energy Policy, 699–705 (2013).

[22] Earl Boebert & James M. Blossom, Deepwater Horizon: A Systems Analysis of the Macondo Disaster (2016).

[23] The Challenges of ROV Operations at Sea, Deep Ocean Education Project , https://deepoceaneducation.org/resources/the-challenges-of-rov-operations-at-sea/.

3.9. The Scoping Report incorrectly states that a well blow-out "can also be prevented by following the specialist mitigation measures,"[24] but as experience has shown, no amount of caution can completely eliminate this risk.

3.10. The EIA must address all of the above considerations, along with complete modelling of worst-case scenarios should a blow-out occur. Accurate modelling of the fate of oil or gas condensate from a well blowout or leak must consider the depth of the emission, its force and maximum quantities emitted given realistic timeframes for gaining control of the well, the depth of the well, and the density of released hydrocarbons. The oil spill modelling must also incorporate results of laboratory analyses of the target hydrocarbons.

4. The ESIA should address broader environmental and socio-economic considerations outside the control of the proponent

4.1. Functioning ecosystems are the lifeblood of individuals, communities, businesses and ultimately the entire planet. The benefactors are profoundly dependent on the services that these ecosystems supply. And often as is the case now the world's ecosystem, and particularly the offshore regions where there is an abundance of biodiversity, are under increasing strain in the name of development.

4.2. The costs of ecosystem degradation are often not fully comprehended until the damage has already been done. When considering new projects, accurate, upfront assessment of both impacts on, and dependence on, ecosystem services is essential. Here, existing environmental and social impact assessments meant to judge the impacts on the natural environment and local communities, often fall short.

4.3. The ESIA must specifically account for the project's entire lifecycle impacts on the ecosystem service benefits, as confirmed in recent judgements pronouncing that exploration and production phases are intrinsically intertwined and are discrete stages[25] in a single process.[26] The ESIA must not overlook future generations who will be vulnerable to ecosystem change. A failure to consider some of the harmful social and economic consequences of a project's environmental effects beyond the temporal scope of exploration can lead to a false sense of security about the project's overall impact, and can make it difficult to develop effective mitigation strategies for a project's long-term impacts.

4.4. Therefore, it is crucial that impact assessments, like the present one, thoroughly evaluate the potential consequences of a diminished or lost ecosystem services provided to local coastal communities and fisherfolk peoples who rely on marine resources.

5. **The ESIA must accurately describe up-to-date environmental baseline conditions**

5.1. Appropriate and up-to-date scientific information should be available to inform a comprehensive assessment of impacts, before a decision can be made whether to authorise a harmful activity. A comprehensive and accurate assessment of the potential impacts requires a robust understanding of the current state and potential stressors.

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[24] Scoping Report at 44.

[25] Director: Mineral Development, Gauteng Region and Another v Save the Vaal Environment and Others (133/98) [1999] ZASCA 9 (12 March 1999).

[26] *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Others* (3491/2021) [2022] ZAECMKHC 55 at para 123

Without a thorough understanding of the current state and potential sensitivities of marine ecosystems, it is not possible to evaluate the significance of future impacts accurately and to accurately assess the cumulative environmental effects.

5.2. Section 2(4)(a)(vii) of NEMA provides that sustainable development requires the consideration of all relevant factors, including "that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions". In *WWF South Africa v Minister of Agriculture, Forestry and Fisheries and others*, the Court found that "[p]otential errors are 'weighted in favour of environmental protection', the object being 'to safeguard ecological space or environmental room for maneuver.[27]

5.3. The precautionary approach is applicable to limits on available information during both exploration and production phases, as confirmed by the court in *Sustaining the Wild Coast NPC and others v Minister of Mineral Resources and others.*[28]

5.4. The proposed activity, along with other marine exploration, production, and mining activities off the West Coast, can significantly increase the intensity of environmental stressors on the broader regional ecosystem. This could alter the current risk status to marine biodiversity and climatic conditions, given the uncertainty and poor knowledge of the extent of species-level and ecosystem-level impacts.

5.5. The ESIA should not rely on outdated information and data from previous environmental impact assessments for other marine exploration, production, and mining activities off the West Coast. If the ESIA does not incorporate a comprehensive and up-to-date understanding of the regional environmental trends within the offshore areas demarcating the Orange Basin, there is a risk that it will miss critical interactions and fail to implement effective mitigation strategies.

5.6. The Draft Scoping Report appears to not address the lack of availability of a regional baseline for multiple components of the marine and coastal ecosystems potentially impacted. Accurate and up-to-date baselines ensure the efficiency of any subsequent project-specific environmental assessment conducted within the same region.

