
APPEAL IN TERMS OF SECTION 43(2) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 106 OF 1998 AGAINST THE ENVIRONMENTAL AUTHORISATION GRANTED TO AFRICA OIL SOUTH AFRICA CORP BLOCK 3B/4B FOR THE PROPOSED OFFSHORE EXPLORATION, OFF THE WEST COAST OF SOUTH AFRICA
DMRE Ref: 12/3/339

INTRODUCTION

1. This is an appeal against the environmental authorisation ("**EA**") granted by the Director-General of the Department of Mineral Resources and Energy ("**DG**"**)** to Africa Oil South Africa Corp, Ricocure (Pty) Limited and Azinam Limited ("**AOSOC**") in respect of the proposed offshore exploration well drilling in offshore block 3B/4B, off the West Coast of South Africa.
2. This appeal is made by Natural Justice, The Green Connection and Masifundise Development Trust (collectively "**Appellants**").
3. 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 support to local and indigenous communities impacted by the ever-increasing demand for land and natural resources.
4. 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.
5. Masifundise Development Trust is a civil society organisation with a long track record in the small-scale fishing sector. Its aim is to promote and advance human rights and Food Sovereignty in small-scale fishing communities in South Africa, and globally. Masifundise empowers fishers and community-based activists to become agents of change in order to become agents of change within their own communities, organisations, and social movements, as well as facilitating and strengthening participatory governance, enabling

fishing communities to secure their social, economic, and political rights and promoting principles of social, economic and environmental justice.

6. The Appellants have legal standing to bring the appeal not only in terms of section 43 of the National Environmental Management Act, 107 of 1998 ("**NEMA**"), but also to enforce environmental laws in terms of section 32 of NEMA. The Appellants act in the interest of, or on behalf of, persons who, for practical reasons, are unable to institute such proceedings, including members of coastal communities who do not have the capacity or resources to do so, in the interests of coastal communities who are affected by the proposed seismic activities, in the public interest, and in the interest of protecting the environment, to further the objectives of section 24 of the Constitution of the Republic of South Africa, 1996 ("**the Constitution**") and NEMA.
7. The Appellants contend that the Final Environmental Impact Assessment Report ("**FEIR**") was fatally flawed, for the reasons set out in this appeal, and cannot serve as a lawful basis for granting the EA. The EA granted by the DG is therefore defective and should be set aside in this appeal. Environmental authorisation should be refused.
8. The Appellants made substantive written submissions during the environmental impact assessment ("**EIA**") process to the environmental assessment practitioner ("**EAP**"). These written submissions contain the Appellants' detailed comments on and objections to the application, and in turn inform the grounds for this appeal because the FEIR and related reports, specialist impact assessment reports and Environmental Management Programme ("**EMPr**") did not deal with the issues raised in a meaningful manner or resolve the issues raised. See attached copies of the submissions marked **annex BO1** and **annex BO2**.

GROUNDS OF APPEAL

9. The Appellants submit this appeal on the following grounds:
   9.1. The FEIR oil spill risk analysis is deficient and does not accurately assess the risk to marine life and coastal communities
   9.2. Failure to adequately assess socio-economic impacts
   9.3. Failure to give effect to the National Environmental Management: Integrated Coastal Management Act, 24 of 2008
   9.4. The authorised activities are not needed or desirable
   9.5. Failure to consider impacts on food security
   9.6. Failure to assess transboundary impacts
   9.7. Failure to adequately assess cultural and heritage impacts
   9.8. The public participation process did not achieve meaningful consultation
10. The grounds are set out in more detail below.

I. THE FEIR OIL SPILL RISK ANALYSIS IS DEFICIENT AND DOES NOT ACCURATELY ASSESS THE RISK TO MARINE LIFE AND COASTAL COMMUNITIES

11. The FESIA's oil spill analysis fails to comply with NEMA's requirements to analyse the full scope of the impact and risk associated with an activity.

12. NEMA requires environmental impact assessments to "assess and rank the impact the activity will impose on the preferred location … including an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures."[1] In addition, all administrative action must be "lawful, reasonable and procedurally fair,"[2] and a court may overturn administrative action if the action was taken "arbitrary or capriciously" or if the action is "not rationally connected to the information before the administrator," among other requirements.[3]

13. As explained in our original comments and reiterated here, the FIR's Oil Spill Drift Modelling Technical Report[4] (OSM) fails to comply with these legal requirements in multiple ways.

    13.1. The OSM failed to model the worst-case scenario spill location.

    13.2. The 20-day capping time assumed in the OSM fails to reflect the worst-case scenario.

    13.3. The OSM failed to model spill impacts in the water column, which could be exacerbated by the use of dispersants.

14. Despite these failures, the Competent Authority still authorised the Project, relying on the inadequate OSM to conclude "the occurrence of [an oil spill] is unlikely and the holder has strategies in place to manage such an event(s), should it occur."[5] As explained further below, this decision relies on the risk assessment in the FEIR, which was drawn from the OSM's faulty analysis of spill impacts.

<u>The OSM failed to model the worst-case scenario spill location.</u>

15. Though the FEIR must assess the worst-case scenario spill locations, the OSM only modelled spills from the "most likely areas for drilling, deeming these as the most useful and applicable points for study,"[6] rather than other potential drilling locations in the Area of Interest (AOI) that could result in more severe impacts should a spill occur. As noted in the OSM, "[t]he exact locations of the wells to be drilled within the area of interest in

[1] EIA Regulations, Appendix 1, Section 3(1)(i).

[2] Constitution Section 33(1).

[3] PAJA Section 6(2)(e)(vi), Section 6(2)(f)(ii)(cc).

[4] EIAR Appendix 4.9, *Oil Spill Drift Modelling Technical Report V07* (5 Apr. 2024).

[5] Environmental Authorisation at 18.

[6] Environmental Impact Management Services responses to Natural Justice commentss on RDEIAR (17 May 2024).

Block 3B-4B are not yet known," and the modelled locations are merely "indicative target points."[7] The Environmental Authorisation does not specify well locations, authorising drilling anywhere within the AOI.

16. In our comments on the draft EIAR, we proposed two release points that would more likely represent the worst-case scenario than those modelled in the OSM.[8] The locations proposed in the comments are closer to the shore and to Namibian waters, and to Critical Biodiversity Areas. By modelling two release points in locations further from these areas, the OSM failed to assess the worst-case scenario should a spill occur as a result of the authorized activities.

The 20-day capping time assumed in the OSM fails to reflect the worst-case scenario.

17. The FEIR's assumed capping timeframe if a blowout were to occur do not reflect the worst-case scenario. Specifically, the FEIR assumes that a blowout can be contained in a mere 20 days, but it is unclear how the FEIR arrived at this highly optimistic number. To put this 20-day figure in context, the U.S. National Oceanic and Atmospheric Administration more conservatively assumes that it could take up to 30 days to contain a blowout in the Gulf of Mexico,[9] a region with far more oil and gas infrastructure than South Africa's west coast. And real-life experience demonstrates that it can take far longer than even 30 days to contain a blowout. The Deepwater Horizon disaster took 87 days to contain.[10]

18. The FEIR bases the capping time on "the Oil Spill Contingency Plan (OSCP) prepared for exploration drilling campaign in Block 11B/12B."[11] However, that 20-day estimate is conditional upon "no debris clearance requirement and suitable weather conditions,"[12] meaning the response time is based on ideal conditions rather than the worst-case scenario. Instead, the FEIR should have modeled the capping time under the worst conditions that can reasonably be expected; including the presence of debris that requires clearance and the worst possible weather conditions.

19. The OSM also fails to consider a scenario in which the capping stack fails. A capping stack failure is not an impossibility. There is only one capping stack stored at Saldanha Bay, and a recent paper on risk analysis of subsea capping stacks points out that "[i]nstalling a

[7] OSM at p. 10.
[8] Pages 3-4 of the Appellants' Comments to the DEIAR.
[9] U.S. National Oceanic and Atmospheric Administration, *Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico* (13 Mar. 2020), at p. 56.
[10] Deepwater Horizon Natural Resource Damage Assessment Trustees, *Deepwater Horizon oil spill: Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement* at 1-2 (2016, *available at* http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan.
[11] OSM at p. 21.
[12] Oil Spill Contingency Plan: TotalEnergies EP South Africa Oil Spill Response Strategy – Block 11B/12B (Aug. 2023).

capping stack on a blowing well is a technically complex exercise."[13] Capping stacks can fail for numerous reasons, and should not be assumed to have a 100% success rate.[14] If the capping stack at Saldanha Bay fails or happens to be in use at one of the growing number of nearby wells, then another capping stack would need to be brought in from another, more distant, location (such as Brazil). This would add a significant amount of time to the successful capping of the well. The EAP's response to comments does not respond directly to this point, instead explaining only that there is one capping stack available at Saldanha Bay and that there have never been simultaneous oil spills. These points do not explain what would happen if the stack from Saldanha Bay failed in the event of a blowout. See attached a copy of the EAP's response to the Appellants' comments to the DEIAR marked **annex BO3**.

The OSM failed to model spill impacts in the water column, which could be exacerbated by the use of dispersants.

20. The OSM assumes that crude oil releases will not impact the water column, stating: "For the Crude oil release: as the dispersion and dissolution during the rise of the oil is very low compared to Condensate, the impact of the crude oil release is not significant for the water column, and has to be focused on the surface, and all the processes involved after (natural dispersion, biodegradation, evaporation)."[15] This assumption is not accurate. Not only could crude oil itself have an "inevitable impact on the water column,"[16] but some of the modelled response scenarios included using dispersants at the release point (SSDI), which would increase water column impacts (more oil and dispersants) while decreasing surface oil presence. Dispersants are designed to disperse the oil into the water column, which can decrease visible slicks on the surface, but increases the toxicity of oil within the water column because it is more easily taken up by organisms.[17] The OSM failed to model the behavior of crude oil in the water column, as well as an oil/dispersant mixture.

II. THE FEIR ANALYSIS OF MARINE AND FISHERIES IMPACTS IS FLAWED AND INADEQUATE

21. NEMA regulations require the assessment of acoustic harms generated by the proposed project, mandating that "[a]n environmental impact assessment report must contain the information that is necessary for the competent authority to consider and come to a

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[13] Jingyu Zhu et al., *Emergency Risk Analysis of Subsea Capping Stack in Blowout Scenario Integrating Numerical Simulation with ANN Model*, 296 Ocean Eng'g 116727 (2024), *available at:* https://www.sciencedirect.com/science/article/abs/pii/S0029801824000647.

