



ANNEX B

APPEAL IN TERMS OF THE SECTION 43(2) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 106 OF 1998, AGAINST THE ENVIRONMENTAL AUTHORISATION GRANTED TO TOTALENERGIES EP SOUTH AFRICA FOR THE PROPOSED EXPLORATION WELL DRILLING IN BLOCK DEEP WATER ORANGE BASIN OFF THE WEST COAST OF SOUTH AFRICA

DMRE REF: TEEPSA 12/3/343

INTRODUCTION

1. This is an appeal against an environmental authorisation granted by the Director General: Mineral and Petroleum Regulation on 23rd of October 2023 to TotalEnergies EP South Africa ("TEEPSA") in respect of the proposed offshore exploration well drilling in Block Deep Water Orange Basin (DWOB) off the West Coast of South Africa
2. This appeal is made jointly by Green Connection and Natural Justice.
3. 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.
4. Natural Justice: Lawyers for Communities and the Environment, a non-profit organisation specialising in environmental and human rights law in Africa – with a focus on the pursuit of social and environmental justice for local and indigenous communities. Natural Justice offers direct support to local and indigenous communities impacted by the ever-increasing demand for land and resources, through legal empowerment.
5. 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.

6. The Appellants contend that the Final Environmental and Social Impact Assessment Report ("ESIA") was fatally flawed, for the reasons set out in this Appeal, and cannot serve as a lawful basis for granting an environmental authorisation. The authorisation granted by the Director-General: Mineral Regulation of the Department of Mineral Resources and Energy ("the decision-maker" or "the DG") is therefore defective and should be set aside in this appeal. Environmental authorisation should be refused.
7. The Appellants made substantive written submissions during the environmental impact assessment ("EIA") process to the environmental assessment practitioner. 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 ESIA 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.
8. As set out more fully in the grounds of appeal below, the Appellants submit that the EIA process generally, and the information contained in the ESIA is found wanting in a number of respects, and the risks associated with this potential project, viewed holistically, are immense and unacceptable. Consequently, in the face of a gap in knowledge and understanding of the likely impacts and costs to the environment and people, the DG should have given effect to the precautionary principle, described as a risk averse and cautious approach in section 2(4)(a)(vii) of NEMA, by exercising caution and should have refused environmental authorisation to the Applicant.

GROUND OFS OF APPEAL

9. The Appellants submit this appeal on the following grounds:
 - 9.1. The ESIA's Oil Spill Risk Analysis Is Deficient and does not adequately assess risk to marine life and coastal communities
 - 9.2. Failure to adequately assess noise impacts
 - 9.3. Failure to adequately assess climate change impacts
 - 9.4. Failure to adequately assess socio-economic impacts
 - 9.5. Failure to give effect to the National Environmental Management: Integrated Coastal Management Act, 24 of 2008
 - 9.6. The authorised activities are not needed or desirable

- 9.7. Failure to consider impacts on food security
- 9.8. Failure to adequately assess the No-Go Alternative
- 9.9. Failure to assess transboundary impacts
- 9.10. Failure to adequately assess cultural and heritage impacts
- 9.11. The methodology of impact significance rating is flawed
- 9.12. The public participation process did not achieve meaningful consultation
- 9.13. Failure to make the Oil Spill Contingency Plan and the Blowout Contingency Plan available for public comment is procedurally unfair

10. The grounds are set out in more detail below.

I. THE ESIA'S OIL SPILL RISK ANALYSIS IS DEFICIENT AND DOES NOT ADEQUATELY ASSESS 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 FESIA's oil spill analysis fails to comply with these legal requirements in multiple ways.
 - 13.1. First, the FESIA inaccurately and artificially minimizes the risks associated with drilling in ultradeep waters.
 - 13.2. Second, the FESIA fails to analyse or model the impacts from a spill that would occur if oil were released at depths of 3100 m, the deepest well authorized for the Project.
 - 13.3. Third, contrary to the FESIA's claims, the FESIA does not actually analyse a worst-case blowout scenario.

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).

13.4. Fourth, the FESIA fails to analyse the cumulative risks of offshore oil and gas development in the region.

13.5. Fifth, the FESIA's oil spill modeling is flawed.

13.6. Finally, the FESIA fails to analyse the environmental impact associated with dispersants, even though the Project includes the use dispersants in the event of a spill.

14. Despite these failures, the Competent Authority still authorised the Project, claiming that even though the impact of an oil spill is very high, "the occurrence of such events is very unlikely, and the holder has strategies in place to safeguard against the occurrence of such an event."⁴ As explained further below, this decision does not reflect an understanding of the risk associated with drilling in ultradeep waters and is predicated on a FESIA that is legally deficient and factually inaccurate.

The ESIA fails to analyse the full scope of the impacts from drilling in ultradeep waters in violation of NEMA and irrationally minimizes the risk of ultradeep drilling in violation of PAJA.

15. As explained in our previous comments, it is riskier to drill in ultradeep waters because pressures and temperatures increase with depth.⁵ Specifically, our comments explain that a peer-review study, Muehlenbachs et al 2013, found that the probability of industry-reported serious accidents, fatalities, injuries, explosions, or fires grows by 8.5 percent with every additional 100 feet (~30 m) of depth at which an offshore platform operates.⁶ Applying this increased risk percentage to the Project would mean that this project—which proposes to drill at depths of up to 3100 m—is 450% riskier than the drilling that occurred at Deepwater Horizon. And because there is additional risk associated with drilling at such depths, the FESIA must analyse and examine that additional risk.⁷

16. But rather than carefully analysing that risk as NEMA requires, the FESIA instead tries to artificially minimize it. First, the FESIA attempts to claim the findings of Muehlenbachs et al 2013 are not relevant because the study examined production drilling and not exploration drilling. This is not a material distinction and the FESIA does not explain why if drilling production wells is riskier at greater depths, drilling exploration wells at greater depths would not also be riskier, especially since exploratory drilling is generally considered to be riskier than production drilling regardless of depth. Moreover, the FESIA does not present any alternative studies to suggest risk is not correlated with depth during exploratory drilling. The FESIA should thus utilize the precautionary principle and assume that drilling in deeper waters is indeed riskier, as Muehlenbachs et al 2013 suggest.

⁴ Environmental Authorization at 17.

⁵ See Green Connection and Natural Justice, *Comments on the Environmental and Social Impact Assessment for the Proposed Offshore Well Drilling Exploration Activities in Block Deep Water Orange Basin, West Coast, South Africa* at 3-4 (12 June 2023) [hereinafter Green Connection and Natural Justice Comments].

⁶ *Id.*, Lucija Muehlenbachs, Mark A. Cohen & Todd Gerarden, *The impact of water depth on safety and environmental performance in offshore oil and gas production*, 55, *Energy Policy*, 699–705 (2013).

⁷ See NEMA EIA Regulations Appendix 1, at Section 3(i). See also Section 3(1)(h)(v).

17. Moreover, Muelenbachs et al 2013 is not the only authority to indicate drilling in ultradeep waters is riskier. In *Scenarios and Responses to Future Deep Oil Spills: Fighting the Next War*, Murawski et al 2020 likewise states that “The inherent risks of catastrophic well blowouts at extreme depths **will increase as the productivity of oil facilities increases exponentially with water depth.**”⁸ Murawski et al 2020 further explains that:

*“The use of novel drilling and production technologies, in largely unexplored frontier regions, and with significant unknown, unknowns regarding oil and gas behavior at extreme pressures and temperatures, contributes to the increase risks of ultra-deep water development ... In this regard, the next deep oil blowout and ensuing spill, wherever it may happen, will likely occur under fundamentally different conditions than the two previous sub-surface mega blowouts (DWH and Ixtoc). While the previous 80+ years of experience in oil exploration and production from the GoM have included responses to literally hundreds of oil spills, **a 3000 m blowout will be unlike any previous** ... Preparations for such accidents must include scenario analyses and training exercise that are informed by sophisticated modeling tools, experimental and field-level data collected under realistic ambient conditions, and deep understanding of the inherent environmental and human risks of drilling such areas in the first place.”⁹*

18. Similarly, the U.S. Bureau of Ocean and Energy Management (BOEM), the expert agency tasked with regulating offshore oil exploration and production in the United States, also recognizes additional risk associated with drilling in deep waters: “BOEM believes that a blowout leading to a loss of well control and release of oil is most likely in water deeper than 3,000 ft, where the spill size and consequences from a blowout are estimated to be greater.”¹⁰ BOEM’s sister agency, the U.S. National Oceanic and Atmospheric Administration, explains why drilling in deep waters is riskier:

As drilling occurs at deeper depths, there can be an increased risk of loss of well control Pressures and temperatures in deeper waters provide extreme conditions where equipment, including safety-critical systems, could be more likely to fail and ... are more difficult to reach quickly. Capping deepwater wells is not a regularly-occurring activity, so lack of experience also plays into the risk. Vessels are having to travel much farther to get out

⁸ Murawski et al, *Scenarios and Responses to Future Deep Oil Spills: Fighting the Next War* (2020), at 16-17 (emphasis added).

⁹ Murawski et al, *Scenarios and Responses to Future Deep Oil Spills: Fighting the Next War* (2020), at 10-11 (emphasis added).

¹⁰ BiOp, Appendix G: Extremely Large Spill Assessment at 50.

to those deeper sites, which could increase spill response times or have fewer available response vessels.¹¹

19. The available literature strongly suggests drilling in ultradeep waters is riskier than drilling in shallower waters—regardless of whether the well is exploratory or for production. The FESIA must therefore examine this additional risk and consider it in its impacts rating for the project as NEMA requires, rather than dismissing it.
20. The FESIA also tries to evade analyzing the additional risk of drilling in ultradeep water by stating that Total has mitigation measures in place to minimize this risk.¹² But mitigation measures do not obviate the need for the FESIA to fully examine the risk and scope of the Project’s impact *prior* to any mitigation as NEMA requires.¹³ If the full scope of an environmental impact is not analysed, then the mitigation measures proposed likely will not be applicable or effective. For example, the Environmental Authorisation requires that “[i]f the operations are planned to cover the Austral winter period, the oil spill response plan must be enhanced to cover risks associated with shoreline oiling from a well blowout.”¹⁴ But this mitigation measure is based on an oil spill analysis that only evaluates a blowout at 1500 m of depth. A blowout at 3100 m might include shoreline oiling in different or a wider range of seasons, undermining entirely the effectiveness of this mitigation measure. This is why NEMA requires environmental impact assessments to evaluate “the nature, significance, consequence, extent, duration and probability of the impacts” of each alternative. Here, as one option is to drill at 3100 m and the FESIA must analyse the full scope of impacts associated with drilling that deep. The FESIA’s failure to analyse the risk from a blowout at 3100 m even though the Project may include wells that deep is a material deficiency.
21. Because of the FESIA’s arbitrary dismissal of additional risk for ultradeep drilling, the FESIA fails to model or analyse the impact of blowout if oil were to be released at 3100 m of depth, even though the Project may drill wells at that depth. Instead, the FESIA only analyses the impact of a blowout at depths of 1534 m and 1253 m.¹⁵ In short, the FESIA’s analysis of the impacts of a blowout does not actually analyse the Project. The risk assigned to a potential blowout in the FESIA therefore has no relationship to the actual risk of the Project.

¹¹ The 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), Appendix G at 52.

¹² Total Energies, *Final Environmental and Social Impact Assessment Report for Exploration Well Drilling in Block Deep Water Orange Basin off the West Coast of South Africa* (July 2023), Appendix 6.8: Comments and Responses to Report at 123-24 [hereinafter Appendix 6.8].

¹³ Notably the EIA regulations require EIAs to include a full discussion of risk and impacts of a proposed project as well as the residual risk after mitigation measures are imposed. To calculate residual risk, an EIA must necessarily first evaluate the impact without mitigation and then reanalyse the leftover risk *after* mitigation.

¹⁴ Environmental Authorisation at 14.

¹⁵ Total Energies, *Final Environmental and Social Impact Assessment Report for Exploration Well Drilling in Block Deep Water Orange Basin off the West Coast of South Africa* (July 2023), Appendix 8: Oil Spill Modelling Technical Report at 14 [hereinafter Appendix 8].