5.6.1. The Scoping Report indicates no adequate baseline for cetacean populations will be included in the ESIA. For example, it is stated:

> "The individual and population level consequences of other exploration activities or multiple smaller and more localised stressors are difficult to assess. Information on the population trends of resident species of baleen and toothed whales is unfortunately lacking, and the potential effects of seismic noise on such populations remains unknown''[29]
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> and
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> "Information on the population trends of resident species of baleen and toothed whales is unfortunately lacking, and the potential effects of seismic

[27] WWF South Africa v Minister of Agriculture, Forestry and Fisheries and Others (11478/18) [2018] ZAWCHC 127; [2018] 4 All SA 889 (WCC); 2019 (2) SA 403 (WCC) (26 September 2018) at para 104.

[28] *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Others* (3491/2021) [2022] ZAECMKHC 55

[29] See Block 3B/4B Scoping Report page xxi.

noise on such populations remains unknown. While it is foreseeable that further exploration (seismic and well-drilling) and future production activities could arise if the current application is granted, there is not currently sufficient information available to make reasonable assertions as to nature of such future activities. This is primarily due to the current lack of relevant geological and resource potential information, which the proposed exploration process aims to address"[30]

5.6.2. Climate change is a measurable reality, and South Africa and its coastal waters are particularly vulnerable to its impacts.[31] This means that the baseline state for marine and coastal ecological systems in South Africa is changing. Animal migrations and feeding habits shift with changing environmental drivers. As an example, since 2011, super-groups of humpback whales ranging from 20 to 200 individuals have been observed in the coastal region of the Southern Benguela current between St Helena Bay and Cape Point. A feeding strategy of densely packed individuals is unprecedented in this region, and researchers have concluded that shifting oceanographic regimes are resulting in large phytoplankton blooms that precede super-group feeding strategy events.[32]

5.6.3. Given how quickly cetacean distribution and feeding and breeding patterns are changing due to shifting ocean temperatures, currents, and resource availability, this substantial knowledge gap must be remedied by new surveys that cover all seasons over two years at minimum.

5.6.4. There is inadequate baseline data on beaked whales in the study area, as the Scoping Report admits:

There are almost no data available on the abundance, distribution or seasonality of the smaller odontocetes (including the beaked whales and dolphins) known to occur in oceanic waters (>200 m) off the shelf of the southern African West Coast. Beaked whales are all considered to be true deep-water species usually being seen in waters in excess of 1 000 – 2 000 m deep (see various species accounts in Best 2007). Presence in the project area may fluctuate seasonally, but insufficient data exist to define this clearly. Beaked whales seem to be particularly susceptible to man-made sounds and several strandings and deaths at sea, often en masse, have been recorded in association with naval mid-frequency sonar (Cox et al. 2006; MacLeod & D'Amico 2006) and

[30] Page xxi of the Scoping Report.

[31] Department of Environmental Affairs (DEA). Long-Term Adaptation Scenarios Flagship Research Programme (LTAS) for South Africa. Climate Change Implications for Marine Fisheries in South Africa; Department of Environmental Affairs: Pretoria, South Africa, 2013; 60p.; Intergovernmental Panel on Climate Change (IPCC). 2022: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate; Cambridge University Press: Cambridge, UK, 2022.

[32] Subhra Prakash Dey *et al.*, *Oceanographic anomalies coinciding with humpback whale super-group occurrences in the Southern Benguela*, 11, Sci. Rep., 20896 (2021).

a seismic survey for hydrocarbons also running a multi-beam echo-sounder and sub bottom profiler (Cox et al. 2006).[33]

5.6.5. Beaked whales and dolphins are commonly observed in Block 3B/4B by marine mammal observers (MMOs) during seismic surveys.[34] Beaked whales dive to great depths to forage and spend long periods of time deep underwater.[35] The observations from MMOs at the surface, though numerous, are an underestimation of their abundance in the Block.

5.6.6. The operating frequencies of the proposed single beam and multi-beam sonar falls into the high frequency kHz range, overlapping with cetacean's hearing sensitivity frequency range, particularly for cetaceans of High Frequency and Very High Frequency hearing groups[36], which includes the beaked whales and dolphins known to be in the Block.[37] Such frequencies would be audible for long distances (tens of km) before attenuating to below threshold levels.[38]

5.6.7. Given the lack of baseline information on cetacean distribution and seasonality in the Block, particularly for the most acoustically sensitive cetacean groups, a precautionary approach should be taken such that where the impacts of exploration cannot be accurately predicted, the activity should not be authorised.