[14] Valentin Vandenbussche et al., Effect of Well Capping as a Blowout Risk Reduction Measure, 2014 International Oil Spill Conference Paper (2014), available at: https://www.researchgate.net/publication/269850921_Effect_of_Well_Capping_as_a_Blowout_Risk_Reduction_Measure; IOGP et al., Subsea Capping Stack Design and Operability Assessment, Report no. 595 (Feb. 2020), available at: https://visual360.no/osrl/files/595.pdf.

[15] OSM at p. 3.

[16] Response to commentss, Items 21-22.

[17] Antonietta Quigg, et al., *Marine Phytoplankton Responses to Oil and Dispersant Exposures: Knowledge Gained Since the Deepwater Horizon Oil Spill*, 164 Marine Pollution Bull. 112074 (2021), *available at:* https://www.sciencedirect.com/science/article/pii/S0025326X21001089#s0070.

decision on the application [for environmental authorisation], and must include … an assessment of each identified potentially significant impact and risk, including … cumulative impacts [and] the nature, significance and consequences of the impact and risk."[18] Under NEMA, an environmental impact assessment must also include an "investigation of mitigation measures to keep adverse consequences or impacts to a minimum."[19] Under PAJA, a court may judicially review the grant of an environmental authorisation if the action was taken because "relevant considerations were not considered", among other provisions.[20]

22. The FEIR's assessment of the project impacts on marine species fails to meet this standard in a variety of ways:

    22.1. The FEIR's analysis of cumulative impacts is flawed.
    22.2. The FEIR lacks sufficient baseline data to evaluate environmental impacts.
    22.3. The FEIR does not adequately describe the potential impacts of oil spills to local marine biodiversity.

23. The FEIR's Marine Ecology Report[21] underestimates the significance of the project's environmental impacts by failing to consider environmental impacts that last beyond the duration of the project.

24. The FEIR fails to abide by the precautionary principle in assessing the significance of impacts characterized by high levels of uncertainty.

The FEIR's analysis of cumulative impacts is flawed.

25. Block 3B/4B lies within the Orange Basin, which extends from South Africa as far north as the Lüderitz Arch in Namibia. The Block has been subjected to multiple previous exploration activities, including 2D and 3D seismic surveys, and more than 38 exploratory wells have already been drilled on the shelf east of the Block.[22] The FEIR 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.[23] Beyond exploration, there is the intended realisation of production in Block 3B/4B 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.

[18] NEMA EIA Regulations at Appendix 3(3)(j)
[19] NEMA Section 24(4)(b).
[20] PAJA at Section 6(2)(e).
[21] PISCES, Proposed Exploration Drilling in Block 3B/4B off the West Coast of South Africa: Marine Biodiversity Specialist Assessment (Nov. 2023).
[22] EIAR at p. 14.
[23] EIAR at p. 466. *See also* Melisa Cavcic, *Shell Makes Another Deepwater Oil Discovery Offshore Namibia*, OFFSHORE ENERGY (March 6, 2023), https://www.offshore-energy.biz/shell-makes-another-deepwater-oil-discovery-offshore-namibia/; *Shell Makes Another Oil Find in Namibia's Orange Basin*, PETROLEUM AFRICA (July 13, 2023) https://www.petroleumafrica.com/shell-makes-another-oil-find-in-namibias-orange-basin/.

26. Despite the high volume of past, current, and potentially future oil and gas exploration activities in the region, the FEIR fails 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". 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.

27. The FEIR expressly declines to assess the cumulative environmental impacts that could arise from further exploration or production activities in the area. Instead, the FEIR 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."[24]

28. The proposed exploration activities are intended to lead to full-scale production activities. 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).[25] The compounding effects of all these projects were not evaluated in the FEIR.

29. A complete cumulative impact assessment must also evaluate the condition of existing well plugs. Concrete used in well casings and plugging degrades over time, especially in seawater. The FEIR failed to account for the cumulative effects of the degradation of existing plugs resulting from prior exploration endeavours.

30. The FEIR failed to assess the immediate and chronic impacts of cumulative sonar and seismic surveys and drilling activities in the project area, not just from a singular exploration project. The FEIR should have assessed the full footprint of impacts from sonar surveys and drilling activities in the context of their additive nature.

<u>The FEIR lacks sufficient baseline data to evaluate environmental impacts.</u>

31. 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] EIAR at p. 466.

[25] *Africa Energy Commences Operations on Block 2B Offshore South Africa*, LUNDINGROUP (October 4, 2022), https://thelundingroup.com/lundin-group-of-companies/africa-energy-corp/news/africa-energy-commences-operations-on-block-2b-off-122637/.

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.

32. 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."

33. 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*.[26]

34. 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.

35. The FEIR relied on outdated information and data from previous environmental impact assessments for other marine exploration, production, and mining activities off the West Coast. Without 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 the FEIR failed to identify critical interactions and could lead to ineffective mitigation strategies.

36. The FEIR contains no data on the benthic fauna in the project area, noting that "[i]nformation on the benthic fauna of the lower continental slope and abyss (beyond 1800 m depth) is largely lacking due to limited opportunities for sampling."[27] Instead, the EIAR cites deep water benthic sampling from a separate project area in Namibian waters, hundreds of kilometres away from Block 3B/4B. The FEIR goes on to acknowledge "that very few national IUCN Red List assessments have been conducted for marine invertebrate species to date owing to inadequate taxonomic knowledge, limited distribution data, a lack of systematic surveys and limited capacity to advance species red listing for these groups."[28]

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[26] *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Others* (3491/2021) [2022] ZAECMKHC 55.
[27] EIAR at p. 99.
[28] *Id.*

37. The FEIR contains no data on demersal cartilaginous species located beyond the continental shelf, citing the absence of survey data.[29]

38. The FEIR fails to include adequate baseline data for marine mammal populations, noting that "data [on] population sizes and trends for most cetacean species occurring on the west coast of southern Africa is lacking."[30]

39. 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]

40. 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.

41. There is inadequate baseline data on beaked whales in the study area, as admitted in the FEIR: "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."[33]

42. 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

[29] *Id.* at pp. 101-102.
[30] *Id.* at p. 130.
[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).
[33] EIAR at pp. 144-145.
[34] EIAR at p. 137, Figure 65: 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).

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.

43. 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]

44. Given the lack of baseline information on cetacean distribution and seasonality in the Block, particularly for the most acoustically sensitive cetacean groups, the impacts could not be accurately predicted and the activity should not have been authorised.

The FEIR does not adequately describe the potential impacts of oil spills to local marine biodiversity.

45. The FEIR's assessment of oil spill impacts on marine biodiversity underestimates the risks of an unplanned event by grouping very different types of marine fauna together and not fully considering the toxic effects of dispersant use.

46. The Southern Benguela is South Africa's most productive ecoregion[39] due to the influence of the cold, equatorward-flowing Benguela Current and the large-scale intensive upwelling of nutrient rich water.[40] The FEIR recognizes how upwelling supports a highly productive pelagic community in the vicinity of the proposed project, stating: "During upwelling the comparatively nutrient-poor surface waters are displaced by enriched deep water, supporting substantial seasonal primary phytoplankton production. This, in turn, serves as the basis for a rich food chain up through zooplankton, pelagic baitfish (anchovy, pilchard, round-herring and others), to predatory fish (hake and snoek) mammals (primarily seals and dolphins) and seabirds (jackass penguins, cormorants, pelicans, terns and others)."[41]

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[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] EIAR at p. 372.

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

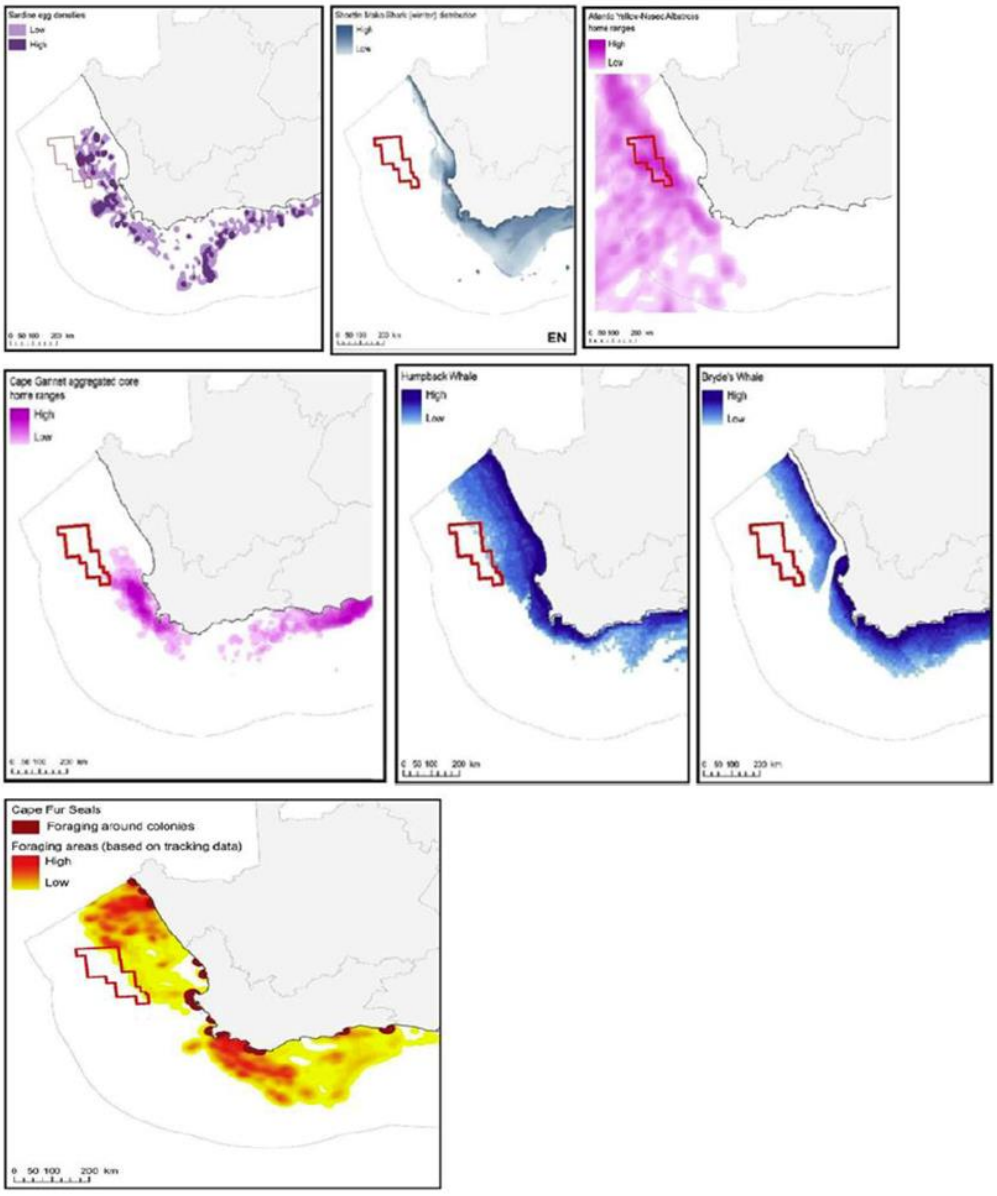
[38] EIAR at p. 372.