22. The FESIA tries to justify its failure by claiming “the modelled Release Points were determined to be the worst-case points for both oil spills and drilling discharges, based on” shortest distance to the coast, water depth, proximity to marine protected areas, and wind and current directions.¹⁶ This statement is false. The FESIA omitted the consideration of water depth when selecting release points to model as is clearly demonstrated in the FESIA’s Oil Spill Modelling Technical Report, which shows that water depth was not a criterion that it considered.¹⁷
23. By failing to analyse the additional impact and risk resulting from a spill twice as deep as the one the FESIA analyses, the FESIA is violating NEMA’s mandate to include “the impacts **and risks** identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts.”¹⁸

Contrary to the FESIA’s claims, the FESIA does not actually analyse a worst-case blowout scenario.

24. The FESIA claims to analyse a worst-case blowout scenario, but this is a gross mischaracterization of the FESIA’s oil spill analysis. First, as explained above, the FESIA fails to analyse the deepest possible blowout, which would likely have the largest impact and consequence because ultradeep drilling carries higher risk and larger potential impact.¹⁹ By failing to analyse a spill at the deepest point, the FESIA also fails to analyse the worst-case scenario.
25. Second, as stated in our previous comments, the FESIA’s assumed capping timeframe if a blowout were to occur is unrealistic. Specifically, the FESIA assumes that a blowout can be contained in a mere 20 days, but it is unclear how the FESIA 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,²⁰ 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.²¹ The FESIA claims Deepwater Horizon is not an appropriate benchmark because “The current state of knowledge, available technology and approach to well blowout responses by the drilling industry have advanced since, and because of, the Deepwater Horizon spill event, which occurred in the Gulf of Mexico in April 2010.”²² But even if the technology

¹⁶ Appendix 6.8 at 126.

¹⁷ Appendix 8 at 12-14.

¹⁸ NEMA EIA Regulations, Appendix 1, Section 3(1)(h)(v)

¹⁹ See Section A above.

²⁰ The 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), Appendix G at 56.

²¹ Deepwater Horizon Natural Resource Damage Assessment Trustees. (2016). *Deepwater Horizon oil spill: Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement* at 1-2. Retrieved from <http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan> [hereinafter DWH Trustees’ Report]. .

²² DWOB FESIA at 129.

has advanced, the depth of oil wells drilled have also advanced and the associated risk has therefore also increased. Moreover, the FESIA's claims that the 87-day timeframe of Deepwater Horizon is not an appropriate benchmark does nothing to explain why the 20-day timeframe proposed in the FESIA is appropriate. Indeed, the 20-day figure seems to be a cookie-cutter figure Total uses for many of its offshore projects, regardless of well depth or distance from shore. For example, to analyse potential blowouts at Total's offshore oil and gas production project in Block 11B/12B, Total used the same 20-day timeframe for capping a blowout, even though the Block 11B/12B project is located at significantly shallower depths (up to only 2300 m as opposed to 3100 m) and is located significantly closer to shore (120 km as opposed to 340 km).²³

26. In sum, it is irrational for the FESIA to assume that a blowout at the Project site will be capped in only 20 days under a worst-case scenario when 1) the wells are in ultradeep water; 2) the Project site is far from shore; and 3) real-world experience demonstrates that capping can take much longer than 20 days, even in less risky conditions than those at the Project site.
27. In addition, the FESIA fails to analyse the impacts of a truly worst-case scenario blowout. The FESIA assumes that if a blowout were to occur, the uncapped well would release an average of 33,375 barrels of oil per day for a period of 20 days.²⁴ The FESIA thus analyses a potential spill of approximately 667,500 barrels of oil. In contrast, a true worst-case scenario—in the vein of Deepwater Horizon or Ixtoc—would release well over one million barrels of oil into the environment. Deepwater Horizon, for example, released more than three million barrels of oil into the ocean.²⁵ The FESIA's failure to analyse the impact of a true worst-case blowout scenario is a failure to analyse all foreseeable environmental impacts and thus violates NEMA. Consequently, the Competent Authority's decision to grant the EA is unlawful, arbitrary and capricious, and fails to consider relevant considerations in violation of PAJA.

The FESIA fails to analyse the cumulative risk of offshore drilling in the region

28. NEMA requires environmental impact assessments to analyse the cumulative impacts of an activity.²⁶ NEMA defines cumulative impacts as "the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant *when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities.*"²⁷ For the Project, that includes examining the cumulative risk from current and future offshore drilling. However, the FESIA fails to conduct this cumulative analysis. Worse, the FESIA erroneously asserts that the presence of many

²³ Compare TotalEnergies, Environmental and Social Impact Assessment for the Offshore Production Right and Environmental Authorisation Applications for Block 11B/12B (Sept. 2023) at PDF page 33 with the DWOB FESIA at

²⁴ FESIA at 440.

²⁵ DWH Trustees' Report at 1-2.

²⁶ EIA Regulations, Appendix 1 at Section 1(j)(i).

²⁷ EIA Regulations, Chapter 1, Section 1.

other wells in the region minimizes risk: “The probability of a well Blowout occurring is considered to be extremely low. Offshore South Africa, 358 wells have been drilled to date ... and no well blowouts have been recorded to date.”²⁸ Likewise, the FESIA notes that Total has already drilled wells in Namibia without any accidents.²⁹

29. This analysis of risk is flawed for multiple reasons. As an initial matter, it is unclear how many of those 358 wells have been in ultradeep water. If those wells were not drilled in ultradeep water, the 358 number is simply not relevant for the Project.³⁰ In addition, contrary to the implications in the FESIA, risk *increases* with the number of wells drilled and a track record of no blowouts does not diminish the chance of a blowout in the future. Indeed, as part of a proper cumulative risk analysis, the FESIA must analyse all current and foreseeable impacts “eventuating from similar or diverse activities”³¹—such as other offshore drilling projects in the region—and then calculate total risk, an analysis that is entirely missing from the FESIA. Without that cumulative analysis, it is impossible for the decision-maker to determine when an additional authorization for offshore drilling will tip risk from acceptable to unacceptable for the region’s ecology and coastal inhabitants.
30. Despite these major gaps, the EA states without any further explanation that: “The identification and assessment of potential impacts of the activity, including cumulative impacts, was adequately undertaken”.³² Because the Competent Authority’s findings are based on a faulty FESIA, it violates NEMA and PAJA.

The FESIA’s oil spill model is flawed

31. As explained in our original comments as well as comments from WildTrust,³³ the ESIA’s oil spill modelling is flawed in numerous ways. Specifically, the FESIA’s oil spill modelling:
- 31.1. Fails to adequately factor in northwest wind;
 - 31.2. Fails to adequately consider climate induced weather changes;
 - 31.3. Uses Block 5/6/7 to validate model results without adequate explanation;
 - 31.4. Relies on outdated thresholds of oil toxicity to evaluate harm to fish in the event of a spill;

²⁸ Appendix 6.8 at 122.

²⁹ Appendix 6.8 at 124.

³⁰ The FESIA also uses a number maintained by Lloyds Register of 1.43×10^{-4} (0.000143), which supposedly represents the frequency of a blowout per exploration well drilled. See Appendix 6.8 at 122. It is also unclear if this number is all wells or only wells from deep water wells—a deepwater only number is the only number that would be applicable here.

³¹ EIA Regulations, Chapter 1, Section 1.

³² EA at 18.

³³ We incorporate by reference our original comments as well as WildTrust’s comments.

31.5. Fails to evaluate all relevant depths of the water column.³⁴

32. The FESIA fails to correct any of these flaws and we therefore reiterate them here.

33. We also incorporate herein the appeal document of WildTrust, attached as **Annex B1**. WildTrust has submitted an appeal in their own name, and accordingly we do not repeat the contents of their submission.

The FESIA fails to analyse the environmental impact of dispersants

34. NEMA requires an environmental impact assessment to analyse all environmental impacts of an activity.³⁵ One such potential impact is an oil spill. The FESIA must therefore analyse all environmental impacts from a spill, including the environmental harm associated with the use of dispersants, which the FESIA states will be a component of Total's spill response.³⁶ The FESIA tries to evade this analysis, claiming that the use of specific dispersants will be developed later, when Total develops a full Oil Spill Contingency Plan.³⁷ This response is not legally relevant. As the use of dispersants are an environmental impact of the proposed Project, the harm associated with dispersants must be analysed in the environmental impact assessment as NEMA requires. Approving this EA without this information contravenes PAJA in that the CA failed to consider relevant considerations and that the decision was unlawful.

II. FAILURE TO ADEQUATELY ASSESS NOISE IMPACTS

35. 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 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."³⁸ Under NEMA, an environmental impact assessment must also include an "investigation of mitigation measures to keep adverse consequences or impacts to a minimum."³⁹ 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.⁴⁰

³⁴ Green Connection and Natural Justice Comments at Section 3; WildTrust, Review and Comment on Draft Environmental and Social Impact Assessment for Exploration Well Drilling in Block Deep Water Orange Basin off the West Coast of South Africa By TEEPSA, SLR Project Reference 720.20047.00008 (8 June 2023).

³⁵ EIA Regulations, Appendix 1, Section 3(1)(i).

³⁶ DWOB FESIA at 129, 432.

³⁷ Appendix 6.8 at 135-36.

³⁸ NEMA EIA Regulations at Appendix 3(3)(j)

³⁹ NEMA Section 24(4)(b)

⁴⁰ PAJA at Section 6(2)(e)

36. Because of several flaws in its approach, the ESIA relied on by the Competent Authority does not adequately identify and assess the risks posed to marine species and ecosystems by project noise. Specifically, and as explained below, the ESIA underestimates the likely acoustic impacts of vertical seismic profiling (VSP), vessel, and drilling activities; fails to analyse the consequences of displacement due to noise; and fails to evaluate cumulative acoustic impacts. The mitigation measures proposed by the ESIA and adopted by the EA are also insufficient to mitigate the likely acoustic impacts from proposed exploratory drilling activities. By issuing an environmental authorisation based on this incomplete and inadequate record, the Competent Authority has made a decision in violation of PAJA because it was taken without considering all relevant impacts, it was in contravention of NEMA and its implementing regulations, including the principle of precaution, and it was arbitrary and capricious.

The ESIA's Conclusion that VSP Acoustic Impacts will be Low is flawed

37. The ESIA concludes that acoustic impacts from VSP operations will be “Low” without taking into account all relevant information.⁴¹ On the basis of the ESIA's flawed finding, the Competent Authority erroneously concluded that the proposed activities “will not result in any detrimental risks to the environment and public.”⁴²

38. The ESIA fails to analyse the increase in ambient noise from the proposed project's VSP activities, which can be significant and extend for kilometres. This is a major flaw. VSP is expected to occur in sessions that could last up to 9 hours with as many as 250 blasts per session.⁴³ As raised in our comments on the DESIA, the ESIA's Underwater Noise Assessment only modelled the zones of impact for individual and cumulative VSP pulses.⁴⁴ However, sounds emanating from a seismic airgun array do not behave as individual and finite pulses *in situ*, but instead reflect off the ocean surface and seafloor as they travel, leading to nearly continuous noise through reverberation. This contribution to ambient noise has repeatedly been documented, can extend for great distances, and contributes to chronic stress in marine species.⁴⁵

39. The ESIA concludes that VSP impacts will be localised. However, as discussed above, airgun noise will influence and degrades the acoustic habitat of marine species over a far greater area than the ESIA considers, undermining the conclusion that impacts are localized. This means that the ESIA fails to account for the potential far-reaching effects of VSP in inshore areas, including coming to the

⁴¹ ESIA at p. 364

⁴² DMRE, Environmental Authorisation in Terms of Section 24 of the National Environmental Management Act for the Proposed Exploration Well Drilling in Block Deep Water Orange Basin off the West Coast of South Africa (Oct., 2023) [hereinafter “Environmental Authorisation”] at Appendix 1, p. 19.