5.7. The Scoping Report indicates no adequate baseline for coastal sensitivity will be included in the ESIA.

5.7.1. A regional baseline for coastal sensitivity must be taken into consideration in the event of an oil spill. Without up-to-date sensitivity information, no impact assessment can be conducted or reviewed by the Competent Authority. The last coastal sensitivity map for the South African coastline was compiled by Jackson & Lipschitz (1984) and is thus mostly rooted in data collected more than three decades ago.[39] The Scoping Report acknowledges this data deficit[40], and does refer to newer data from the 2018 South Africa National Biodiversity Assessment that may be compiled into an online GIS reference[41], yet does not confirm if this

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[33] Scoping Report at 120.

[34] Scoping Report at 112, Figure 49: Block 3B/4B (red polygon) in relation to the distribution and movement of cetaceans along the West and South Coasts collated between 2001 and 2020 (SLR MMO database).

[35] Roanne Manzano-Roth *et al.*, *Dive characteristics of Cross Seamount beaked whales from long-term passive acoustic monitoring at the Pacific Missile Range Facility, Kaua'i*, 39, Mar. Mammal Sci., 22–41 (2023); Hilary Kates Varghese *et al.*, *Spatial analysis of beaked whale foraging during two 12 kHz multibeam echosounder surveys*, 8, Front. Mar. Sci., 1139 (2021).

[36] Scoping Report at 284.

[37] Brandon L. Southall *et al.*, *Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects*, 45, Aquat. Mamm., 125–232 (2019).

[38] Scoping Report at 284.

[39] Lynette F. Jackson *et al.*, Coastal sensitivity atlas of Southern Africa 1984: compiled for the Dept. of Transport of the Republic of South Africa by Lynette F. Jackson & Steven Lipschitz; mapped by Hannes van der Merwe & Larry Zietsman = Kussensitiwiteitsatlas van Suidelike Afrika 1984 (1984).

[40] Scoping Report at 137.

[41] Harris, L.R., Sink, K.J., Skowno, A.L. & Van Niekerk, L. (eds). 2019. South African National Biodiversity Assessment 2018: Technical Report. Volume 5: Coast . South African National Biodiversity Institute, Pretoria. http://hdl.handle.net/20.500.12143/6374

represents recent sensitivity data that will be used in the assessment of oil spill impacts that could results from the project.

5.8. The Scoping Report's Marine Ecology scope of work lists that the study will include an "[u]pdate of Baseline Description (only based on available desktop information)." Given the gaps in the literature for cetaceans and coastal sensitivity that the Scoping Report acknowledges, it appears that the ESIA will not remedy the key knowledge gaps that would allow for an adequate assessment of marine ecology impacts from the project.

6. The ESIA must comprehensively assess economic impacts

6.1. The TOR and scope of the Economic Impact Assessment[42] must consider short-term to long-term implications of economic impacts for the complete life cycle of the project including production, paying particular attention to irreversible, permanent and irreplaceable losses of natural and heritage resources.

6.2. In addition, the assessment ought to consider the full spectrum of contexts in which economic impacts on fishing both commercial and small-scale, food security and livelihood development may be realised ie the local, regional and national context. The scope of the economic impact assessment should adopt a range of scenarios to test the potential economic impacts of various development paths within the regional western coastal area within South Africa EEZ. The basis of the assessment of scenarios must include:

6.3. The cost benefit of addressing the threat of climate change and the necessity to move to net zero economy. Net Zero commitments creates barriers to oil and gas development and taxes on emissions will dis-incentivize investment in oil and gas developments.

6.4. An evaluation of the net socio-economic benefits of the no go option – the status quo provides livelihoods for many coastal dwellers and provides both cultural value and contributes to their well-being. Not going ahead with the project will continue those benefits – going ahead risks undermining and destroying these communities.

6.5. An evaluation of the cost benefits of a business as usual taking into consideration the fluctuation of the global energy prices of oil and gas and the availability of imports

6.6. An evaluation of demand within the context of a carbon border adjustment tax regime and transitions to renewable energy systems.