[39] Sink KJ, et al., Chapter 3: Marine Ecosystem Classification and Mapping. In: Sink KJ, van der Bank MG, Majiedt PA, Harris LR, Atkinson LJ, Kirkman SP, Karenyi N (eds). 2019. *South African National Biodiversity Assessment 2018 Technical Report Volume 4: Marine Realm*. South African National Biodiversity Institute, Pretoria. South Africa, *available at* http://hdl.handle.net/20.500.12143/6372

[40] Shannon, L. V., *The Benguela ecosystem I: evolution of the Benguela, physical features and Processes*, 23 Oceanogr. Mar. Biol. Ann. Rev. 105-182 (1985).

[41] EIAR at 92.

47. The FEIR provides many maps showing the distributions of fishes, birds, and mammals that overlap with the area of the modeled oil spill scenarios. The examples below were taken from Chapter 8.3 of the EIA, and illustrate the diversity of species (many of which are listed by the IUCN as Endangered, Threatened, or Vulnerable) that could be impacted by an oil spill and/or the use of dispersants. The red polygon in each figure corresponds to Block 3B/4B.



Shown above: Figures 54, 59, 63, 67, and 74 from the FEIR, depicting sardine egg densities; Shortfin Mako shark distribution (Regionally Vulnerable, Globally Endangered); Yellow-nosed Albatross habitat (Endangered), Cape Gannet habitat (Endangered); Humpback whale distribution (Regionally Vulnerable); Byrde's whale distribution (Regionally Vulnerable); and Cape Fur Seal foraging areas (Threatened).

48. The species listed above are impacted by oil in unique ways. Oil exposure is known to be lethal to plankton communities, fish (including eggs dispersing in the water column), birds,

and marine mammals. The use of dispersants can further increase the toxicity of oil and/or result in sublethal effects, including bioaccumulation of polycyclic aromatic hydrocarbons (PAHs) in marine food webs.[42] The FEIR provides several pages describing the different ways in which oil and dispersants have been shown to negatively impact individual groups of marine fauna (i.e, plankton, benthic biota, sandy shores, rocky shores, fish, seabirds, turtles, seals, cetaceans).[43] In these narrative pages, the FEIR identifies risks of varying significance for different types of species. For example, the FEIR describes potentially severe impacts on plankton,[44] more moderate impacts on benthic species,[45] long-term impacts on sandy shore environments,[46] and the potential for extremely high impacts on seabirds, sea turtles, and seals.[47]

49. The FEIR, however, used a matrix to assess impacts that combines all of these species groups together.[48] This has the effect of averaging impacts across all marine fauna and habitats. By doing so, potentially extreme impacts on some species groups (seabirds, turtles, seals, etc.), are masked by predicted lower and short-term impacts to other groups (benthic species, rocky coastal ecosystems, etc.). The fully assess the true impacts of the proposed project, the FEIR should have expanded its assessment matrix to consider the potential impact significance for each faunal group and habitat separately, and for each oil spill scenario (condensate and crude).

50. Furthermore, the FEIAR noted that oil spill impacts would be reduced from "HIGH" to “MEDIUM” significance compared to the previous iteration of the DEAIR where the same mitigation measures, save for one - the addition of the development of an Oiled Wildlife Contingency Plan – would not change the significance of a condensate spill from "MEDIUM". Further, the proposed mitigation includes the “[u]se of low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds.”[49] However, while dispersants alone can have low toxicity, the larger concern is the combination of oil and dispersants. In combination with crude oil, dispersants can increase the overall toxicity and absorption of oil by organisms. The FEIR acknowledges this, stating: “many of the ecological impacts reported for the DWH [Deepwater Horizon] spill were the result of the application of dispersants, both at the leaking well head and at the sea surface. Dispersants applied to the DWH spill modified the spreading, dispersal, weathering, biodegradation, and toxicity of the spilled oil, and their use is now thought to

[42] [Cited in the EIAR] Almeda, R., Wambaugh, Z., Wang, Z., Hyatt, C., Liu, Z., & Buskey, E. J. (2013). *Interactions between zooplankton and crude oil: toxic effects and bioaccumulation of polycyclic aromatic hydrocarbons*. PloS one, 8(6), e67212.
[43] *See* EIAR at p. 390-394.
[44] EIAR at p. 390.
[45] EIAR at p. 391.
[46] EIAR at p. 392.
[47] EIAR at pp. 393-394.
[48] *See* EIAR at p. 402.
[49] EIAR at p. 403.

have negatively influenced the total environmental impact of the DWH spill as some of the components proved to be considerably more persistent than originally thought."[50]

51. Given the toxic effects associated with dispersant use, the FEIR should have explained why dispersants were selected as a mitigation measure, as well as how they would contribute to impacts being reduced to "MEDIUM" significance when the evidence indicates that they could actually serve to aggravate impacts, beyond merely asserting that "low-toxicity" dispersants would be used.[51]

The FEIR's Marine Ecology Report underestimates the significance of the project's environmental impacts by failing to consider environmental impacts that last beyond the duration of the project.

52. The FEIR's Marine Ecology Report only considers the duration of the project's harmful activities in assessing the significance of environmental impacts, and not the duration of the impacts as South African law requires. As a result, the FEIR consistently underestimates the significance of marine impacts.

53. The FEIR's impact significance ratings fail to account for the extent, duration, reversibility, and probability values corresponding to the findings presented in the Marine Ecology Report. For example, the Marine Ecology Report's conclusions conflicted with impact ratings with respect to helicopter noise, underwater noise, damage to benthic ecosystems, toxic pollution, and light pollution.

54. **Helicopter noise:** The Marine Ecology Report found that helicopter overflights could have significant long-term impacts on seabirds and marine mammals, but nevertheless categorized these impacts as "IMMEDIATE." The report describes how helicopter flights over seabirds and marine mammals could have population-level effects. For seabirds, the ecology report notes that impacts could "include loss of usable habitat, increased energy expenditure, reduced food intake and resting time and consequently impaired body condition, decreased breeding success and physiological changes" and reduced "hatching success and recruitment success."[52] For whales, the ecology report stated that "repeated or prolonged exposures to aircraft over flights have the potential to result in significant disturbance of biological functions, especially important nursery, breeding or feeding areas."[53] The helicopter flight paths for the proposed project would fly over the Robben Island seabird colony and a Southern right whale calving and nursing area off the Cape Peninsula,[54] with the risk of long-term impacts to these populations. However, the helicopter noise impacts were characterized as of "IMMEDIATE" duration, based on the

[50] EIAR at p. 390.
[51] Response to Appellants Comments to the Revised DEIAR.
[52] Marine Ecology Report at p. 124.
[53] *Id.* at p. 123.
[54] *Id.* at p. 124-125.

extent of time that flights would occur, which is a period of four months per well.[55] The Marine Ecology Report should have assessed how long overflight impacts on marine ecosystems, particularly sensitive seabird and marine mammal populations, would last. According to the report's descriptions of potential impacts, especially the risk of the abandonment of nests or key calving/nursing areas, impacts could be PERMANENT and IRREVERSIBLE.

55. **Underwater Noise:** According to the Marine Ecology Report, underwater noise could lead to changes in marine mammal behaviour and migration, including inundating a key breeding and feeding area with injurious levels of noise. The Marine Ecology Report describes how noise from drilling activities "could result in behavioural disturbance in cetaceans" up to 28 km away from the source, and "whales potentially associated with [the] Tripp Seamount located ~25 km north-west of the Area of Interest, may be affected."[56] Changes in behavior and abandonment of important feeding or breeding areas for whales, such as the Tripp Seamount, have long-term impacts on the health of individual animals and the well-being of the population that will extend far beyond the actual duration of the drilling. Yet, the report concluded that "[t]he duration of the impact on the populations would be limited to the IMMEDIATE TERM (3-4 months per well)."[57] This conclusion ignores the likely population-level impacts of predicted avoidance behaviours.

56. **Damage to Benthic Ecosystems:** The Marine Ecology Report also noted potentially PERMANENT and IRREPARABLE damage to benthic marine ecosystems, but nevertheless categorized these impacts as merely "LONG-TERM." The report noted that drill cuttings and WBMs discharged from the surface would result "in changes in sediment structure and possibly community composition within the fall-out footprint of the cuttings plume."[58] The ecology report explicitly notes that in the "low-energy, deep-water environments, such as those in the Block 3B/4B, the effects of drilling discharges on benthic ecosystems can be more severe and long-lasting."[59] The Marine Ecology Report notes that the impact is reversible "only by incurring prohibitively high time."[60] Yet these PERMANENT impacts were characterized as only "LONG-TERM" and "PARTIALLY REVERSIBLE."[61]

57. **Toxic Pollution:** Additionally, the Marine Ecology Report found that toxic pollution from the discharge of drill cuttings will significantly change the health and composition of deep-sea benthic species, with cascading ecosystem effects. Specifically, the report found that "contamination gradients manifested themselves as reduced abundance and biomass of

[55] *Id.* at p. 125.
[56] *Id.* at p. 177.
[57] Marine Ecology Report at 178.
[58] *Id.* at p. 136
[59] *Id.* at p. 137.
[60] *Id.* at p. 144-145.
[61] *Id.* at p. 144-145.

dominant faunal species that serve as food for demersal fish, declines in diversity and loss of sensitive macrofaunal species, with an increase in abundance of opportunistic species" and modelling results undertaken for the current project "predicted that the environmental risk of contaminants in the sediments … persists beyond five years after operations."[62] These severe impacts to the long-lived, sensitive benthic ecosystems are PERMANENT and IRREVERSIBLE. Yet, the Marine Ecology Report concluded that "the duration for sediment toxicity is MEDIUM TERM.[63] At the very least, the Marine Ecology Report should have concluded that these impacts are LONG TERM, since they will not cease until after the operational life span of the project.