⁴³ ESIA Appendix 9 at p. 29

⁴⁴ ESIA Appendix 9 at p. 37

⁴⁵ See Shane Guan et al., *Airgun inter-pulse noise field during a seismic survey in an Arctic ultra shallow marine environment*, 138 JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA 3447 (Dec. 7, 2015) (finding that the sound field between seismic airgun pulses “exceed[ed] ambient noise levels by as much as 9 dB”); Estabrook et al. (2016); Guerra et al. (2016).

erroneous conclusion that VSP will have no effect on biologically important spawning areas which “all lie inshore of the Area of Interest, and should in no way be affected by the highly localised VSP operations.”⁴⁶

40. The ESIA’s Marine Faunal Assessment (MFA) concludes that pelagic species will react to VSP blasting by moving away from the sound source, and therefore, expected physiological injury will be very low.⁴⁷ The ESIA, however, does not adequately analyse the short and long-term impacts of this movement from an ideal or preferred habitat on individuals, populations, and ecosystems. Many protected marine species utilize habitat in the Area of Interest for important biological functions. If species are displaced from these critical areas, it may cause severe and potentially irreversible consequences.
41. As discussed further below, the ESIA underestimates the cumulative effect of acoustic impacts from VSP activities in intensity, effect, and reach, which undermines the conclusion that impacts will be “Low.”⁴⁸

The ESIA’s conclusion that drilling and vessel acoustic impacts will be Very Low is flawed

42. The ESIA also concludes that acoustic impacts from vessel and drilling noise will be “Very Low” without taking into account all relevant information.⁴⁹
43. Similar to its analysis for VSP activities, the MFA depends upon the mobility of pelagic species as a justification for finding very low impacts from drilling and vessel operations. The MFA concludes that “[a]s most pelagic species likely to be encountered within the Area of Interest are highly mobile, they would be expected to move away from the sound source before trauma could occur.”⁵⁰ Not only does this place the burden on the animals themselves to mitigate the harm caused by project activities, but it also fails to acknowledge the short and long-term consequences of this avoidance behaviour on individual, population and ecosystem levels. As noted above, many protected marine species depend on habitat in the Area of Interest for important biological functions. If these species are displaced from these critical areas, it may cause severe and potentially irreversible population-level effects.
44. The ESIA does not adequately analyse the chronic impacts from the increase in ambient noise caused by drilling and vessel activities. While acknowledging that the overall sound level generated by drilling operations “would be audible for considerable ranges before attenuating to below threshold

⁴⁶ ESIA at p. 362 (emphasis added).

⁴⁷ ESIA Appendix 12 at p. 196 (“As most pelagic species likely to be encountered within the licence block are highly mobile, they would be expected to flee and move away from the sound source before trauma could occur”); *Id.* at p. 197 (“It is thus considered likely that most would avoid sound sources at distances well beyond those at which injury is likely to occur”).

⁴⁸ See, *infra*, Section on Cumulative Impacts

⁴⁹ ESIA at p. 360

⁵⁰ Marine Faunal Assessment, p. 194.

levels,”⁵¹ it dismisses the impacts of this noise because it would “not cause direct physical injury or mortality to marine life, except at close range.”⁵² As stated in our previous comments, this is a major flaw. Chronic noise exposure increases stress and leads to changes in behaviour, which can lead to decreased reproductive activity, decreased foraging, inhibited predator avoidance, immunosuppression, and ultimately reductions in survivorship. For instance, studies have found that ambient noise results in the cessation of feeding in multiple cetacean species,⁵³ the cessation of foraging activity in invertebrates and fishes,⁵⁴ and the cessation of egg laying and reproduction in invertebrate and fish species.⁵⁵

45. Rather than analyse whether the marine ecosystem is capable of withstanding the anticipated increase in anthropogenic chronic noise caused by the exploratory drilling activities, the ESIA concludes that behavioural disturbance from vessel and drilling noise will be low because “the drill area is located in a main marine traffic route and thus is in an area already experiencing increased marine traffic and vessel noise.”⁵⁶ In other words, the ESIA illogically concludes that because vulnerable species are already experiencing acoustic harms from other sources, there will be no harm caused by additional noise from the proposed activities.
46. In actuality, project activities will add to noise from other sources in the region, rather than somehow be hidden by it. Specifically, the ESIA’s Underwater Noise and Marine Faunal Assessments acknowledge that the project’s drilling, vessel, and VSP activities “may potentially contribute to and/or exceed ambient noise levels in the area,” and would generate noise that is roughly 100 times more intense than the ESIA’s highest estimates of ambient noise in the region.⁵⁷ Given this anticipated increase in ambient noise, the ESIA should have integrated these sources of greater noise into a cumulative noise assessment with the project.

⁵¹ ESIA at p. 371

⁵² ESIA at p. 357

⁵³ Blair, H. B., et al. Evidence for ship noise impacts on humpback whale foraging behaviour. *Biol. Lett.* 2(8), 20160005. (2016). doi:10.1098/rsbl.2016.0005; Wisniewska, D. M. et al. High rates of vessel noise disrupt foraging in wild harbour porpoises (*Phocoena phocoena*). *Proc. R. Soc. B Biol. Sci.* 285(1872), 20172314 (2018). doi:10.1098/rspb.2017.2314.

⁵⁴ Popper, A. N. & Hastings, M. C. The effects of human-generated sound on fish. *Integr. Zool.* 4, 43–52 (2009); Voellmy, I. K. et al. Acoustic noise reduces foraging success in two sympatric fish species via different mechanisms. *Anim. Behav.* 89, 191–8 (2014). doi:10.1016/j.anbehav.2013.12.029; de Soto, N. A. Peer-reviewed studies on the effects of anthropogenic noise on marine invertebrates: From scallop larvae to giant squid. in *Advances in Experimental Medicine and Biology*, 17–26 (2016). doi:10.1007/978-1-4939-2981-8_3.

⁵⁵ de Soto, 2016; Popper and Hastings, 2009.

⁵⁶ ESIA at p. 360.

⁵⁷ See Noise Assessment at p. 27 (“It is expected that the noise generated by the major drilling operation activities (i.e., VSP, drilling units and supporting vessels) can be significantly higher than the natural ambient noise levels (90–130 dB re 1 µPa)”; See also Marine Faunal Assessment at p. 188 (stating that the overall noise level from non-impulsive noise is approximately 201.9 dB re 1 µPa and the pulse peak sound pressure level from VSP operations is around 245.5 dB re 1 µPa @ 1 m). Decibels are measured on a logarithmic scale (so every 10 db increase in sound signifies that the sound is 10 times more intense).

The ESIA fails to adequately analyse impacts from displacement of marine animals

47. The ESIA's assessment of acoustic impacts failed to analyse the consequences caused by displacement of vulnerable animals from their habitats. Thus, the Competent Authority issued an environmental authorisation without a complete understanding of the scope of likely impacts.
48. The proposed project is in an ecologically important area that is utilized by many different marine species. The DWOB forms part of several "blue corridors," also known as "whale superhighways," for species like the humpback whale and the southern right whale.⁵⁸ For example, the ESIA's Marine Faunal Assessment states: "Given this high proportion of the population known to feed in the southern Benguela, and current numbers reported, it is highly likely that several hundreds of right whales can be expected to pass through the southern portion of the Deep Water Orange Basin Area when migrating southwards from the feeding areas between April and June."⁵⁹ The Area of Interest is near African Penguin and Cape Gannet foraging and distribution areas, and overlaps with the foraging ranges of various other pelagic bird species, particularly Wandering Albatross and Atlantic Yellow-nosed Albatross.⁶⁰ The project area also covers sea turtle migratory corridors for both critically endangered leatherback and endangered loggerhead sea turtles.⁶¹
49. The ESIA acknowledges that project activities (including VSP, drilling, support vessels) will generate sufficient noise to result in behavioural impacts to a variety of species, including marine mammals, fish, seabirds, and sea turtles.⁶² It also recognizes that impacts on the behaviour of individual animals can lead to changes in feeding, growth, and reproduction, with significant ecosystem-wide consequences.⁶³
50. However, the ESIA concludes that these behavioural impacts will not be significant because "there is no evidence of significant behavioural changes that may impact the wider ecosystem."⁶⁴ To arrive at

⁵⁸ Marine Fauna Assessment, p. 83, Figure 39.

⁵⁹ Marine Fauna Assessment, p.84.

⁶⁰ Marine Faunal Assessment, p. 70.

⁶¹ Marine Faunal Assessment, p. 65, Figure 31.

⁶² See ESIA at p. 308 ("Elevated airborne noise levels from helicopters may disturb faunal species resulting in behavioural changes or displacement from important feeding or breeding areas"); *id.* at p. 359 ("The Underwater Noise Modelling study predicts that non-impulsive noise from drilling activities at two sites ... could result in behavioural disturbance in cetaceans to distances of between 28.3 km and 33.5 km"); *id.* at p. 363 ("It is possible that the noise generated by VSP may mask biologically significant sounds, and cause disturbance and behavioural changes in the receptors"); *id.* at p. 367 ("The underwater noise from the survey systems may, however, induce localized behavioural changes (e.g., avoidance of the source) in some marine mammal, turtles and fish").

⁶³ ESIA at p. 224 ("[t]here is increasing recognition for the need to consider the effects of anthropogenic noise at population and ecosystem level. The sub-lethal effects of sound exposure may seem subtle, but small changes in behavior can lead to significant changes in feeding behaviour, reductions in growth and reproduction of individuals ... and can have effects that go beyond a single species, which may cause changes in food web interactions.")

⁶⁴ ESIA at p. 359; *id.* at p. 367; *id.* at p. 542.

this conclusion the assessment relies on an almost 15-year-old environmental impact assessment prepared for offshore drilling in the Falkland Islands.⁶⁵

51. Relying on an outdated study that looked at the impacts of a different project on a different environment is inadequate to assess the ecosystem-wide impacts for this project. The ESIA does not discuss the marine ecosystem around the Falkland Islands and how it differs from the marine ecosystem off the Southwest Coast of Africa, including species composition, migratory routes, currents, depth, spawning areas, vessel traffic, fishing pressure, underwater formations, substrate composition, etc.
52. The ESIA also claims that a quantitative analysis of ecosystem impacts was not possible because “[t]he required data inputs into such models are currently limited in southern Africa.”⁶⁶ Yet at the same time, it implies that no further assessment of ecosystem impacts is needed because “there is no evidence of long-term negative change to population size or irreparable harm as a direct result of seismic survey activities [and] ... [t]o date no trophic cascades off the South African coast have been documented despite the completion of a number of seismic surveys having been completed.”⁶⁷
53. The ESIA does not cite any studies or data to support its assertion that historical seismic surveys in South Africa have not had any ecosystem impacts. To the contrary, the ESIA notes in several places that its understanding of the baseline is inadequate. For example, the MFA points to the deficiency of data surrounding cetacean behaviour and states that available information about the offshore environment is primarily from historic whaling records prior to 1970.⁶⁸ It also notes that “data population sizes and trends for most cetacean species occurring on the west coast of southern Africa is lacking.”⁶⁹ It further states that short-term observations on behavioural impacts have the potential to mask long-term population declines,⁷⁰ and therefore the ESIA would have needed to conduct or rely on a comprehensive long-term study of the ecosystem effects of oil and gas exploration in South Africa to support its conclusion that no ecosystem-level impacts are likely. The ESIA also recognizes that a stronger assessment of the ecosystem impacts of project noise was feasible, but nevertheless not undertaken. Specifically, the ESIA states that expert elicitation “would be a useful method” to assess ecosystem-level impacts that otherwise would be ignored.⁷¹ The ESIA does not explain why expert elicitation was not carried out to analyse the ecosystem effects of acoustic noise for this project.
54. The ESIA also improperly concludes that the impacts on seabirds from helicopter noise, vessel noise, drilling noise, and VSP blasts will be either very low or low without undertaking a comprehensive

⁶⁵ ESIA at p. 359; *id.* at p. 367; *id.* at p. 542 (all citing Perry, J., 2005. Environmental Impact Assessment for Offshore Drilling the Falkland Islands to Desire Petroleum).