6.7. An identification and incorporation of priority ecosystem services for inclusion within the terms of reference. By adopting this approach, the economic assessment can pinpoint the pertinent ecosystem services that necessitate consideration. Moreover, this aids in identifying the relevant stakeholders that should be actively engaged throughout the assessment. The process should consider the following:

[42] A key measure of economic impact is Gross Value Added (GVA). GVA measures the difference between the total output or revenue of an industry and what it spends on intermediate inputs. Intermediate inputs are the goods and services used up in production

6.7.1. In identifying and incorporating priority ecosystems services for inclusion, an inclusive stakeholder engagement strategy must extend beyond engaging solely with indigenous communities, though their cultural and indigenous intangible heritage are deeply connected to the concerned area. The engagement strategy should extend to encompass fishers who may not explicitly identify as Khoisan or indigenous. These fishers possess tangible and intangible cultural heritage that is intricately interwoven with their fishing practices, harvesting activities, and diverse interactions with the ocean.

6.8. By incorporating a holistic approach to assessing the socio-economic scenarios that impact tangible and intangible cultural heritage that is linked to fishing harvesting and use of the ocean in diverse ways, the socio-economic dimensions of the project's environmental impacts can be effectively captured. This holistic approach ensures that unforeseen costs and benefits linked to the project are adequately considered. In this manner, the assessment should endeavour to identify stakeholders who might otherwise remain overlooked, guaranteeing a well-rounded perspective on the potential ramifications of the project.

6.9. In conclusion, the Economic Impact assessment should encompass the entire project lifecycle, from short to long term, focusing on irreversible losses of natural and heritage resources. This evaluation must span various economic contexts, considering factors like global energy price fluctuations, carbon border adjustment tax regimes, and transitions to renewable energy systems. Priority ecosystem services should be identified and incorporated into the assessment, involving stakeholders beyond indigenous communities, extending to fishers with cultural ties to the area. A comprehensive approach to assessing socio-economic scenarios linked to fishing and ocean use will ensure the project's environmental impacts are adequately addressed. This inclusive strategy aims to capture unforeseen costs and benefits while recognizing stakeholders that may otherwise be overlooked, providing a well-rounded understanding of the project's potential consequences.

7. The ESIA must comprehensively assess cultural heritage impacts

7.1. The plan of study for the Cultural Heritage Assessment (CHA) appears to follow the same methodology as a number of other recent similar studies in EIA processes which NJ and The Green Connection have participated. It dedicates only 35-days of field work to cover the coastline from the Namibian border from Alexander Bay to the Gqeberha region. We believe that this is inadequate to properly consult with indigenous and local communities, and to understand and assess their cultural heritage.

7.2. Further, the CHA should not concentrate only on assessing impacts on Khoisan cultural heritage and intangible aspects, but should include an assessment of cultural heritage of indigenous fisher communities, distinct from indigenous groups. There are many fishers who do not specifically identify as Khoisan or indigenous, but possess significant tangible and intangible cultural heritage intertwined with their fishing, harvesting, and ocean-related activities, showcasing diverse cultural connections. A comprehensive CHA requires engagement with indigenous structures and groups, as well as traditional, small-scale fishers from different locales.

8. The ESIA must take into account relevant integrated coastal management considerations

8.1. According to section 63(1) of the National Environmental Management: Integrated Coastal Management Act, 24 of 2008, various factors must be taken into account in deciding on an application for environmental authorisations for "coastal activities". The ESIA holds the responsibility of integrating a forward-looking perspective into its assessment.[43] This requires a comprehensive evaluation encompassing the impact's scale, duration and range concerning the interests of the whole community, as defined in the Act.

REQUESTS FOR INFORMATION

9. The Draft Scoping Report acknowledges that the Joint Venture Partners are the holders of an Exploration Right for Block 3B/4B.

    9.1. Please provide a copy of the Exploration Right.

    9.2. What is the respective interest holding percentage of the JV partners?

    9.3. Were the JV Partners granted an environmental authorisation at the time that the right was awarded? If so, please provide access to copies of the environmental authorisation, as well as the EIA process that preceded the granting of the authorisation.

    9.4. Please provide a copy of the approved EMPR associated with the Exploration Right, and any audit report for the EMPR.

10. Please explain what is meant by the following sentence, particularly in respect of the underlined portion: "As part of the process of applying for the Exploration Right, the JV Partners undertook and completed the reprocessing project covering 2 000 km^2, which is a subset of the 10 000 km^2 BHP/Shell 3D seismic datasets, focussed primarily on the most northern portion of Block 3B/4B."

11. Please provide details of any reconnaissance activities which have been conducted under the auspices of the Exploration Right.

12. Please provide a copy of the Exploration Right Renewal Application.

13. Please provide a copy of the application for environmental authorisation together with all the minutes of meetings with authorities.

[43] Section 21 read with section 12 of the ICMA.