58. **Light Pollution:** The Marine Ecology Report describes how light pollution from flaring can attract migratory pelagic species and impact their migration routes, including pelagic seabirds, turtles, fish, and cetaceans.[64] Specifically, the report describes how the bright light from the flare will "disturb and disorientate pelagic seabirds feeding in the area" and "may also result in physiological and behavioural effects of [sic] fish and cephalopods, as these may be drawn to the increased lighting at night where they may be more easily preyed upon by other fish, marine mammals and seabirds."[65] Even slight changes in migration routes and shifts in predator-prey dynamics will have knock-on effects that reverberate throughout the populations of these migratory species and their ecosystems. These impacts are especially concerning, given that "[m]any of [the taxa most vulnerable to light disturbance] are considered globally 'Critically Endangered' (e.g. Leatherback turtle), 'Endangered' … 'Vulnerable' … or 'Near Threatened.'"[66] Yet, the report concluded that the duration of lighting impacts would be only "IMMEDIATE (4 days of flaring over a period of up to 14 days).[67]

<u>The FEIR fails to abide by the precautionary principle in assessing the significance of impacts characterized by high levels of uncertainty.</u>

59. Where impacts are uncertain or there is a lack of evidence, South African law requires a precautionary approach.[68] Therefore, an environmental assessment should take a "risk-averse and cautious approach where there is uncertainty in order to encompass the full range of potential consequences of decisions and actions." The Marine Ecology Report instead assumes the best-case scenario in cases of considerable uncertainty, leading to a FEIR that substantially underestimated the potential risks of moving forward with the proposed project.

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[62] Marine Ecology Report at p. 156.
[63] *Id.* at p. 160.
[64] *Id.* at p. 192.
[65] *Id.* at p. 193.
[66] *Id.* at p. 192.
[67] Marine Ecology Report at 193.
[68] *Fuel Retailers Association of Southern Africa v. Director-General: Environmental Management, Dept of Agriculture, Conservation and Environment, Mpumalanga Province*, Case Number 67/06, para 81 (Constitutional Court of South Africa) (7 June 2007).

60. Deep-sea marine environments:

60.1. The Marine Ecology Report frequently recognizes how little is known about deep-sea marine environments, particularly the benthic environment in the Area of Interest. Specifically, the report describes how "sampling beyond 1000 m depth has not taken place … [and] it is not known whether [fragile coral] communities may be expected in Block 3B/4B."[69] Additionally, it notes that "[d]ue to limited opportunities for sampling, the benthic biota of the outer shelf, continental slope and beyond into the abyss are very poorly known, and quantitative data on the biota from depths beyond the shelf break are largely lacking."[70]

60.2. In addition to a lack of knowledge on what species are present in the Area of Interest, there is even less knowledge about how these species may be affected by exploratory drilling. According to the report, "there is … very little knowledge on the sensitivity of microfauna, epifauna, hyperfauna and coral and sponge communities to drilling discharges, and there is virtually no information of potential long-term effects on benthic population and community functions such as production, reproduction, and trophic interaction."[71] Given this uncertainty, the report asserts that "the possibility of subtle, cumulative effects from the operational discharges at population or ecosystem level cannot be ignored."[72]

60.3. The Marine Ecology Report nevertheless concludes that nearly all impacts of drilling to local benthic species would be of "LOW" impact.[73] It's clear from the Marine Ecology Report that not enough information is available to conclude that exploratory activities would have a LOW impact, which the FEIR defines as not having enough of an impact to "have a direct influence on the decision to develop in the area."[74] The Marine Ecology Report and FEIR claim that because benthic impacts are unknown, they do not exist. This logic is the reason why the FEIR is able to claim that there is "no evidence of long-term negative change … as a direct result of … exploration drilling activities."[75] There is no evidence because there has been no research, not because there is no damage. The FEIR's claim of "no impacts" despite considerable uncertainty will allow projects to continue to destroy benthic ecosystems before they are even discovered.

61. Marine mammals:

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[69] Marine Ecology Report at p. 49.
[70] *Id.* at p. 130.
[71] *Id.* at pp. 107-108.
[72] *Id.* at p. 108.
[73] *Id.* at pp. 202-205.
[74] Marine Ecology Report at p. 297.
[75] *Id.* at pp. 206-207.

61.1. The FEIR also fails to abide by the precautionary principle with regard to its treatment of impacts to marine mammals. There is a paucity of information regarding the population sizes and distribution of South Africa's marine mammal species. As the Marine Ecology Report notes, "[t]he offshore areas have been particularly poorly studied with most information from deeper waters (>200 m) arising from historic whaling records," and "data population sizes and trends for most cetacean species occurring on the west coast of southern Africa is lacking."[76] There have also been a number of recent mass stranding events of marine mammal species in South Africa with "unknown" causes.[77]

62. Additionally, there is a lack of information about the long-term effects of noise pollution on marine mammals. As the report describes: "if a disturbance displaces a species from an important feeding or breeding area for a prolonged period, impacts at the population level could be significant. Information on the population trends of resident species of baleen and toothed whales is unfortunately lacking, and the potential effects of exploration activities on such populations remains unknown."[78]

III. FAILURE TO ADEQUATELY ASSESS SOCIO-ECONOMIC IMPACTS

63. As indicated in our comments to the revised DEIAR, the Appellants rely on expert opinion of Gillian Hamilton, an economist with over 15 years experience.[79] According to Hamilton, the EIA is inadequate for the reasons stated below.

64. The EIA is inadequate insofar as it relates to assessing the socio-economic impacts arising from oil spills. The DG based his decision on *inter alia* an economic impact assessment report that relies on legislative and policy framework and energy plans that are not aligned with the Paris Agreement or the recent White Paper on Biodiversity Conservation.[80] Most of the aforementioned energy plans are outdated and not aligned with the Just Energy Transition and the most recent scientific evidence of methane gas as a contributor to greenhouse gas emissions.[81] The proposed oil and gas project poses significant economic risks, including stranded assets and increased sovereign debt, as seen in other African countries.[82] Additionally, the FEIR's assertion that there is insufficient gas supply in South Africa is outdated, and unsubstantiated, as Renergen is already producing gas, negating the need for further supply.[83]

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[76] *Id.* at 69.
[77] *See* Marine Ecology Report at p. 84 (describing recent kogiid strandings in South Africa and stating that [t]he cause of the strandings is unknown."); Id. at p. 89 (describing an "unprecedented mortality event" for Cape fur seals in South Africa, and noting that the "underlying causes of the morality event remain uncertain.").
[78] Marine Ecology Report at p. 197-198.
[79] Paragraph 84 of the Appellants' Commentss to the Revised DEIAR.
[80] Paragraph 147 of the Appellant' Commentss to the DEIAR.
[81] Paragraph 148 of the Appellants' Commentss to the DEIAR.
[82] *Ibid*.
[83] Paragraph 149 of the Appellants' Comments on the DEIAR.

65. The FEIR does not provide actual cost data and relies on estimates. It provides an estimated cost of $35 million per well drilling, an estimate that is substantially higher than previous estimates by other previous exploration projects.[84] Consequently, the FEIR falsely inflates projected economic benefits such as operational expenditure and GDP growth.[85] Furthermore, the FEIR suggests that operational costs might be exaggerated since most operational supplies will be imported, with only a few materials sourced locally.[86] The FEIR identifies four sectors—commercial fishing, maritime logistics, tourism, and telecommunications—affected by exploration activities. However, the potential economic repercussions of temporarily closing the fishing industry are not well understood and are likely underestimated, especially regarding job losses and impacts on secondary industries.[87] The FEIR acknowledges local negative impacts, such as increased pressure on infrastructure and skill mismatches, but these are not quantified in the economic analysis.[88] Overall, the exploration may concentrate the economy rather than diversify it, increasing vulnerability to economic shocks. The broader negative impacts of the oil and gas industry at local levels need to be quantified to fully understand externalities and inform mitigation strategies.[89]The analysis of the socio-economic impact lacks clarity regarding economic costs and depends on external modelling, suggesting that only spending within the country should be taken into account.[90]

66. The economic impact assessment is flawed because it overstates the benefits of exploration while underestimating negative externalities. It has significantly inflated the projected number of direct jobs created, failing to account for job losses in the fishing industry. Additionally, the assessment has not adequately considered the economic risks associated with a potential well blowout.

67. The FEIR only analysed the potential negative impacts of a well blow-out scenario on the commercial fishing and maritime logistics industries. It ignored many other likely and foreseeable economic costs.[91] The Appellants highlighted this analysis as one of the reasons why the economic assessment is flawed.[92] In response to the Appellants' comments, the DEIAR was revised. However, the revised version of the DEIAR still failed to deal with the concerns that were raised in the Appellants' comments which prompted the Appellants to submit further comments to the revised version of the DEIAR in order to highlight this fact. The FEIR highlights significant environmental, social, and economic impacts from hydrocarbon exploration and potential well blow-outs. However, it underestimates the negative local effects, such as social issues, health impacts, and local

[84] Paragraph 150 of the Appellants' Comments to the DEIAR.
[85] *Ibid.*
[86] See footnote 7 above.
[87] Paragraphs 151 and 152 of the Appellants' Comments to the DEIAR.
[88] *Ibid*.
[89] Paragraphs 155-157 of the Appellants' Comments to the DEIAR.
[90] *Ibid*.
91 See paragraphs 82-91 of the Appellants' comments to the DEIAR.
92 *Ibid*.

business disruptions. The analysis fails to consider the costs associated with these local impacts and lacks comprehensive mitigation measures. It also neglects broader economic factors, including Scope 3 emissions, the social cost of carbon, and mortality costs related to carbon emissions. Additionally, the withdrawal of Shell from downstream operations in South Africa serves as a warning about the commitment of multinational corporations to local economic well-being. As the global energy landscape shifts away from fossil fuels, emerging petrostates face increased financial risks, with declining demand and potential stranded assets from new oil and gas projects.

IV. FAILURE TO GIVE EFFECT TO THE NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT 24 OF 2008

68. One of the DG's key findings that persuaded him to grant environmental authorisation is that the proposed project complies with the NEM:ICMA.[93] The Appellants' comments on this aspect of the assessment highlighted the fact that although the DEIAR identified the NEM:ICMA as a relevant law, it did not include any interrogation or assessment of the requirements of the Act.[94] In response to this comments, the EAP stated as follows: *Section 63 places this obligation on the competent authority. It is expected that the Competent Authority will consider the relevant factors when making a decision on this application*.[95] The Appellants submit that the competent authority can only adequately consider relevant factors (as required by NEM:ICMA) in relation to information placed before him or her by the applicant.