⁶⁶ ESIA at p. 225

⁶⁷ ESIA at p. 413

⁶⁸ Marine Faunal Assessment at p. 71

⁶⁹ Marine Faunal Assessment at p. 69

⁷⁰ ESIA at p. 412

⁷¹ ESIA at p. 225

analysis of the potential effects on different species and populations of seabirds.⁷² For instance, the Area of Interest is near African Penguin and Cape Gannet foraging and distribution areas, and overlaps with the distribution of many other pelagic bird species.⁷³ Despite the likelihood that protected seabirds will be found within the Area of Interest and are sensitive to anthropogenic noise, the ESIA's Underwater Noise Assessment does not analyse impacts to any seabird species.⁷⁴ The MFA dismisses noise impacts to seabirds because "the Area of Interest lies offshore of the distribution of small pelagic fish species that constitute the main prey of these seabirds."⁷⁵ However, this generalization is contradicted by the ESIA's own description of the baseline environment, which states that the Area of Interest "overlaps with the foraging ranges of various pelagic bird species"⁷⁶ and shows that the Area of Interest overlaps significantly with the foraging area of the Endangered Atlantic Yellow-nosed Albatross.⁷⁷ The ESIA does not adequately assess how these protected seabird populations may be displaced from foraging areas by project noise, nor the consequences of this displacement.

55. The ESIA also fails to consider the differing types of displacement that may occur because of acoustic impacts from the exploratory drilling activities. Anthropogenic noise can cause changes in the direction of movement of species from a geographical area, as the ESIA acknowledges.⁷⁸ However, it can also cause species to shift their movements vertically in the water column. The ESIA does not consider the effects that displacement may have on marine species that inhabit deep waters, such as sperm whales. Specifically, the ESIA should have considered whether these species may be driven to shallower waters inshore, and how this shift may impact access to food sources or increase their exposure to other anthropogenic threats.
56. The Fisheries Impact Assessment estimates that drilling and vessel noise will generate a roughly 80 km² behavioural disturbance zone for commercial fish species, but does not analyse how this displacement will impact fish populations or the ecosystem as a whole.⁷⁹ Additionally, the only mitigation measure that the assessment offers related to vessel and drilling noise pollution is to communicate with "the various sectors allowing them to focus fishing in other areas."⁸⁰ This mitigation measure should have been accounted for in the Marine Faunal Assessment, as it will inevitably increase fishing pressure and vessel traffic in other areas.
57. Each of the deficiencies is a major gap in assessing the risk to marine animals. Taken together, it is overwhelmingly clear that the Competent Authority did not have adequate information to

⁷² See ESIA at p. 311; *id.* at p. 360; *id.* at p. 364; *id.* at p. 368.

⁷³ ESIA at p. 177

⁷⁴ In fact, the word "bird" is not mentioned even once in the entire noise assessment.

⁷⁵ Marine Faunal Assessment at p. 195

⁷⁶ Marine Faunal Assessment at p. 66

⁷⁷ Marine Faunal Assessment at Figure 33, p. 70

⁷⁸ ESIA at p. 542.

⁷⁹ Fisheries Impact Assessment at p. 135

⁸⁰ Fisheries Impact Assessment, p. 136

understand the extent of the project's marine impacts and its decision to approve the project is arbitrary and capricious and violates NEMA.

The FESIA fails to evaluate the cumulative impacts of acoustic pollution from the project and adjacent projects

58. The ESIA describes numerous negative impacts from sound generated by project activities. However, these effects are evaluated in a vacuum and largely dismissed as temporary disruptions that most marine life can avoid. This failure to consider the impacts of the project's noise together with noise from current and future anthropogenic sources not only violates NEMA, but results in a record that underestimates the project's likely impacts on the marine environment.
59. Specifically, the ESIA fails to consider the cumulative impacts of noise from the DWOB project, along with the noise pollution from many other current or planned adjacent projects. As described in our previous comments, the DWOB block has already been subject to high vessel and aircraft traffic, sonar emissions, and drilling operations. It is also well-known that the cumulative impacts of noise pollution can result in cascading effects on marine ecosystems. Disruption of key species or changes in their behaviour can alter predator-prey relationships, population dynamics, and overall ecosystem health. However, the ESIA does not attempt to assess the project's cumulative noise impacts, claiming that "the possible range of the future prospecting, mining, exploration and production activities that could arise will vary significantly in scope, location, extent, and duration ... As these cannot at this stage be reasonably defined, it is not possible to undertake a reliable assessment of the potential cumulative environmental impacts."⁸¹ In light of this uncertainty, the precautionary approach mandates an evaluation of cumulative noise impacts under the worst-case scenario. South African law does not condone the approach taken by the ESIA here: in which uncertainty is used as an excuse to avoid evaluating potentially significant environmental impacts.

The ESIA offers inadequate mitigation measures

60. The ESIA offers inadequate mitigation measures that prioritise offshore development over the health of the marine ecosystem, in contravention of NEMA requirements.
61. For example, the ESIA's VSP mitigation measures include a measure that calls for industry to limit VSP blasting to daylight and good visibility "as far as possible."⁸² Good visibility is an important condition for VSP operation, since other mitigation measures depend on visual scans to ensure that marine fauna are not within close range of the sound source. However, the "as far as possible" language is too permissive and leaves considerable discretion to the industry. This could result in VSP operations being conducted extensively during times when visual mitigation is not possible.

⁸¹ ESIA at p. 215

⁸² ESIA at p. 364, Mitigation measure 2.1

62. While the ESIA imposes additional requirements, these mitigation measures are also inadequate. The ESIA relies on the use of Passive Acoustic Monitoring (PAM) technology to mitigate harm from VSP blasting during periods of low visibility.⁸³ By employing hydrophones under the water, PAM allows for the nonvisual detection of marine mammals if they are vocalising within range. However, the ESIA only requires PAM use if “a risk assessment, undertaken ahead of the VSP operation, indicate[s] that PAM equipment can be safely deployed considering the metocean conditions (specifically current).”⁸⁴ Additionally, the operator can avoid deploying PAM at all during conditions of low visibility if there have not been three or more occasions where cetaceans, penguins, shoaling large pelagic fish or turtles have been sighted within the mitigation zone during the preceding 24-hour period and a two-hour period of continual observation of the mitigation zone was undertaken during a period of good visibility prior to the period of low visibility.⁸⁵ This is problematic on many fronts. First, this would allow TEEPSA to go ahead with drilling operations *without any form of visual or acoustic monitoring* if they determine it is too dangerous to deploy PAM equipment. If PAM cannot be safely deployed, no drilling should be allowed to take place. Second, this measure would result in dangerous VSP operations during periods of prolonged poor visibility conditions. For example, the ESIA notes that the region experiences strong winds and swells throughout the winter, with waves “often attaining over 5 m” in height.⁸⁶ Thus, poor visibility conditions could feasibly last for weeks if not months. TEEPSA could conduct VSP operations without PAM and when visual monitoring is not possible, so long as the mitigation zone was monitored for two hours sometime prior to the period of low visibility. Since the ESIA does not specify when this two-hour monitoring needs to occur, TEEPSA could conduct VSP operations in the winter based on a visual scan of the mitigation zone that took place months prior.
63. The ESIA’s proposed 500 m mitigation zone for visual and acoustic monitoring is also inadequate. The Underwater Noise Assessment found that VSP impacts on marine mammals could extend up to 980 m away from the sound source.⁸⁷ Even assuming that visual monitoring is effective at detecting all whales within the 500 m mitigation zone, the project’s VSP activities will still result in significant behavioural impacts to any whales located within a roughly 1 km vicinity.
64. The MFA does not present any mitigation measures either for drilling, vessels, or VSP noise impacts that considers the seasonality and movement patterns of cetaceans, sea turtles, or any other species with complex movement patterns or migratory routes through the Block. The ESIA requires TEEPSA to “[a]void, as far as possible, planning sonar surveys during the movement of migratory

⁸³ ESIA at p. 365, Mitigation measure 5.1

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ ESIA at p. 147

⁸⁷ Underwater Noise Assessment at p. 39

cetaceans,”⁸⁸ but does not require the same for VSP or drilling activities, which are anticipated to generate similar acoustic harms.

The ESIA fails to apply the Precautionary Principle

65. South African law requires adoption of the precautionary principle when addressing threats of harm characterized by uncertainty, including acoustic impacts to marine and bird life caused by seismic surveys.⁸⁹ While the ESIA uses outdated data and, at times, recognizes the considerable scientific uncertainty characterizing acoustic impacts,⁹⁰ it does not apply the precautionary principle.

66. Specifically, the MFA and ESIA in several instances points out uncertainty in data related to understanding the current state of the marine ecosystem. Yet, the MFA does not account for this uncertainty in its significance ratings or proposed mitigation measures. As explained in our previous comments, the lack of knowledge about potential harms and the lack of understanding about species’ physiology, behaviour, and ecological interactions in the Area of Interest and nearby areas calls for the application of the precautionary principle and for robust mitigation measures that account for current uncertainty⁹¹.

III. FAILURE TO ADEQUATELY ASSESS CLIMATE CHANGE IMPACTS

The failure to assess full lifecycle of climate impacts

67. 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.

68. In response, the FESIA erroneously states:

“Any future extraction activities would be subject to a separate Production Right application and associated application for EA by means of the necessary ESIA process. This separate ESIA Process would be undertaken to assess the impacts and provide mitigation recommendations specific to the production activities that are proposed at the time. ... This is in line with the MPRDA and the EIA Regulations 2014 (as amended) which clearly separates ‘exploration activities’ from ‘production activities’ and sets out

⁸⁸ ESIA at p. 505

⁸⁹ *Sustaining the Wild Coast NPC and Others v. Minister of Mineral Resources and Energy and Others*, at 32-37.

⁹⁰ See, e.g., Underwater Noise Assessment at p. 24 (“In general, limited scientific data are available regarding the effects of sound on fish”); Marine Faunal Assessment at p. 213 (“The individual and population level consequences of other exploration activities or multiple smaller and more localized stressors ... are difficult to assess”); *id.* at p. 214 (“Information on the population trends of resident species of baleen and toothed whales is unfortunately lacking, and the potential effects of seismic noise on such populations remains unknown”).

⁹¹ See International Whaling Commission’s (IWC) Resolution 2018-4, Resolution on Anthropogenic and Underwater Noise (stating that “in line with the precautionary approach, the lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to address the effects of anthropogenic underwater noise”).

the distinct application/assessment processes by which an applicant would have to obtain further Environmental Authorisation.”⁹²

69. The Competent Authority’s reasons do not address this issue, but one can only assume it is based on this faulty logic.
70. NEMA, through its EIA provisions, seeks to ensure “the integrated environmental management of activities” (section 23 of NEMA), and “(2) The general objective of integrated environmental management is to- (a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment; (b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2; (c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them” (emphasis added).
71. NEMA and the EIA Regulations require consideration of cumulative impacts of proposed activities and associated activities. This is stated in the following provisions:
- 71.1. Regulation 3(1)(j) of the EIA Regulations, 2014 explicitly states that “(1) An environmental impact assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include ... (j) an assessment of each identified potentially significant impact and risk, including... (i) cumulative impacts”.
- 71.2. Cumulative impacts are defined in the EIA Regulations as “in relation to an activity, ... the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities” (emphasis added).⁹³
72. This demonstrates quite clearly that NEMA requires an assessment of the potential impacts of exploration, as well as production, as a reasonably foreseeable impact of an associated activity.
73. We do not dispute that the two activities (exploration and production) are listed separately under NEMA and require separate EIA processes. However, this does not mean that an EIA for exploration can or should ignore reasonably foreseeable impacts that might eventuate from exploration. NEMA requires this and does not permit a piece-meal approach.