69. There is no evidence in the DG's decision, as set out in his reasons, that he brought his mind to bear on all of the factors set out in section 63 of NEM:ICMA, or of the State's obligations under sections 12 and 21. Paragraph 3.5 of the DG's reasons for his decision attempt to deal with some of the section 63 factors, but neither the FEIR or the DG's decision consider:

    69.1. the extent to which the applicant has in the past complied with similar authorisations;

    69.2. whether the activity would be contrary to the interests of the whole community, as defined by NEM:ICMA; or

    69.3. the State's obligations under sections 12 and 21 of NEM:ICMA.

70. It is clear that the DG conflated many of the section 63 factors into general assessment requirements under NEMA and the EIA Regulations, and did not give specific attention to the objects of NEM:ICMA, and how section 63 ought to give effect to them, from the

[93] Paragraph 3.5. of Reasons of Decision for EA.
[94] Paragraph 98 of the Comments to the DEIAR and the subsequent revised version.
[95] Paragraph 4.7. of the FEIAR.

perspective of the State's obligations. Further, it is unclear what the DG might have based his section 63 assessment on, given the lack of assessment of these factors in the FEIR. The DG's reference to these requirements is not justified by any evidence that was before him. Summarising the requirements of some of the section 63 factors does not mean that they were meaningfully considered.

V. THE AUTHORISED ACTIVITIES ARE NOT NEEDED OR DESIRABLE

71. The competent authority must consider all of the factors listed in section 24O of NEMA, including the need and desirability of the proposed project, any guidelines published under section 24J, and any minimum information requirements for the application, according to regulation 18 of the EIA Regulations. This includes the Department of Environmental (DEA), Pretoria, South Africa's 2017 Affairs Guideline on Need and Desirability (hereinafter, "the Guideline").

72. The Guideline also states that "the assessment of "need and desirability" must include considerations of how the proposed activity "may affect the geographical, physical, biological, social, economic, and cultural aspects of the environment".96

73. Addressing the need and desirability within the context of ecologically sustainable development should give consideration to the potential impacts of the proposed exploration for new offshore oil and gas resources throughout its life cycle[97] (rather than ring-fencing the consideration of need and desirability to the exploration well drilling phase only).

Failure to consider the negative impacts of the full lifecycle of oil and gas exploitation

74. We have set out in our comments that it is artificial to consider the need for and desirability of undertaking the proposed exploration activities without considering the impacts associated with further production activities which are intended to materialise from successful exploration. The only reason that AOSAC wishes to undertake exploration is to discover reserves, which can be exploited.

75. A balanced and proper assessment of need and desirability requires considering both the positive and negative impacts of the full chain of oil and gas exploration and production. The FESIA should have explicitly assessed the potential negative impacts associated with exploration and production activities. This would provide a more balanced and comprehensive understanding for decision-makers, acknowledging both the anticipated benefits and potential drawbacks associated with the proposed exploration and subsequent production phases.

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[96] Page 9 of the Guideline.

[97] Section 2(4)(e) of NEMA stipulates that responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

76. The FEIR is not comprehensive as it only assessed climate change impacts of the exploration phase and deliberately omitted the production phase, and skewed the assessment by considering only the ostensible benefits associated with production.[98] For instance, the FEIR only assessed scope 1 emissions of the project, omitted to assess scope 3 emissions and refused to assess impact on children and future generations. Thus, the information that was before the DG regarding the need and desirability of the project was incomplete and inadequate.

77. However, in the reasons for his decision, the DG asserts that the motivation for the need and desirability of the project is "in line with requirements of Appendix 3 of the EIA Regulations" and that it addresses key issues in the Guideline on Need and Desirability (2017) published by the then Department of Environmental Affairs.[99] On the contrary, the motivation for need and desirability of this project is premised on a flawed interpretation of the legal framework that governs the environment, minerals and petroleum resources in South Africa.

78. In particular, the motivation ignores the precedent set in *Sustaining the Wild Coast NPC v Minister of Mineral Resources and Others* ("***Shell***")[100] that is better expressed as follows:

> "[122] According to the respondents, climate change considerations and the right to access food and livelihood are irrelevant when considering an application for an exploration right; these considerations are premature because they fall to be considered at a much later stage.
>
> [123] On the authority of *Director: Mineral Development, Gauteng Region and Another v Save the Vaal Environment and Others* the processes are discrete stages in a single process that culminates in the production and combustion of oil and gas, and the emission of greenhouse gases that will exacerbate the climate crisis and impact communities' livelihoods and access to food.
>
> [124] The respondents' thesis does not find support from *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others*, either, where Murphy J said:
>
> 'The absence of express provision in the statute requiring a climate change impact assessment does not entail that there is no legal duty to consider climate change as a relevant consideration and does not answer the interpretative question of whether such a duty exists in administrative law. Allowing for the respondents' argument that no empowering vision in NEMA or the regulations explicitly prescribes a mandatory procedure or condition to conduct a formal climate

[98] Page xxix of the FEIR.
[99] Paragraph 3.4. of the Reasons for EA decision.
[100] (3491/2021) [2022] ZAECMKHC 55.

> change assessment, the climate change impacts are undoubtedly a relevant consideration as contemplated by section 240 of NEMA for the reasons already discussed. A formal expert report on climate change impacts will be the best evidentiary means of establishing that this relevant factor in its multifaceted dimensions was indeed considered, while the absence of one will be symptomatic of the fact that it was not.'
>
> [125] It seems clear from the aforegoing, even taking into account the contentions raised by the respondents, that, had the decision-maker had the benefit of considering a comprehensive assessment of the need and desirability of exploring for new oil and gas reserves for climate change and the right to food perspective, the decision-maker may very well have concluded that the proposed exploration is neither needed nor desirable."

79. This excerpt from the *Shell* judgment makes it clear that a comprehensive assessment of the need and desirability of exploring and exploiting oil and gas reserves within the climate change context, is a relevant factor that a competent authority must consider in granting EA.[101] The judgment of the Supreme Court of Appeal in *Minister of Mineral Resources and Energy and Others v Sustaining the Wild Coast NPC and Others* (SCA judgment)[102] does not disturb this finding of the High Court.

80. The EIA Regulations and the listed activities as they stand make provision for separate environmental authorisation requirements for exploration and production activities. It is not our argument, in this appeal, that environmental authorisation should be sought for exploration and production activities at the same time. The impacts of production should, however, be considered, at least in a general sense, in determining whether exploration activities are needed or desirable.

81. NEMA and its Need & Desirability Guideline furthermore requires that cumulative impacts be considered in respect of need and desirability. The impacts associated with production and downstream uses are reasonably foreseeable future impacts.

82. Consequently, a NEMA-compliant need and desirability assessment requires that the impacts associated with production must be taken into account from a need and desirability perspective, because these are the intended outcomes of its exploration activities. This was not done.

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[101] Our emphasis.
[102] 2024 (5) SA 38 (SCA).

83. The Appellants submit that had a comprehensive assessment (as described in *Shell*) of need and desirability of the project been provided to the DG, he would not have granted the EA for the reasons alluded to in the comments to the DEIAR.

Failure to consider climate change

84. The FEIR does not adequately assess the climate impacts of the project as it has ignored the climate impacts of potential associated production activities. This is particularly relevant for assessing and determining need and desirability because it is impossible to determine whether the proposed exploration activities are necessary and desirable without knowing: (1) what the full lifecycle GHG emissions of the activities (including production) could be; and (2) what these GHG emissions could mean for SA's obligations (domestic and international) to limit GHG emissions.

85. Even if the discovery of oil or gas is not inevitable, and there are future opportunities to consider the impacts of any production, the likely impacts - in the event that deposits are found - still need to be considered at this stage of the process. If it is not necessary or desirable for an oil or gas production project to proceed, then that should be the end of the road for any proposed exploration. The risks and impacts associated with exploration cannot be justified, if intended future production cannot be justified.

86. The potential climate impacts of production have not been quantified or assessed, nor has any consideration been given to how ultimate production activities might affect South Africa's climate commitments. As such the FEIR has not adequately assessed need and desirability as required by NEMA.

The assumption of oil and gas as a positive contributor to South Africa's economy is flawed

87. The FEIR makes an uninformed assumption about the economic benefits of production of more oil and gas within South Africa. A direct quotation of the assumption reads as follows:

> ''Producing more oil and gas within South Africa is expected to contribute towards a lower current account, more stable prices, create new jobs and industries in the upstream and downstream oil and gas industry supply chain and sectors, and counter volatility related to instabilities in major oil producing regions"[103]

88. Our comments pointed out that this assumption is misleading and baseless, yet it remained in the FEIR. The costs of extraction, infrastructure, and environmental damage

[103] FEIR at p. 63.

could offset any potential gains that the FEIR assumes is likely to follow from a successful find. The long-term economic viability of new oil and gas projects is questionable, given the increasing pressure to reduce fossil fuel dependence and the potential of stranded assets. A gas-based energy industry requires an extremely expensive, multi-decade infrastructure dedicated to exploration, processing, transport (e.g. expensive, unreliable pipelines) and combustion. Offshore extraction entails many marine conservation risks, and methane leaks are a major source of greenhouse gases. The International Institute for Sustainable Development[104] estimated infrastructural costs associated with the most basic attempts to provide methane gas infrastructure – including gas plants, floating storage and regasification units. Even without cost and time overruns and other drawbacks, the infrastructure would quickly assume the status of stranded asset, given the need to halt methane gas emissions.[105] The long-term economic viability of the project needs careful evaluation, considering future energy market trends and potential carbon pricing mechanisms such as the Carbon Border Adjustment Mechanism. The FEIR does not do this.