92 ESIA, Appendix 6.8, IAP Comments and Response Report, pp. 11, 159.

93 EIA Regulations, reg 1 sv “cumulative impact”.

74. The processes for exploration and production are intrinsically intertwined. From an environmental perspective, it is artificial to consider them as separate from each other. They 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.
75. 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.
76. For example, if an assessment of production, including an estimated quantification of potential production GHG emissions had been conducted, it may well have been found that production as per the proposed project would be in breach of South Africa's climate commitments and policies and not be desirable at all. Then there would be no point in exploration.
77. Assessing climate impacts of production at this stage is also supported in the case of *Sustaining the Wild Coast NPC & Others v Minister of Mineral Resources and Energy & Others* 2022 (6) SA 589 (ECMk) ("Sustaining the Wild Coast"), which recognised the need for a forward-looking approach that considers the long-term climate change impacts of potential oil or gas production – and what it might mean for South Africa's climate change commitments – in determining need and desirability.
78. In addition, the FESIA's arbitrary legal distinction between exploration and production also breaks down when you look at many aspects of the FESIA's analysis which justifies the exploration activities with reference to the benefits they anticipate from the exploitation of the oil and gas.
79. In summary, the Competent Authority's failure to consider the potential climate impacts of this project should it proceed to production violates NEMA and contravenes PAJA's requirement that administrative decisions be lawful, reasonable, and consider all relevant considerations.

The failure to adequately assess climate risks associated with the project

80. The climate change impact assessment does not adequately assess risks that climate change poses to the project and the resilience of the surrounding marine environment to climate change. The risk that the project poses to adaptation is regarded as a "non-issue" because of the temporary and short nature of the exploration activities.⁹⁴
81. However, 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. The ESIA acknowledges that the impacts on the fishing sector could be

94 P98, ESIA.

increased due to additive cumulative impacts of climate change.⁹⁵ Yet this was not addressed in sufficient detail in the ESIA - where climate projections should have been factored into the baseline assessment for the area.

82. 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. Section 24O(1)(b) NEMA requires the competent authority to take into account “all relevant factors” in considering whether to authorise activities under NEMA.
83. Integrating and considering the impacts of proposed activities on climate adaptation is an essential component of an EIA, as it is necessary to ensure that a projects is resilient to the impacts of climate change, and also that it is environmentally and socially responsible.⁹⁶ 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.
84. The Consultation on Intention to Publish the National Guideline for Consideration of Climate Change Implications in Applications for Environmental Authorisations, Atmospheric Emission Licences and Waste Management Licences supports this position and calls for consideration of the impacts of proposed activities on infrastructure that is important for climate adaptation and resilience, in EIAs.⁹⁷
85. The impacts of the project activities for food security (depleting fish stocks) are relevant in this regard and ought to have been considered. This is addressed in further detail below.
86. South Africa is extremely vulnerable to the impacts of climate change⁹⁸ and therefore the climate risks that could be exacerbated by the exploration project activities – even if short and temporary duration – are relevant considerations that ought to have been included in the ESIA.

Failure to consider the rights and welfare of children in the context of climate change

87. A child’s best interests are of paramount importance in every matter concerning the child (section 28(2) of the Constitution). Everyone (including children and future generations) has the right to an environment that is not harmful to their health and wellbeing (section 24(1) of the Constitution). Everyone has the right to have the environment protected for the benefit of present and future generations (section 24(2) of the Constitution). Our Constitution obliges courts, tribunals or forums, to consider international law when interpreting these rights (section 39(1)(b) of the Constitution). The African Charter on the Rights and Welfare of the Child obligates state parties to protect children’s right to survival and development. According to General Comment No.26 of the UN Convention on

⁹⁵ P414.

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⁹⁷ Para 1.ii.

⁹⁸ P8, National Climate Change Response White Paper.

the Rights of the Child, climate change impacts on children's environmental rights and thus every development that will have an impact on the environment must consider the impact on children's rights. South Africa is signatory to both the African Charter on the Rights and Welfare of the Child, and the UN Convention on the Rights of the Child.

88. Accordingly, a decision that authorises the exploration contrary to South Africa's obligation to avoid the climate crisis, and the globally accepted decision to move away from non-renewable to renewable energy, is one that concerns children and future generations. Therefore, the assessment of the impact of this exploration on, *inter alia*, should have been assessed in the FESIA and considered by the competent authority to inform its decision to grant or deny environmental authorisation.
89. It is a globally accepted fact that climate change causes unpredictable and violent weather conditions. Extreme weather conditions can destroy homes, recreation centres, child and youth care centres, schools, and infrastructure that is key to children's wellbeing. Consequently, children's rights to rest, play, leisure, recreation and education will be negatively impacted. Accordingly, an investigation, research, probe, exploration etc. whose aim is to establish the existence of fossil fuel during this climate crisis undermines South Africa national policy position on climate change and its international commitments to a transition from non-renewable to renewable energy.
90. No information about the impact or lack thereof which this exploration, or its intended ultimate exploitation, may have on children and future generations was included in the report that was before the competent authority when environmental authorisation was granted. Despite absence of such crucial information, the competent authority erroneously granted the authorisation.
91. In conclusion, the decision to grant environmental authorisation in this case clearly violates South Africa's environmental laws, international laws, and undermines South Africa's commitment to transition from non-renewable to renewable energy.

IV. FAILURE TO ADEQUATELY ASSESS SOCIO-ECONOMIC IMPACTS

92. NEMA's EIA Regulations, 2014, stipulate that an EIA must contain an assessment of each identified potentially significant impact and risk, including— *inter alia*, (ii) the nature, significance and consequences of the impact and risk.⁹⁹
93. The socio-economic impacts of the project were not adequately assessed, in accordance with the NEMA requirements, in that:
- 93.1. the FESIA failed to adequately account for a number of key risks, including risks to the fishing and tourism sectors, the economic risks associated with a spill, and transition risks;

⁹⁹ Appendix 3, section 3(1)(j), EIA Regulations, 2014.

- 93.2. the FESIA relies on unsubstantiated and incorrect assumptions on economic benefits of the project; and
- 93.3. the FESIA failed to adequately take into account external costs of the project activities to society.

The failure to adequately consider key economic risks posed by the project activities

94. As stated above, the NEMA EIA process requires an assessment of each identified potentially significant risk. However, the FESIA failed to fully and adequately assess the socio-economic risks of the proposed activities for the fishing and tourism sectors. Some material socio-economic risks – namely transition risk – have not been assessed at all.

Socio-economic risks to the fishing and tourism sectors

95. The socio-economic impact assessment (SEIA), appendix 14 to the FESIA, acknowledges that the fishing industry employs a number of people in the Western Cape and along the West Coast,¹⁰⁰ and that the agriculture, forestry and fishing sector contributes the most to employment within the municipality.¹⁰¹
96. The SEIA recognises the potential significant impacts and *“high risk of physiological injury from seismic sound sources is for species with swim-bladders (e.g. hake and other demersal species targeted by demersal longline and demersal trawl fisheries, small pelagic species targeted by the midwater and purse-seine fisheries).”*¹⁰² However, the SEIA concludes that *“the project will have negligible economic impact on the commercial sector identified and small scale fisheries will not be impacted under normal operation”*.¹⁰³
97. Above we have highlighted a number of concerns with the assessment of the potential impacts of an oil spill on the marine environment as well as with the acoustic impacts of the normal operations on the marine environment and fish species. Because of these material deficiencies, the socio-economic risks that the proposed activities pose for the fishing sector are understated and the conclusions drawn, unfounded. The conclusions in the SEIA that the project will have negligible economic impact on the commercial sector, and that the small-scale fishers will not be affected at all therefore cannot be relied upon.
98. It is also fundamental that a number of small-scale fishers have raised numerous concerns in relation to the proposed project and their concerns have not been substantively addressed.

100 P37 and 38, SEIA.

101 P48, SEIA.

102 P73, SEIA.

103 P74, SEIA.

99. In the event of an unplanned event – such as a spill – the impacts to the fishing and tourism sectors immediately become very high and even more significant. This is addressed in further detail below.

The socio-economic risks of an oil spill

100. The SEIA states that *“all coastal communities and activities along the West Coast coastline (key area affected) are considered to be of very high sensitivity to major oil spills: it is a high value coastline that services extensive regional tourism, recreation, residential development, and near-shore and offshore fishing”*.¹⁰⁴ The SEIA notes that *“social impacts of a spill reaching the coast would be international in extent, medium-term in duration, and high in intensity, assuming that no comprehensive mitigation measures are in place. The impact is, therefore, considered to be of very high magnitude and **very high significance**”*.¹⁰⁵ Even with mitigation measures in place, the residual impact remains of “very high significance”.¹⁰⁶

101. The SEIA concludes that the impact of an oil spill – although of very high significance – is considered to be unlikely and partially reversible. Above, we critique the significant gaps in the oil spill modelling and impact assessment, and on this basis the conclusions reached in the SEIA cannot be relied upon.

102. The DESIA comments highlighted the failure of the draft SEIA to assess the potential impacts of an oil spill – particularly on food webs and the livelihoods of small-scale fishers. We stand by these concerns and objections as these risks have not been sufficiently addressed in the FESIA.

103. The DESIA comments further stated that *“the socio-economic impact assessment fails to adequately evaluate the cascading impacts on the sense and spirit of place for both commercial and small-scale fishers. These fishers perceive the offshore areas surrounding the region as unique in character and identity, playing a vital role in their livelihoods and way of life. These areas contribute to the social and economic values that shape their sense of place and are crucial for their well-being and resilience. A catastrophic oil spill, for example, would have a devastating impact on the fishing industry which overlaps with the spill area. It would destroy fishing grounds, kill fish, and contaminate seafood. This would lead to job losses, economic hardship, and a loss of way of life for coastal communities and commercial and small-scale fishers.”* The potential impacts of the project on sense of place are addressed below under the cultural and heritage impacts. This, however is also a relevant consideration from a socio-economic perspective. None of these potential impacts have been quantified or adequately weighed against the alleged benefits of the project activities.

104. The high significance of the socio-economic risk for coastal communities who are dependent on fishing, and a healthy coastal ecosystem for their livelihoods, far outweighs any alleged economic benefits of the proposed project activities, even if the impact is regarded as unlikely. On this basis

104P76, SEIA.

105 Pv, SEIA.

106 P77, SEIA.

alone, the environmental authorisation should not have been granted. This, even more so, when the FESIA notes the economic benefits to the local economy from the proposed exploration activities to be “moderate to low”.¹⁰⁷ The so-called benefits are not outweighed by the risks of harm.

No consideration of transition risks associated with the project

105. A key socio-economic risk that ought to have been considered, but was not, is the transition risks of proceeding with the proposed activities and any resultant oil and gas exploration.

106. Transition risk is the risk that the value of assets and income are less than expected because of climate policy and market transformations, such as the transition away from fossil fuels. Transition risk includes: the problem of stranded assets; negative impacts on trade and competitiveness; and the physical risks of climate change itself. All these factors must be considered in a proper economic impact assessment and prior to investment in non-renewable resource extraction.¹⁰⁸ This is especially so as these factors have become increasingly important when analysing or insuring projects. Such risks are seen by the world’s central banks as one of the biggest threats to global financial stability.¹⁰⁹ None of these risks have been considered in the SEIA.

107. Although the authorised exploration activities are for a limited duration and are not production activities, the SEIA specifically opts to focus on the longer-term trajectory of oil and gas development in South Africa. The need and desirability section of the SEIA (chapter 9) explores some of the long-term considerations associated with TEEPSA’s plausible entry into production in the future, stating that *“In order to profile future strategic issues and the way forward, this chapter considers a scenario where payable quantities of gas, oil or condensate are found, and TEEPSA enters into production within the next decade, management and logistic support both being primarily based in Cape Town or Saldanha.”*¹¹⁰ On this basis the transition risks associated with the longer term potential production aspects of the project ought to have been considered. Particularly as such an assessment is key to informing whether exploration ought to proceed in the first place.

108. The SEIA states that *“the proposed exploration project will potentially lead to South Africa optimising its own indigenous resources (the amount of oil/diesel used locally would not increase if oil is found, rather local resources would be used as opposed to importing resources from elsewhere) to provide its identified oil and gas needs until the 2050 deadline to achieve carbon neutrality, rather*

107 P85, ESIA.

1. 108 Huxham, M., Anwar, M., & Nelson, D. (2019). Understanding the Impact of a Low-Carbon Transition on SA. Climate Policy Initiative at <https://www.climatepolicyinitiative.org/publication/understanding-the-impact-of-a-low-carbon-transition-on-south-africa/#:~:text=%E2%80%9CTransition%20risk%E2%80%9D%20is%20widely%20regarded,away%20from%20coal%2Dfired%20power.>

109 Huxham, M., Anwar, M., Strutt, E., & Nelson, D. (2020). Understanding the impact of a low carbon transition on Uganda’s planned oil industry. Climate Policy Initiative.

110 P79, SEIA.

*than having to mainly import, as at present (a situation which has been exacerbated by the recent closure of several South African refineries)”.*¹¹¹

109. The SEIA further acknowledges that *“given that production may potentially only commence within a decade, caution is also required to manage potential expectations and speculation around the long-term development trajectory”*¹¹²
110. The SEIA therefore takes a forward-looking approach that purports to consider the economic impacts of oil extraction from the project, yet fails to consider the transition risks (a key economic impact) associated with the lock-in to a carbon-intensive fossil fuel within the next decade. This is a material omission.
111. The Climate Policy Initiative analysed South Africa’s transition risk in 2019 and found that the country faces transition risk of more than R1747 billion in present value terms between 2013 and 2035. It notes that South Africa’s trade-offs associated with a low-carbon transition are particularly acute because of high levels of unemployment and inequality, together with a strong reliance on fossil fuels.¹¹³ This research did not include analysing the risk from offshore oil and gas industries, but it did recommend that South Africa should avoid or delay any new investments that could add to South African climate transition risk until the market for the related product is certain.
112. Some specific transition risks associated with this project include:
- 112.1. **The risks of taxes being imposed** on carbon-intensive products, for example the carbon border adjustment mechanism (CBAM). According to the National Planning Commission, South Africa’s trade accounts for around 60% of GDP.¹¹⁴ South Africa’s exports are focused on few destinations and are heavily concentrated around a small number of value chains. Therefore, South Africa is particularly vulnerable to changes in trade patterns arising from measures aimed at transiting to low-carbon pathways. Many of the importers of South African goods are transitioning away from carbon-intensive pathways, and consequently many of them are considering imposing carbon border adjustment mechanisms (carbon border tax) that would reflect the amount of carbon emissions attributed to goods being imported. The CBAM is likely to hit the competitiveness of African exports, particularly industrial exports if product coverage expands over time. Further, the CBAM process

111 P80, SEIA.

112 P81, SEIA.

113 Huxham et al ‘Understanding the impact of a low carbon transition on South Africa’, <https://climatepolicyinitiative.org/wp-content/uploads/2019/03/CPI-EF-Understanding-the-impact-of-a-low-carbon-transition-on-South-Africa-2019.pdf>.

114 National Planning Commission. (2020). Economic Progress Towards The National Development Plan's Vision 2030. Pretoria: National Planning Commission.

introduces administrative hurdles to market access by African countries, which historically struggled to access the European market.¹¹⁵

- 112.2. **The risks of legislation coming into effect which poses limits on the GHG emissions from the project and potentially imposes additional constraints and costs on the project proponent.** The Climate Change Bill for example – was recently passed by the National Assembly and is now awaiting approval from the National Council of Provinces. There is a high likelihood that the Climate Change Act and associated regulations will be in place by the time this project comes into operation.
- 112.3. **The risk of the project becoming a stranded asset.** The International Energy Agency defines stranded assets as ‘those investments which have already been made but which, at some time prior to the end of their economic life, are no longer able to earn an economic return’. Simply put, stranded assets are projects that fail to deliver adequate returns as conditions change.¹¹⁶ In 2020 about a third of the fossil-fuel investment planned through to 2030 risks failing to deliver adequate returns for developers.¹¹⁷
113. None of the above transition risks are assessed in the SEIA. The above deficiencies, at the very least, needed to be addressed in order provide a full picture of the potential risks of the project, and to inform the decision to authorise the project activities.

The FESIA, and consequently the decision-maker, relies on unsubstantiated and incorrect assumptions on economic benefits of the project

114. The SEIA notes that the *“well exploration activities will result in limited impact on services and facilities in the area of impact due to the short-term nature of the activity with respect to the pressure on local service providers or suppliers. The demand for such local services will be largely limited to crew accommodation, meals, basic goods, and refuelling, provided at the onshore logistics base in Cape Town or Saldanha. The specialised nature of the survey vessels and drilling unit is such that they are not available locally and are sourced from international contractors. The technical nature of the operations means that the survey vessels and drilling unit are crewed by highly skilled personnel, who are part and parcel of the contract.”* As such there will be very limited – if any - local employment benefits from the project activities.

115 Study by the African Climate Foundation (ACF) and the Firoz Lalji Institute for Africa at the London School of Economics and Political Science (LSE), ‘Implications for African Countries of a Carbon Border Adjustment Mechanism at the EU’ at <https://www.lse.ac.uk/africa/assets/Documents/AFC-and-LSE-Report-Implications-for-Africa-of-a-CBAM-in-the-EU.pdf>.

116 Grant, A., & Coffin, M. (2020). Fault lines: How diverging oil and gas company strategy link to stranded assets. Carbon Tracker.

117 Hurst, L. (2020, September 20). ‘Stranded Assets’ Risk Rising With Climate Action and \$40 Oil. Retrieved January 26, 2021, from https://www.washingtonpost.com/business/energy/stranded-assets-risk-rising-with-climate-action-and-40-oil/2020/09/18/89f90d3a-f963-11ea-85f7-5941188a98cd_story.html.

115. The project may even give rise to negative employment impacts. The FESIA states that *“Unemployment for the Western Cape has been steadily rising over the last decade. In part this is due to in-migration of work seekers from other areas, which is itself linked to the poor performance of the national economy.”*¹¹⁸ Conceivably, the project itself may cause more in-migration and job losses, but this has not been assessed.
116. The SEIA acknowledges that the exploration activities will have limited economic benefits – if any. It seeks to rely, instead, on the further anticipated production activities for alleged socio-economic benefits that would justify the project. In assessing the economic impacts of the “no go” alternative, the FESIA states that *“the No-Go alternative (which here assumes no future oil and gas exploration and production in South Africa) means that any domestic oil and gas resources that might occur in the target area, cannot be identified and assist in the transitions to the 2050 carbon neutrality target. Unless other fields are developed, South Africa's demand for gas and oil refined products will continue being met by imports.”*¹¹⁹
117. The scope of this assessment ought (by the project proponent's own approach) be limited to the activities applied for (exploration).
118. In any event, and to the extent that the impacts of production are considered (and relied on by the decision-making authority, this assumption that the production of oil and gas would be beneficial for South Africa and its transition to a low-carbon economy is unsubstantiated and is incorrect for reasons that include:
- 118.1. It disregards the high (negative) economic risks of developing a domestic oil and gas sector, as explained above. Anwar et al note that expanding the oil and gas sector carries risks for South Africa, including the possibility of new investments in infrastructure becoming stranded once global markets stabilise and stricter decarbonisation measures are implemented.¹²⁰ To address this concern, it's advisable for South Africa to make investments in a way that allows them to adapt to potential future drops in demand and to repurpose the infrastructure effectively.
- 118.2. The 2021 National Business Initiative *"Just Transition and Climate Pathways Study"* is relied on in the SEIA (at p79) because it concludes that a *“lack of gas supply threatens South Africa's decarbonisation strategy because the synfuels, power and industrial sectors would rely on carbon-intensive fuels (e.g., coal and diesel) for longer”*. However, this position is not correct and has since been superseded by subsequent recommendations by South Africa's National

118 P21, ESIA.

119 P83, ESIA.

120 <https://www.wtwco.com/en-za/insights/2022/12/natural-gas-in-africa-amid-a-global-low-carbon-transition>.

Business Initiative to import liquified natural gas over developing a domestic market, in order to minimise the risks associated with a potential carbon lock-in.¹²¹

118.3. It is misleading to state that South Africa will continue to rely on exports if this project does not proceed. Firstly because Renergen is currently producing gas in South Africa (meaning that there is already local production in place).¹²² And secondly because it ignores the current plethora of proposed oil and gas projects (some of which belong to TEEPSA, and some of which are at more advanced stages towards production than this project) which are all putting themselves forward as the only solution to develop a domestic gas market (without which SA would be dependent on exports). This is a false narrative.

118.4. Given that production would be anticipated to commence only within the next decade, any oil and gas produced from this project would in any event not meet short-term energy needs for South Africa, nor would it be capable of filling any demand gap caused by the high European demand, as this is only anticipated (by the SEIA) to last until 2028.¹²³

118.5. Importantly, it is wholly incorrect that the development of an oil and gas sector is needed in South Africa or that it would assist in the transition to a low carbon economy. This is addressed in detail under the Need and Desirability section.

119. The competent authority appears to have relied on these incorrect suppositions around alleged benefits of developing an oil and gas resources, in making the decision to grant the authorisation: *“The no-go alternative was not preferred due to the preclusion of the opportunity for the development of potential future oil and gas resources and associated economic and social benefits that may be derived.”*¹²⁴ On this basis, the decision to grant the authorisation ought to be set aside.

The FESIA failed to adequately take into account external costs of the project activities to society

120. The FESIA has failed to consider a number of key external costs that the project activities would impose on society, such as the social cost of carbon and costs of the negative impacts of the activities to ecosystems and ecosystem services.

121. Healthy ecosystems and human communities are economically important because they provide goods and services that make important contributions to the well-being of individuals, families, communities, and society as a whole. Economists around the globe have recognised that, to understand the overall consequences of fossil-fuel projects, such as the proposed project, decision-

121 National Business Initiative. 2022. Just Transition and Climate Pathways Study For South Africa: The Role of Gas in South Africa’s Path to Net-Zero. Available from: www.nbi.org.za/wp-content/uploads/2022/02/NBI-Chapter-3-The-role-of-Gas-in-South-Africas-path-to-net-zero_vFinal.pdf [Accessed 14 October 2023].

122 <https://www.renergen.co.za/renergen-projects/virginia-gas-project/>.

123 P84, ESIA.

124 3.5, p18, environmental authorisation.

makers and the public must have the results from an analysis that provides a full, unbiased assessment of the external costs.

122. Most importantly, the FESIA fails to assess the external health, environmental and social costs that would be associated with a potential oil spill.
123. The FESIA states that *“The public response to potential unplanned events (including oil spills) is likely to be highly sceptical at the national level. It is expected that there will be substantive pressure on TEEPSA to disclose information on such risks and measures that are put in place. **The ramifications of an actual unplanned events in terms of social impacts are beyond this scope of this SIA. However, the legal, financial and reputational risks are likely to be substantive.**”* (emphasis added).
124. The DESIA comments stated that *“the assessment of the extensive long-term damages and costs caused by oil spills is lacking in the socio-economic impact assessment. To some extent this is impossible due to the material deficiencies in the DESIA’s spill modelling. It is crucial to recognize the potential adverse effects on fish stocks, commercial fishing, marine life, and species conservation because of an oil-spill, as these factors are vital for the well-being of coastal communities and future generations.”* The final SEIA has not addressed these concerns.
125. The failure to even provide some cost estimates is a material omission in the SEIA.
126. These external costs are fundamental considerations that needed to be factored in to the FESIA and weighed against any suppositions around the economic benefits of the proposed project. This is particularly important given that local economic benefits are already anticipated to be medium to low, meaning that any alleged benefits to the local coastal communities are (or would ordinarily reflect as being) significantly outweighed by the negative high costs that will have to be borne by these communities in the ordinary course of the project activities and especially in the case of an unplanned event.

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

127. In our comments, we referred to the requirements of NEM:ICMA to take account of specific factors when deciding whether or not to grant environmental authorisation for “coastal activities”, including whether or not the proposed project “would be contrary to the interests of the whole community”.¹²⁵ We stated that this requires an eco-centric consideration of the impacts of the

¹²⁵ In terms of the National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEM:ICMA), the ‘interests of the whole community’ is defined as meaning the collective interests of the community determined by:

(a) prioritising the collective interests in coastal public property of all persons living in the Republic over the interests of a particular group or sector of society;

proposed project in an area that must be afforded a particularly high standard of protection given the natural functioning of the dynamic coastal processes.