89. It has become increasingly vital to consider a full range of costs – including adverse downstream economic implications – along with benefits when it comes to fossil fuel emissions. One simple reason to engage in broad-based accounting is the point made by President Cyril Ramaphosa in late 2021, explaining the danger to the economy of further greenhouse gas emissions which have not been adequately assessed within the full-life cycle assessment of this project. Ramaphosa (2021) referenced the 'Carbon Border Adjustment Mechanism' (CBAM) that will be imposed by Western importers of South African goods, in a Presidential newsletter advocating a low-carbon economy and Just Transition for affected workers and communities, he noted:
"As our trading partners pursue the goal of net-zero carbon emissions, they are likely to increase restrictions on the import of goods produced using carbon-intensive energy. Because so much of our industry depends on coal-generated electricity, we are likely to find that the products we export to various countries face trade barriers and, in addition, consumers in those countries may be less willing to buy our products"[106]

90. Climate-related trade disincentives will include increased carbon taxation based on high-CO2 components of local production as well as the distance travelled by goods either through shipping or air transport.[107]

91. Failing to assess these risks leaves South Africa and its citizens exposed to significant dangers as the world transitions to renewable energy. A balanced need and desirability

[104] International Institute for Sustainable Development 2022. South Africa: No Need for Gas. Cape Town. https://www.iisd.org/system/files/2022- 03/south-africa-no-need-for-gas.pdf
[105] Bond. P. 2023. Resource Extraction Cost-benefit Debates in South Africa: Contesting the Environmental Economics of Offshore Gas Extraction. Alternation 30,1 at page 52
[106] Ramaphosa, C. 2021. From the Desk of the President. The Presidency, 11 October. https://www.gov.za/blog/desk-president-88
[107] Bond. P. 2023. Resource Extraction Cost-benefit Debates in South Africa: Contesting the Environmental Economics of Offshore Gas Extraction. Alternation 30,1 at page 52

assessment must consider both the claimed benefits of increased oil and gas production and the potential downsides, such as:

91.1. Limited impact on the current account deficit: Increased domestic production may not significantly reduce South Africa's overall deficit.

91.2. Unstable long-term prices: Oil and gas prices are volatile and may decline in the long term, jeopardizing claimed price stability.

91.3. Missed opportunity for renewables: Investing in fossil fuels could hinder development of South Africa's abundant renewable resources.

92. Only by comprehensively evaluating both benefits and risks can decision-makers make informed choices about South Africa's energy future, particularly in the context of being offered well supported conclusions to inform reasonable and justified decisions.

Gas-based energy solutions for South Africa are not sustainable

93. The FEIR claims that natural gas may act as a transition fuel[108] and relies on the IRP 2019 as support for this claim. In the DG's decision, he also relies on this claim, stating

> "The EIAR emphasises the necessity and desirability of exploration activities due to the potential role of natural gas as a transition fuel. This transitional role is crucial while greener technologies continue to develop and mature."

94. However, neither the FEIR nor the DG's decision provide support for this claim, beyond the outdated 2019 IRP including some provision for natural gas. The claim is therefore unsubstantiated.

95. The FEIR seems to also conclude that exploration of hydrocarbons in deep offshore locations is necessary and desirable "to determine whether a viable gas or oil resource is present. The outcomes of this could provide insight into potential alternative supply options to inform the future energy planning and policy for South Africa".[109] The DG's decision depicts identical reasoning.[110]

96. We submit that any claim of natural gas as a transition fuel is baseless, and contrary to internationally accepted scientific conclusions. It is incorrect and misleading to paint a picture that gas is needed as a transition fuel in South Africa. Recent independent studies challenge the view that fossil gas is necessary for electricity generation and as a transition

[108] FEIR, p. 63.
[109] FEIR, p. 63.
[110] Paragraph 3.4 of the Reasons for the EA.

fuel, and that also confirm renewable energy with battery storage options can meet almost all of South Africa's energy needs.

97. The International Institute for Sustainable Development's (IISD) *Gas Pressure: Exploring the case for gas-fired power in South Africa* (March 2022) report points out that while there used to be a rational view that fossil gas would be necessary either during a transition to low-carbon energy or as part of the long-term energy mix for electricity production:

> ….revolutions first in renewable energy costs and then in battery storage costs have upended this view. Analysis of the South African electricity system shows that gas supply is not technically necessary until at least 2035, if ever. In the last few years, either the risks associated with gas have increased, or the understanding of existing risks has increased. Consequently, South Africa may see significant negative outcomes from developing a large gas-to-power system now… the trend toward decarbonization, coupled with cost reductions for renewable energy and storage, creates risks for gas investment. Investment in gas can reasonably be expected to lead to higher costs for consumers, just transition challenges for workers, and losses for investors.[111]

98. The IISD report highlights some of the risks associated with gas-to-power investment in South Africa. These risks include significant contributions to climate change (as a consequence of CO_2 and methane emissions when gas is burned), increasing international pressure to move away from gas due to climate impacts, financial risks linked with gas-to-power, the risk of reduced security of affordable gas supply, the risk of stranded assets, and the risk of creating an additional just transition burden (future gas workers and communities face a repeat of the transition hardships currently faced by the coal sector).[112]

99. Meridian Economics' *'Hot Air about Gas – An Economic Analysis of the Scope and Role for Gas-Fired Power Generation in South Africa'* (June 2022) report points out that while South Africa's large-scale use of gas appears to be central to current energy policy direction in South Africa, '*this rests on a 2012 vision which pre-dates dramatic reductions in renewable energy costs and carbon emissions space'*.[113] The report goes on to state that independent analysis of the power sector across multiple recent studies shows that South Africa's power needs can be met both now and in the future with very little use of gas, and that there is '*no evidence to support the large-scale gas envisaged in the GMP; this is uneconomical even before carbon emissions are considered'.*[114] Meridian point out that *'the assumption that gas-fired power generation would replace coal ignores the fact that other technology combinations are now better at replacing coal-fired power than gas, and*

[111] IISD report, piv. Available online at: https://www.iisd.org/publications/report/south-africa-no-need-for-gas
[112] IISD report, pages 8 – 12.
[113] Meridian report, page ii. Available online at: https://meridianeconomics.co.za/wp-content/uploads/2022/06/Hot-Air-About-Gas.pdf
[114] Ibid.

it is against these technologies that gas-fired generation should actually be compared'.[115] Meridian demonstrate that existing modelling provides no economic rationale for "big gas" in the power sector, and that *'the impact of using large volumes of gas to generate power will be borne by electricity consumers and will essentially be a subsidy provided by power consumers to otherwise unviable gas use in other sectors'*.[116]

100. The Vital Ambition Report[117] by Meridian Economics in collaboration with the Council for Scientific and Industrial Research ("CSIR") Energy Centre ("Vital Ambition Report") states that gas to power is only justified in the South African energy mix in so far as it is required for low-utilisation flexible capacity (peaker plants) for balancing the system during peak power demand. The report confirms that no investments in gas infrastructure for energy production and generation is needed now or in the near future.[118]

101. Furthermore the 2019 IRP is in the process of being updated, and should align with South Africa's Nationally Determined Contribution under the Paris Agreement and to keep pace with quickly evolving science and significant reductions in price for solar and wind energy. However, even the 2019 IRP, which is rooted in an outdated and scientifically and economically unsound understanding of the necessity for any gas in the energy mix[119], only projects the collective contribution of gas and diesel to the 2030 energy mix to be 1.3% combined.[120]

102. The assessment should have considered whether South Africa needs, or should rely on, gas to provide security of supply of electricity and whether alternative technologies could meet the same supply objectives with less harm and risk. Renewable energy and/or storage can replace gas to provide reliable and cost-effective generating capacity while greatly reducing the environmental and health risks associated with gas.[121] Moreover, considering the lifecycle impacts of a gas to power plant, the use of gas (mostly methane) to generate electricity is likely to have a worse climate change impact than using coal, given the significant potential for leaks in the extraction and transportation of gas to a power plant. Increasingly, studies are showing that gas fired power generation does not

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[115] Ibid, p1.
[116] Ibid, p37.
[117] Meridian Economics, 2020. A Vital Ambition: Determining the Cost of Additional CO2 Emission Mitigation in the South African Electricity System. See at https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf
[118] Gas and peaking resources contribute just 1.1% of total electricity generation in 2025, and 2.4% by 2035 according to the same Meridian report.
[119] Meridian Economics, Hot Air About Gas: An Economic Analysis of the Scope and Role for Gas-Fired Power Generation in South Africa (2022), pages 2-3, https://meridianeconomics.co.za/wp-content/uploads/2022/06/Hot-Air-About-Gas.pdf
[120] 2019 Integrated Resource Plan, page 42.
[121] See, e.g., Union of Concerned Scientists, Turning Down the Gas in California (13 July 2018), https://www.ucsusa.org/resources/turningdown-gas-california?_ga=2.79265367.2135392956.1587590973-34786515.1587590973#ucs-report-downloads

produce less greenhouse gas emissions than coal, when considering the lifecycle of the project.[122]

103. South Africa has already committed to transitioning to renewable energy sources. Investing in exploration for new fossil fuels contradicts this commitment and locks the country into a high-carbon future. According to Kemfert *et al*:[123]

> From a methodological perspective, quantitative model-based scenario analyses are a valuable tool to assess energy systems transitions.124 125. Importantly, however, the implications of a given scenario depend on the underlying assumptions and accuracy of the models. To avoid poorly designed energy policies, new research on the climate impact of methane (for example, via leakage), non-business as usual assumptions and non-economic factors,[126] should be included in scenarios. In many of the scenarios referred to by natural gas proponents, these aspects remain largely unexamined.

104. According to the IPCC, global gas demand must decrease by between 21 and 61 percent from 2020 levels by 2050 in scenarios limiting warming to 1.5, with no or limited overshoot.[127] The current global gas infrastructure already supplies the gas volumes required to meet demand within these future scenarios, and any additional infrastructure is at risk of becoming stranded assets. In addition to this modelling, the International Energy Agency (IEA) has found that no new oil and gas exploration is needed to achieve net zero emissions by 2050.[128]

105. Considering the above, the assumption that the outcomes of the proposed exploration could offer insights into potential alternative supply options for informing South Africa's future energy planning and policy appears unreliable. This assumption fails to account for the swift cost decline and growing feasibility of renewable energy solutions, consequently impeding South Africa's transition towards clean energy. These alternatives are not considered. Moreover, juxtaposing new data from fossil fuel exploration with the

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[122] See for example, the expert report of Dr Robert Howarth in relation to the greenhouse gas emissions arising from Eskom's proposed gas power plant in Richards Bay. https://naturaljustice.org/wp-content/uploads/2021/05/FA-12-Howarth-RichardsBayReview.pdf

[123] Kemfert, C., Präger, F., Braunger, I. *et al.* The expansion of natural gas infrastructure puts energy transitions at risk. *Nat Energy* **7**, 582–587 (2022). https://doi.org/10.1038/s41560-022-01060-3.

[124] Cherp, A., Vinichenko, V., Jewell, J., Brutschin, E. & Sovacool, B. Integrating techno-economic, socio-technical and political perspectives on national energy transitions: a meta-theoretical framework. *Energy Res. Soc. Sci.* **37**, 175–190 (2018).

[125] Grubler, A. Energy transitions research: insights and cautionary tales. *Energy Policy* **50**, 8–16 (2012).