128. We further set out that the DESIA only cursorily mentioned section 63 of NEM:ICMA, but did not set out how each of the factors have been assessed, and consequently, that the interests of the whole community had not been presented to the decision-maker.
129. In response to our comment, and comments from other I&APs, the FESIA was updated “to explicitly set out these requirements in terms of Section 63 of NEMA”.¹²⁶ However, despite the inclusion of the table referring to the section 63 factors, in authorising the exploration activities, the Director-General has failed to give effect to NEM:ICMA in that it firstly, fails to consider the extent to which the applicant has in the past complied with similar authorisations, secondly, that the socio-economic impacts of the activity have not been adequately considered, and thirdly, that granting authorisation is not in the interests of the whole community.

The decision-maker failed to consider the extent to which the applicant has complied with similar authorisations

130. Section 63(1)(b) requires that the competent authority takes into account the extent to which the applicant has in the past complied with similar authorisations.
131. The FESIA indicates that closure audits and reports in respect of TEEPSA’s previous drilling in Block 11B/12B were submitted to PASA, which “demonstrate that TEEPSA materially complies with its environmental authorisations”.¹²⁷ However, these reports are not included in the FESIA documents, and there is no indication that they were taken into account by the decision-maker in taking the decision. In fact, the absence of the inclusion of these reports in paragraph 1 of Appendix 1: Reasons for the Decision indicates that such reports were not taken into account by the Director-General. Consequently, the decision was taken in contravention of section 63(1)(b) of NEM:ICMA.

The FESIA does not adequately present the socio-economic impacts if the activity is authorised or not authorized.

132. As set out above, the socio-economic impacts of the project were not adequately assessed, in accordance with the NEMA requirements, in that:
- 132.1. the FESIA failed to adequately account for a number of key risks, including risks to the fishing sector, and transition risks;

(b) adopting a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable; and

(c) taking into account the interests of other living organisms that are dependent on the coastal environment.

¹²⁶ Page 181 of the Comments and Responses Report.

¹²⁷ Page 16 of the FESIA.

132.2. the FESIA relies on unsubstantiated and incorrect assumptions on economic benefits of the project; and

132.3. the FESIA failed to adequately take into account external costs of the project activities to society.

133. In particular, it fails to account for positive socio-economic impacts if the activity is not authorised.

134. Further, the competent authority appears to have relied on a number incorrect suppositions around alleged benefits of developing an oil and gas resources, in making the decision to grant the authorisation: *“The no-go alternative was not preferred due to the preclusion of the opportunity for the development of potential future oil and gas resources and associated economic and social benefits that may be derived.”*¹²⁸

135. As a consequence, the competent authority has not taken into account the full economic impacts of the activity, in contravention of section 63(1)(e) of NEM:ICMA.

Granting authorisation is not in the interests of the whole community

136. “Coastal public property” has a unique legal status which is intended to ensure that coastal and marine environments receive a particularly high degree of protection; are used, managed, protected, conserved and enhanced in the interest of the whole community; and are safeguarded by the State as trustee on behalf of all South Africans, including future generations. One of the objects of NEM:ICMA is “to preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations”¹²⁹ The purposes for which coastal public property is established include: “to protect sensitive coastal ecosystems”¹³⁰ and “to facilitate the achievement of any of the objects of this Act”¹³¹ Coastal public property is owned by the citizens of South Africa and cannot be alienated.¹³²

137. Coastal public property is held in trust by the State on behalf of the citizens of South Africa and as public trustee, the State.¹³³

¹²⁸ 3.5, p18, environmental authorisation.

¹²⁹ Section 2(c) of NEM:ICMA.

¹³⁰ Section 7A(1)(b) of NEM:ICMA.

¹³¹ Section 7A(1)(e) of NEM:ICMA.

¹³² Section 11 of NEM:ICMA.

11. Ownership of coastal public property.— (1) The ownership of coastal public property vests in the citizens of the Republic and coastal public property must be held in trust by the State on behalf of the citizens of the Republic.

(2) Coastal public property is inalienable and cannot be sold, attached or acquired by prescription and rights over it cannot be acquired by prescription.

¹³³ Section 12 of NEM:ICMA.

12. State public trustee of coastal public property.— The State, in its capacity as the public trustee of all coastal public property, must—

137.1. must ensure that coastal public property is used, managed,¹³⁴ protected, conserved and enhanced in the interests of the whole community; and

137.2. must take whatever reasonable legislative and other measures it considers necessary to conserve and protect coastal public property for the benefit of present and future generations.

138. Section 21 of NEM:ICMA requires an organ of state that is legally responsible for controlling or managing any activity in or on coastal waters must control and manage that activity in the interests of the whole community and in accordance with the State's obligations under international law.

139. As set out elsewhere in this appeal, the risk to marine life and coastal communities associated with the proposed exploration activities is unacceptable. Consequently, granting environmental authorisation is not in the interest of the whole community, and violates the State's obligations under sections 12 and 21 of NEM:ICMA.

VI. THE AUTHORISED ACTIVITIES ARE NOT NEEDED OR DESIRABLE

140. 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").

141. 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".¹³⁵

142. 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 cycle¹³⁶ (rather than ring-fencing the consideration of need and desirability to the exploration well drilling phase only).

(a) ensure that coastal public property is used, managed, protected, conserved and enhanced in the interests of the whole community; and

(b) take whatever reasonable legislative and other measures it considers necessary to conserve and protect coastal public property for the benefit of present and future generations.

¹³⁴ "coastal management" includes—

(a) the regulation, management, protection, conservation and rehabilitation of the coastal environment;

(b) the regulation and management of the use and development of the coastal zone and coastal resources;

(c) monitoring and enforcing compliance with laws and policies that regulate human activities within the coastal zone; and

(d) planning in connection with the activities referred to in paragraphs (a), (b) and (c);

¹³⁵ Page 9 of the Guideline.

¹³⁶ 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.

143. The description of need and desirability in the ESIA is deficient in a number of respects, as set out below.

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

144. We have set out in our comments and above 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 TEEPSA wishes to undertake exploration is to discover reserves, which can be exploited.

145. 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.

146. However, the FESIA fails to consider the negative impacts of long-term oil and gas production, and downstream activities, in fact deliberately avoiding dealing with these aspects in relation to need and desirability.

147. Notably, the need and desirability chapter is described in the FESIA as follows:

This chapter firstly highlights the applications for the use of hydrocarbons and, secondly, indicates how these applications are aligned within the strategic context of South Africa national and international policy and energy planning, broader societal needs, and regional planning, as appropriate.

148. It then goes on to describe the use of hydrocarbons and the petroleum industry in South Africa and the use of fossil fuels in South Africa. It makes no attempt at providing an objective assessment of the impacts and risks associated with these downstream implications of the project.

149. It does not consider how the exploration or production activities will not accrue any real benefits to coastal communities, only risk. Instead, it portrays the ostensible benefits of production, midstream and downstream activities, shying away from considering the impacts associated with exploitation. For example, it does not discuss the potential climate impacts should exploration move to production, or the potential harms to communities' food security and livelihoods. These are all material deficiencies.

150. The project proponent and DDG cannot have it both ways – praising the alleged and unsubstantiated benefits for the country of exploiting oil and gas, as a means to justify the need and

desirability of the project but then refusing to consider the negative impacts of long-term oil and gas production and what climate impacts from production could mean for government policies.

151. By confining any consideration of the impacts associated with production to a next-phase EIA process, the EAP's response, as set out in the Comments & Responses report, clearly mischaracterizes our comment in relation to need and desirability. We acknowledge that the EIA Regulations and the listed activities make provision for separate environmental authorisation requirements for exploration and production activities. It is not our argument, here, that environmental authorisation should be sought for exploration and production activities at the same time. However, from a need and desirability perspective, it is our argument that the impacts of production should be considered, at least in a general sense, in determining whether exploration activities are needed or desirable.
152. 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.
153. We take note of the Minister's position in her appeal rulings of another of TEEPSA's exploration applications (Block 5/6/7)¹³⁷ and for that of Searcher Geodata UK¹³⁸ that:
- 153.1. "The Makhanda Judgment is currently being taken on appeal. I understand from the advice I received from the legal officials in the Department that rule 18(1) of the Uniform Rules of Court automatically suspends the operation of the order pending the finalization of the appeal. It is therefore incorrect, and unfair, to assert, as some of the appellant's do, that the Competent Authority is "in contempt" of that order. It is not."¹³⁹
- 153.2. "I am also aware that the judgment in that case is currently being taken on appeal. It is my view that the applicant is only required to assess the potential impact and mitigation measures in respect of the activity for which it sought an authorisation..."¹⁴⁰
154. Presumably, the Minister refers to section 18 of the Superior Courts Act, 10 of 2013, which states that "the operation and execution of a decision which is the subject of an application for leave to appeal or of an appeal, is suspended pending the decision of the application or appeal."
155. In any event, when considering the intervening parties' review ground, the court's judgment interpreted the law, existing law. It is only the operable and executable order of the court which is suspended in terms of section 18. Consequently, the Minister is obliged to consider those relevant parts of the judgment of the High Court.

¹³⁷ DFFE Appeal Ref: LSA 231067

¹³⁸ DFFE Appeal Ref: LSA 226116

¹³⁹ Paragraph 2.11 of the Minister's Appeal Decision in re Block 5/6/7 (LSA 231067).

¹⁴⁰ Paragraph 2.3.4.9 of the Minister's Appeal Decision in re Search Seismic (LSA 226116)

156. For the avoidance of doubt, we confirm that it is not our argument that the applicant needs to conduct full EIAs to “assess the potential impact and mitigation measures in respect of any activity for which it has not yet sought authorization, even though it may one day seek to do so.”¹⁴¹ It is our argument that consideration of 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.
157. Put simply, if the ultimate outcome of the project cannot be justified, then the competent authority should refuse authorisation for any activity that causes environmental and/or social harm, and which serves as a precursor to the ultimate undesirable activity.

Failure to consider climate change

158. As stated above, the FESIA 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.
159. 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.
160. 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 FESIA has not adequately assessed need and desirability as required by NEMA.

Assumption of gas as a transition fuel

161. We set out in our comments that the DESIA makes an assumption that gas serves as a transition fuel, referring primarily to the IRP 2019. In response, the EAP affirms this position.¹⁴² In our view, it is incorrect and misleading to paint a picture that gas is needed as a transition fuel in South Africa.
162. The FESIA acknowledges that South Africa has developed a promising renewable power programme, ‘which has been very successful’, but points to grid constraints in high yield wind and solar areas restraining further development in the Northern and Western Cape, and recycling the outdated argument that wind and solar cannot provide dispatchable energy, and that battery options

¹⁴¹ Paragraph 2.8 of the Minister’s Appeal Decision in re Block 5/6/7 (LSA 231067).

¹⁴² Page 162 of the Comments and Responses Report

are not yet viable, and that further current battery technology is unproven at very large-scale for protracted periods. It concludes that as a result, there is a potential role for natural gas fired power generation at least as a transition fuel'.¹⁴³

163. Reference is also made to the government's "continuing view that any existing oil or gas resources should be developed (see especially the MPRDA and the proposed Upstream Petroleum Resources Development bill: <https://www.parliament.gov.za/bill/2298070>)."¹⁴⁴ This statement is made despite, as mentioned above, the FESIA also acknowledging the many domestic and international policies that require the urgent phase-out of fossil fuels.
164. In any event, a 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.
165. In *Earthlife Johannesburg and Another v. Minister of Energy and Others*,¹⁴⁵ the court found 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".¹⁴⁶ 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."¹⁴⁷
166. Recent independent studies challenge the view that fossil gas is necessary for electricity generation and as a transition fuel, and that also confirm renewable energy with battery storage options can meet almost all of South Africa's energy needs.
167. 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:

¹⁴³ FESIA, p. 68.

¹⁴⁴ DESIA, p. 89.

¹⁴⁵ *Earthlife Johannesburg and Another v. Minister of Energy and Others* 2017 2 All SA 519 (GP)

¹⁴⁶ See above at para 97.