[126] Hoffart, F. M., Schmitt, E.-J. & Roos, M. Rethinking economic energy policy research—developing qualitative scenarios to identify feasible energy policies. *J. Sustain. Dev. Energy Water Environ. Syst.* **9**, 1–28 (2021).

[127] IPCC, 'Climate Change 2022 - Mitigation of Climate Change', (2022), IPCC, https://doi.org/10.1201/9781003264705-7

[128] IEA (2023), *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach*, IEA, Paris https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach, Licence: CC BY 4.0

rapidly advancing landscape of low-carbon alternatives creates a misleading equivalence, disregarding the transformative potential of renewable energy sources.

106. In light of this consideration and other emerging data on supply options, coupled with the rapid technological advancements within the energy sector, particularly in low-carbon alternatives, it becomes imperative to consistently reassess and revise South Africa's energy planning to ensure the formulation of the most suitable and sustainable strategy, grounded in the best available scientific insights and robust scenario modelling. Section 6 of the National Energy Act, 34 of 2008, requires just this through an annual revision of the Integrated Energy Plan, recognising that in a transitioning world, the national energy mix requires regular revision.

107. The necessity to scrutinize energy plans guided by policy lies in the obligation to review the latest climate science and energy modelling. The objective is to discern the optimal and appropriate focus for accelerating the transition to renewables, rather than using it to rationalize further exploration of fossil fuels. This assumption made in the FEIR and by the DG distorts the true purpose of the need and desirability assessment.

108. For this reason, optimizing energy planning for South Africa necessitates a thorough exploration of research focused on the feasibility and transition pathway modelling towards achieving 100% renewable energy systems—a field that has significantly evolved since the 2000s. Numerous publications across diverse jurisdictions have demonstrated the technical feasibility of attaining 100% renewable energy.[129] Adopting a cross-sectoral perspective encompassing the entire energy system, with a strategic integration of fluctuating and dispatchable renewables, along with various sources of flexibility such as energy storage options, demand response, and sector coupling, forms the bedrock for the realization of 100% renewable energy systems.

109. Therefore, technological advancements in renewables could very quickly outpace any potential fossil fuel discoveries, making them obsolete and economically unviable.

110. Lastly, the competent authority is not bound by any policy and must independently apply its mind to the need and desirability of the proposed project from a NEMA perspective. Rigid adherence to policy in making an administrative decision fetters the decision-maker's discretion, in violation of basic principles of just administrative action (it is a fundamental rule of administrative law that the decision-maker vested with a discretionary power may not fetter its discretion by rigid adherence to a pre-determined policy). What is required of an administrator is that he or she is independently satisfied that the policy is appropriate to the circumstances of the particular case. In *Earthlife Johannesburg and Another v. Minister of Energy and Others*[130] the court found

[129] Hansen, K., Breyer, C. & Lund, H. Status and perspectives on 100% renewable energy systems. *Energy* **175**, 471–480 (2019).
[130] *Earthlife Johannesburg and Another v. Minister of Energy and Others* 2017 2 All SA 519 (GP)

that "[p]olicy instruments developed by the Department of Energy cannot alter the requirements of environmental legislation for relevant climate change factors to be considered".[131] The decision-maker cannot elevate principles or policies into rules that are considered to be binding with the result that no discretion is exercised at all. While policies in keeping with the empowering legislation may be used to assist decision making, they may not inevitably determine the outcome of the decision, lest they "preclude the person exercising the discretion from bringing his mind to bear in a real sense on the particular circumstances of each and every individual case coming up for decision."[132]

111. An objective assessment on the need for gas is lacking in the FEIR, as are consideration of any of the above studies. The consequence is that the claim that gas is needed as a transition fuel is not presented in an objective and balanced way. The DG's decision does also not depict any balanced assessment on the need for gas or oil.

VI. FAILURE TO ADEQUATELY ASSESS CLIMATE CHANGE IMPACTS

112. As we stated in our comments, the climate change impact assessment is deficient because it does not assess potential climate impacts should this exploration project lead to production.

113. The DG asserts that he took into account *inter alia* the climate change impact assessment specialist report when granting the EA.[133] However, the DG's decision does not grapple with the Appellants' comments at all around the need for a comprehensive lifecycle assessment, and we can only assume that he follows the EAP's flawed logic:

> It is the opinion of the EAP that the NEMA does not put an obligation on the process to identify and assess impacts associated with a separate distinct production phase for which authorisation is not presently being sought.
>
> As mentioned previously, it would not be possible to accurately determine size of the resource at this stage. Once exploration is complete and a resource has been defined, the Scope 3 emissions could be considered during a potential future production right application.

114. The rationale for a comprehensive life-cycle assessment of the project was underscored by at least two high court judgments[134] in *Earthlife Johannesburg and Another v. Minister of Energy and Others* ("***Earthlife***")[135] and *Shell*[136] respectively. The perspective that the project pertains solely to exploration, and that the impact

[131] See above at para 97.
[132] Richardson v Administrator, Transvaal 1957 (1) SA 521 (T) at 530.
[133] Paragraph 1.5.5. of the Reasons for Decision in the EA.
[134] Gauteng Provincial Division of the High Court, and the Makhanda High Court.
[135] 2017 2 All SA 519 (GP).
[136] (3491/2021) [2022] ZAECMKHC 55.

assessment should be confined to exploration activities, is not supported by the two judgments. Importantly, the *Earthlife* case has never been appealed and the Minister of Mineral Resources and Energy's attempt to appeal the *Shell* judgment was rejected by the Supreme Court of Appeal ("**SCA**").

115. NEMA seeks to ensure "integrated environmental management of activities", focusing on identifying, predicting, and evaluating both actual and potential impacts on the environment, socio-economic conditions, and cultural heritage.[137] It emphasizes assessing risks, consequences, and mitigation alternatives, ensuring that environmental effects are adequately considered before any actions are taken. Additionally, NEMA and the EIA Regulations mandate the evaluation of cumulative impacts from proposed and associated activities, clearly indicating that NEMA requires an assessment of potential impacts from both exploration and production as foreseeable consequences of related activities.[138]

116. The extent to which proposed activities in an EIA may impact upon the climate adaptation of the surrounding environment is a relevant factor for consideration under section 24O(1)(b) of NEMA, and is necessary to ensure that a project is resilient to the impacts of climate change, and also that it is environmentally and socially responsible. Ecosystems, communities, and infrastructure must be protected from climate-related risks – particularly where proposed projects would pose threats to their ability to adapt to, and cope with, climate impacts.

117. The obligation to consider reasonably foreseeable associated impacts, as required by NEMA, from the proposed exploration would also denote an obligation to consider estimated GHG emissions from production in the context of SA's domestic and international climate commitments.

118. The CCIA is missing critical information:

118.1. It 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;

[137] Section 23 of NEMA.
[138] *Ibid*.

118.2. no consideration is given to how an unplanned event, such as a spill, could aggravate the surrounding marine environment's resilience and adaptation to climate change. In other words, there has been no assessment of the compounding effects of a spill on the ecological infrastructure that is important in South Africa's resilience to climate change - such as the marine species that are important for food security - in circumstances where the marine environment is already being impacted by climate change;

118.3. it does not describe how the project will interact with and potentially exacerbate vulnerabilities; and

118.4. it indicates that "the details of venting and flaring are not yet certain", but does not explain why this is the case.[139]

119. 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, and should not be dismissed on the basis that the climate. Certain resource assumptions underly the financial and technical feasibility of the Applicant's decision to proceed with exploration, and consequently, there must be sufficient information to consider emission possibilities associated with exploitation activities.

120. For the reasons above, and those set out in our previous comments, the Climate Impact Assessment has omitted key information and cannot serve as a basis for decision-making.

VII. FAILURE TO CONSIDER IMPACTS ON CHILDREN AND FUTURE GENERATIONS

121. As mentioned in our comments to the DEIAR, NEMA places a duty on the state to ensure participation of all interested and affected parties, including the vulnerable and disadvantaged in environmental governance, recognise the vital role of women and youth in environmental management and promote their full participation therein.[140] Section 28(2) of the Constitution also places a duty on the state to consider the best interests of children as paramount in every matter that concerns them. This principle is also repeated in the Children's Act. Despite these legislative requirements, the report fails to assess the impact that this project will have on present and future generations.[141]

122. The rationale for decision-makers to consider impact of these projects on children was underscored by the UN Convention on the Rights of the Child (committee of experts), under General Comment No. 26. In sum, the General Comment calls on State parties to the Convention on the Rights of the Child to adopt a child-rights based approach to

[139] Page 41 of the CCIA.
[140] Paragraph 95 of the Appellants' Comments to the DEIAR.
[141] *Ibid*.

environmental management. The Constitution obliges every court to prefer any reasonable interpretation of legislation that is consistent with international law over any alternative interpretation that is inconsistent with international law, when interpreting legislation.[142] It goes without saying that this constitutional provision is also instructive to decision-makers (i.e. DGs, Ministers, etc.).

123. In the FEIR, the EAP argues that a socio-economic assessment that is part of the FEIR includes women, children and vulnerable people. This statement by the EAP is the most glaring example that the EIA process was far from being child friendly or considering impacts on children and future generations. Research shows that climate change impacts children differently compared to adults due to their developing bodies.[143] The FEIR does not assess the proposed project's impact on children at all. The Appellants submit that the failure to assess the project's impact on potential or identified I&APs (children etc.) cannot be justified by an assumption that the project will not have an impact on children. The whole purpose of EIAs is to establish potential impacts or lack thereof as a matter fact, not assumptions.

124. Accordingly, the DG granted the EA in absence of relevant factors. The decision must be set aside on this ground alone.

VIII. FAILURE TO ASSESS IMPACT ON FOOD SECURITY ON COASTAL COMMUNITIES

125. The Appellants submit that the decision fails to assess the impact of the activity of the food security of coastal communities. It is undeniable that small-scale fishers positively contribute to the food security of impoverished coastal communities.[144]

126. The impacts of the proposed activity extend beyond the potential harm emanating from an oil spill and is blind to the recognition and rights of small-scale fishers to a livelihood, right to food and the subsequent impacts of food security on the extended community on both a local and national scale.[145] While no official data exists, it is estimated that there are more than 80,000 people depending on small-scale fisheries who are playing a vital role in ensuring and guaranteeing the food sovereignty of their families and communities, particularly those living in rural areas. [146]

127. Most species are an affordable source of animal protein and essential micronutrients, making the fishery valuable to the rural poor, especially vulnerable groups such as youth,

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[142] Section 233 of the Constitution.
[143] See Appellants' comments to the DEIAR in this regard.
[144] Isaacs, M., Hara, M. M., Dennis T. L., Rouhani, Q. A., Mannarino, C., Jaffer, N. (2022). A Situational Analysis of Small-Scale Fisheries in South Africa: From Vulnerability to Viability. V2V Working Paper 2022-9. V2V Global Partnership, University of Waterloo, Canada.
[145] Oil, fisheries and coastal communities: A review of impacts on the environment, livelihoods, space and governance - ScienceDirect
146 Monitoring-Report-Feb-2023-Online-002.pdf (masifundise.org)

women, and elderly, who rely on fish to put food on the table and provide an income to those who otherwise not be able to find formal employment.[147]

128. The impacts on food security and the value chain of small-scale fishing therefore have the potential to harm a significant number of people, also impacting child nutrition and development, as well as the livelihoods of women. The failure to assess this impact is a fatal omission and no good reason is provided as a justification for this.

129. Given the levels of poverty and food insecurity in South Africa, the failure to assess the impacts on food security and the number of people who depend on fish and fishing to secure a livelihood will undoubtedly mean that proposed projects impacts have not been adequately assessed.

IX. FAILURE TO ASSESS TRANSBOUNDARY IMPACTS

130. The NEM: ICMA mandates the DMRE to manage coastal activities in line with international law. South Africa has two key obligations regarding environmental authorisations for activities with transboundary impacts: assessing these impacts and consulting relevant foreign authorities. However, the FEIR acknowledges the risk of a transboundary oil spill but overlooks potential non-domestic impacts. Furthermore, it lacks evidence that foreign authorities were consulted during the assessment and the EMPr development, violating South Africa's international obligations.

Failure to adequately assess transboundary impacts

131. The FEIR inadequately evaluates the non-domestic impacts of potential transboundary oil spills, violating South African law. Consequently, the Competent Authority issued an environmental authorisation without full consideration of relevant information. The International Court of Justice’s Pulp Mills case underscores the obligation to assess transboundary impacts under international law. While the FEIR acknowledges that oil spills could affect Namibia and international waters, it limits its impact assessment to South Africa, neglecting specific implications for Namibian communities. This oversight is significant, as the socio-economic consequences for Namibia, with its smaller economy and different resource dependencies, could be severe but were not analysed in the FEIR.

Failure to consult with Namibian Government relating to transboundary impacts

132. The FEIR was compiled without meaningful consultation with relevant Namibian authorities, violating South Africa's international commitments. Both countries are signatories to the Benguela Current Convention and the Abidjan Convention, which

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mandate consultation when marine ecosystems are at risk. These agreements promote environmentally responsible industrial development and cooperation to protect biodiversity. The Abidjan Convention requires states to avoid transferring environmental damage, while the Benguela Current Convention calls for joint efforts to prevent pollution and conduct environmental assessments. South Africa is thus obligated to support coordinated conservation efforts in the Benguela Current marine ecosystem, including Namibian waters.

133. In our comments on the DEIR, we highlighted the lack of evidence for meaningful consultation with Namibian authorities, violating South Africa's international obligations. Both the DEIR and FEIR claim to include Namibian stakeholders in its initial database but provided no specifics on who was contacted and how. This vague assertion fails to demonstrate compliance with obligations to prevent transboundary harm. Notice letters sent to Namibian authorities only offered a generic invitation for public comment, without indicating potential impacts on their waters. This approach did not facilitate meaningful engagement or address the transboundary nature of the project, contradicting South Africa's commitments.

X. FAILURE TO ADEQUATELY ASSESS CULTURAL AND HERITAGE IMPACTS

134. In his reasons for granting environmental authorisation to AOSAC, the DG repeats the FEIR's assertion that "The negative impact of an unplanned event, such as a well blow-out, ranges from low to medium significance with mitigation, that the occurrence of such an event is unlikely and the holder has strategies in place to manage such an event(s), should it occur. "[148] The DG makes this finding without interrogating the FEIR's assertion which is contradicted by the Appellants' comments on unplanned oil spill events.

135. The failure to consider comments by I&APs on unplanned oil spill events and, the uncritical repetition of the FEIR's assertions that the negative impacts will be low with mitigation and that a well blow out event is unlikely, is suggestive of the DG's failure to apply his own mind to potential impacts on culture and heritage.[149]

136. A proper consideration of impacts on culture and heritage would have revealed, to the DG, that the FEIR underplays the significance of the impact of a well blow out on the spiritual connection that people have with the land and ocean.

137. Despite comments on both versions of the DEIR from NJ, TGC, and Masifundise, the FEIR lacks a thorough assessment of the project's cultural and heritage impacts. While it includes detailed research on Khoi-San communities, it neglects other groups such as traditional healers, religious communities, and small-scale fishers, who were not consulted. The FEIR acknowledges the rich fishing heritage in South Africa but only few

[148] Paragraph 3.2. of the Reasons for Decision to grant EA.
[149] Our emphasis.

fishers were interviewed about the project's significant potential impacts on their culture. It suggests participatory forums as a mitigation measure, but these are seen as procedural rather than genuinely engaging. Concerns expressed by over 50% of interviewed fishers about offshore oil and gas operations are valid, given the high sensitivity of various cultural receptors. The report incorrectly assumes that traditional leaders' opinions represent entire communities, failing to capture the diverse perspectives on cultural heritage impacts. Overall, the assessment inadequately considers the effects on culture and heritage.

XI. THE FEIR DOES NOT INCLUDE RESPONSE PLANS FOR COMMENT

138. Whilst a separate oil spill modelling report is contained in DEIAR, it does not include an Oil Spill Contingency Plan, an Emergency Response Plan, a Blowout Contingency Plan, a Well-Control Contingency Plan. These plans are essential mitigation measures, the details of which are necessary to inform the impact assessment, and without them, the EAP cannot reasonably evaluate the significance of an impact post mitigation.

139. We set out clearly in our previous comments why this information is critical to understanding mitigation measures and assessment of impacts.

140. Section 24N of NEMA requires that the EMPR include proposed mitigation and remedial measures, and measures to rehabilitate the environment affected by the undertaking of the activity. These plans must form part of the EMPR that is to be approved by the competent authority, and approval of the plans should not exist as discrete processes separate from the EMPR.

141. The FEIR also does not indicate how it will deal with a multiple block simultaneous blowout scenario, with all authorised projects relying on the same capping equipment.

142. These documents should deal with specific equipment that will be available (including any offshore drilling equipment should a relief well need to be drilled), as well as the logistics informing actual response time etc, such as – but not limited to - transport or shipping requirements for the capping stack mobilisation scenarios, implications of attempting to install a capping stack at a deep sea location in potentially adverse and challenging weather conditions, implications of having to drill a relief well should capping fail, and associated time requirements for all scenarios.

143. The response is integrally connected to the mitigation of this impact, and without these plans being made available for comment, I&APs are unable to consider the adequacy of the response, or to input into the plans.

144. The failure to make these plans available for comment by I&APs during the EIA process is procedurally unfair.

XII. THE PUBLIC PARTICIPATION PROCESS DID NOT ACHIEVE MEANINGFUL CONSULTATION

145. The Appellants submit that the public participation process did not achieve meaningful consultation. Our previous comments highlighted the need for an approach that not only acknowledges and addresses community concerns, but also fosters an environment of trust, inclusivity, and genuine collaboration with relevant stakeholders. The right to public participation is enshrined in the Constitution, and in terms of NEMA, must be meaningful and effective. Any participation process that functions as a tick-box exercise fails to give effect to these objectives.

146. Our previous comments highlighted some of the major issues with the public participation processes, including the amount of information that rural communities had to understand and how this information was presented. These issues were not remedied in the subsequent round of public participation.

147. The FEIR contains the table of correspondence.[150] It is notable that comments from various stakeholders have not been responded to meaningfully:

147.1. The comments submitted by Ernest Titus (page 81) which raised numerous concerns, one of them being the technical nature of the presentations which made it difficult to understand even when presented in Afrikaans. The response from EIMS has not engaged the numerous points but rather just acknowledged that these comments have been recorded and will be submitted.

147.2. The comments submitted by Ms Wendy Pekeur (page 89) on behalf of a number of people from Doringbaai, was not responded to in detail or engaged with but rather just “noted”. The concerns from the community members should have been addressed.

147.3. Similarly, the comments from Mr Edward Jantjies, Mr George Lenard Johnson, Charmaine Andrew, Loren Gosling, Ms Menka Vansant were not engaged with (pages 103-120).

148. The point raised by Mr Titus about the technical nature of the presentations should be given due consideration as understanding of the content will directly impact engagement. For example, at the last public participation meeting in Cape Town (19 April 2024) there were no questions raised by the attendees, possibly as a result of the technical nature of the presentations. Similarly, as noted by EIMS, Ms Pekeur made a lot of effort to submit comments from a number of community members in Dooringbaai. However,

150 Page xlv – xlvii of the FEIR.

there is no substantive engagement with their concerns, which does not constitute meaningful consultation.

149. Regarding attendance and engagement with fishing communities, we reiterate that it is unthinkable that affected coastal communities can respond to each of these processes meaningfully. The ocean-based livelihoods of many coastal communities, particularly small-scale fishers, are recognized in the FEIR. This means that fishers must fish for a living, requiring them to be out at sea daily or for extended periods of time. Even if they wish to do so, they do not have the time or resources to attend multiple public meetings, engage with voluminous technical information and provide comments and appeals.

150. It is further notable that historic barriers to accessing education and the impact of Apartheid means that some of these communities have significantly lower levels of literacy making engagements with voluminous documents almost impossible. The result, even if unintended, is that those who have less resources, are required to be out at sea to make their livelihoods or are unable to fully understand the different proposals and processes, are significantly prejudiced by the onslaught of applications, and are not able to engage meaningfully in each process.

151. The impacts on coastal communities have not been considered and the decision to approve this project would amount to a regressive measure under the Constitution in terms of food security. Much of the existing research suggests that coastal communities remain on the fringes of these developmental prospects, bearing many costs without receiving many benefits as a result of a lack of skills limiting job access, environmental impacts negatively affecting local livelihoods, and unresolved governance dilemmas across different scales and actors.

XIII. CONCLUSION

152. The Appellants have set out in this appeal a number of grounds on which the decision to grant environmental authorisation to AOSAC was fatally flawed. The decision to authorise the project is consequently unlawful, in that it failed to comply with, inter alia, the Constitution and NEMA.

153. For all the reasons set out in this appeal, Natural Justice, The Green Connection, and Masifundise submit that the appeal should succeed, and that AOSAC's application for the environmental authorisation should be refused.