¹⁴⁷ *Richardson v Administrator, Transvaal* 1957 (1) SA 521 (T) at 530.

*....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.*¹⁴⁸

168. The ISSD 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 CO₂ 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).¹⁴⁹
169. 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'*.¹⁵⁰ 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'*.¹⁵¹ 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 it is against these technologies that gas-fired generation should actually be compared'*.¹⁵² 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*

¹⁴⁸ ISSD report, piv. Available online at: <https://www.iisd.org/publications/report/south-africa-no-need-for-gas>

¹⁴⁹ ISSD report, pages 8 – 12.

¹⁵⁰ Meridian report, page ii. Available online at: <https://meridianeconomics.co.za/wp-content/uploads/2022/06/Hot-Air-About-Gas.pdf>

¹⁵¹ Ibid.

¹⁵² Ibid, p1.

*and will essentially be a subsidy provided by power consumers to otherwise unviable gas use in other sectors’.*¹⁵³

170. The Vital Ambition Report¹⁵⁴ 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.¹⁵⁵ Furthermore the 2019 IRP will likely need to be updated in the foreseeable future to align with South Africa’s 2021 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 mix¹⁵⁶, only projects the collective contribution of gas and diesel to the 2030 energy mix to be 1.3% combined.¹⁵⁷
171. These studies have not been integrated into the assessment. Instead, it cherry-picks parts of the IPCC report and skews its analysis towards justifying an on-going role for oil and gas.¹⁵⁸
172. The fundamental outcome of the need and desirability assessment should not be centred on the determination of whether gas technology will ensure security of supply for electricity. Instead, due to the climate crisis, this assessment should be centred on 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.¹⁵⁹
173. 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.

¹⁵³ Ibid, p37.

¹⁵⁴ 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>

¹⁵⁵ 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.

¹⁵⁶ 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>

¹⁵⁷ 2019 Integrated Resource Plan, page 42.

¹⁵⁸ Page 83 of the FESIA.

¹⁵⁹ 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

Increasingly, studies are showing that gas fired power generation does not produce less greenhouse gas emissions than coal, when considering the lifecycle of the project.¹⁶⁰

Assumption on the need for natural gas based on international markets

174. At page 71 the FESIA discusses the impact that geopolitics would have on the demand for natural gas import initiatives that could fuel a developmental boom for South Africa should it prioritize the development of its gas production. The FESIA appears to assume that this particular project is necessary to understand the extent to which South Africa could exploit any potential gas reserves that may be identified by way of an exploration project. The FESIA stated the following:

“Recent events in Russia and Ukraine have had a profound impact in many areas. Russia was the most important supplier of gas to Europe, with major nations such as Germany and Italy being highly reliant on Russian gas supplies. Thus, gas import initiatives for South Africa will be contingent on international market developments. Strong desire to replace Russian gas supply will keep the Liquefied Natural Gas (LNG) and Floating Storage and Regasification Unit (FSRU) markets tight (fully contracted) and, due to strong European demand, new FSRUs may not be available until 2028. Thus, it is estimated that import gas supply will become available from about 2028, if South African terminals can offer a compelling destination for gas (compared to European alternatives) and for FSRUs (in the context of a motivated European market to secure gas and infrastructure to replace Russian gas supply)”¹⁶¹

175. This statement heavily relies on the assumption that the availability of new FSRUs is contingent on a motivated European market. It does not consider other global factors, potential shifts in energy priorities, or emerging markets that could impact the supply and demand for FSRUs. The statement mentions that import gas supply for South Africa will depend on the country's terminals offering a compelling destination for gas, but lacks a thorough examination of South African market dynamics, regulatory frameworks, and economic considerations that could influence the competitiveness of the country as a destination for gas.

176. The heavy reliance on a motivated European market assumes that South Africa's gas supply opportunities are contingent on external factors. Where the competent authority does not consider broader global dynamics and South Africa's market conditions, it is likely to make decisions based on incomplete information, potentially overlooking alternative opportunities or risks such as:

¹⁶⁰ 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>

¹⁶¹ Final Environmental and Social Impact Assessment report. Section 5.1.1.3 at page 71.

- 176.1. that South Africa faces material exposure to “external” climate transition risk. In scenarios with faster global decarbonisation, lower natural gas demand and lower long-term prices will reduce the value of existing natural gas industries and damage the economic viability of future LNG projects. The economic viability of gas resources targeted at domestic demand is likely to also be impacted by “external” climate transition risk.¹⁶²
- 176.2. Domestic demand is unlikely to be a viable anchor for investments in new gas resources as domestic gas prices are often significantly below LNG prices. For investors in new gas resources, growing domestic or regional demand as a hedge against an uncertain outlook for exports is unlikely to be viable, as gas prices in African markets tend to be lower than gas prices in increasingly globalised LNG markets. African natural gas prices are often capped or regulated to encourage growth in gas uptake or because of the low ability to pay in countries where natural gas is used.¹⁶³ This may mean that anticipated revenues from servicing domestic or regional demand are unlikely to be a sustainable substitute for dollar-denominated export revenues.¹⁶⁴
- 176.3. Investments in the upstream and midstream infrastructure required to enable growth in domestic or regional demand for South Africa, will add further transition risk to South Africa’s economy, this time in relation to its own planned transition.¹⁶⁵ Increased competition from low-carbon alternatives such as renewable energy and rising long-run gas prices are likely to lead to gas becoming uncompetitive in South Africa before the end of those infrastructure assets’ lives.
- 176.4. South Africa is relatively less developed than existing producers of gas and therefore has weaker sovereign credit ratings, with public finance less suited to absorbing the impacts of climate risk (physical or transition).¹⁶⁶ Investments in developing new resources will be subject to more downside risk. Payback on investments on long life infrastructure for new resources may not be complete before the global shift away from gas to meet the Paris Agreement targets.
- 176.5. Low (subsidised) domestic gas prices can be a key constraint for developing countries underutilised gas reserves as they may not provide sufficient returns for the investments in gas and infrastructure for volumes destined for the domestic market. A global low carbon energy transition would not only cause global gas prices to rise slower in relation to business as usual, but the global low carbon energy transition would also reduce the costs of

¹⁶² Muhammed. A, Neary. P, Huxham.M. 2022. Natural Gas in Africa amid Global Low-carbon Energy Transition. The African Climate Foundation, at page 5

¹⁶³ *Ibid.*

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ *Ibid.*

competing technologies such as electrolyzers for hydrogen production, battery technology for power system flexibility, and renewable solar and wind.

177. Given the limited capacity of countries (especially emerging producers such as South Africa) to bear economic and financial risk, it is now even more important for the Competent Authority to have taken into account transition risks before granting authorisation on the assumption that such project may increase the likelihood of investment.

Summary of key concerns

178. Based on the reasons provided by the DG, it appears that he accepts the assumptions made in FESIA that the project is necessary to realise South Africa's potential in gas production, relying heavily on the assumptions based on geopolitical events affecting international gas markets.¹⁶⁷ The FESIA suggests that the availability is contingent on a motivated European market.
179. There is limited consideration of climate transition risk within the FESIA's need and desirability assessment. South Africa is exposed to external climate transition risk which will impact the economic viability of existing and future LNG projects in the following ways:
- 179.1. Domestic demand in South Africa may not be a viable anchor for investments, given lower domestic gas prices compared to global LNG gas prices.
 - 179.2. Investments in infrastructure for domestic or regional demand may add transition risk to South Africa's economy, especially with rising competition from low-carbon or zero carbon alternatives such as electrolyzers for hydrogen production, battery technology for power system flexibility, and renewable solar and wind
180. South Africa's relatively less developed status and weaker sovereign credit ratings do pose downside risk to investments in new gas resources. The payback on long-life infrastructure is very likely to not be complete before a global shift away from gas is expedited.
181. Low (subsidized) domestic gas prices are very likely to constrain South Africa's ability to utilize its gas reserves, especially with rising competition from technologies like hydrogen production, battery technology, and renewable energy

Conclusion

182. The DG's focus on the assumptions made in the FESIA, without considering the dynamics of international markets, exposes the potential oversights by the DG. By ignoring factors such as the climate transition risk, the competitiveness of domestic demands and the impact of low carbon or zero carbon energy transition, the FESIA does not include robust and comprehensive examination of the impacts that South Africa's economy and developmental potential risks being exposed to due to

¹⁶⁷ *Ibid* page 71.

climate risk (physical or transition), and consequently the DG's failed to consider critical relevant information.

183. Assessing transition risks is crucial, especially considering the limited capacity of South Africa as an emerging producer to bear economic and financial risks. The Minister should re-evaluate the authorisation decision, taking into account a more thorough analysis of both the global and local factors.

Reliance on Operation Phakisa as basis for national planning for economic development through offshore oil and gas exploration is flawed

184. As part of its motivation for need and desirability, the FESIA refers to Operation Phakisa as a policy designed to “unlock the economic potential of South Africa’s oceans” through the advancement of offshore oil and gas exploration.¹⁶⁸ However, the referral and subsequent reliance on the objectives of Operation Phakisa lack mention and analysis of specific details on the economic viability of pursuing offshore oil and gas exploration. A comprehensive examination of potential returns, costs, and long-term economic benefits is imperative to facilitate a more informed analysis by the decision maker. This detailed analysis is crucial not only for evaluating the anticipated benefits but also for assessing the actual need and desirability of the project. The current lack of in-depth analysis skews the perceived viability of the project in favour of the proponent, primarily based on anticipated benefits from exploration and production.
185. The decision-making process should be grounded in a thorough understanding of the project's economic feasibility, especially within the context of climate transition risk and potential climate-induced impacts. Without a nuanced exploration of these factors, there is a risk of overlooking essential considerations that could impact the project's sustainability and alignment with broader environmental and economic goals.
186. While Operation Phakisa sets a target of drilling 30 exploration wells in ten years, the reference to Operation Phakisa in the FESIA does not elaborate on the rationale behind this specific target nor provide a nuanced understanding of how achieving this goal will contribute to South Africa’s economic growth and energy security. The FESIA seems to operate under the assumption that this project will exclusively yield direct benefits to South Africa by realizing its production potential. However, there is a notable absence of consideration and evaluation regarding the potential negative impacts that are likely to emerge from the exploration phase, which is treated as a direct precursor to production.
187. The referral to Operation Phakisa by the EAP in the FESIA,¹⁶⁹ and the reliance of its objectives to establish need and desirability, is limited solely on offshore oil and gas exploration as the priority

¹⁶⁸ Final ESIA. Section 5.2.5, at page 74.

¹⁶⁹ Final ESIA. Section 5.2.5, at page 74.

sector for economic growth. The analysis lacks a broader discussion on diversifying the energy portfolio and exploring alternative, sustainable energy sources, which is crucial for long terms environmental economic sustainability.

The assessment of energy planning frameworks is inconsistent with international commitments to addressing climate change

188. While the FESIA¹⁷⁰ references the IRP as a foundation for endorsing the implementation of this specific project, the analysis provided by the EAP overlooks the potential risks and subsequent impacts associated with gas exploration, notably the release of methane, a potent greenhouse gas. The exclusive emphasis on gas exploration for immediate gains, driven by policies favoring gas, fails to adequately assess the long-term viability of gas as a primary energy source. This oversight occurs despite the existence of an overarching policy directing attention towards maximizing renewable energy sources—a critical component for achieving a sustainable and low-carbon future.¹⁷¹
189. The energy policies used to underpin the emphasis on gas exploration lack an in-depth evaluation of the viability of renewable energy technologies and their long-term sustainability. A more comprehensive approach is needed within the evaluation of need and desirability, ensuring that the project aligns not only with immediate energy development goals but also with the broader vision for a sustainable and low-carbon future. This would involve a balanced consideration of both the short-term benefits and long-term implications, fostering an energy strategy that stands the test of time and meets evolving needs.
190. Whilst the need and desirability assessments refers to South Africa’s Economic Reconstruction and Strategy plan¹⁷² as a basis to support the assertion that the gas exploration project will achieve the priority intervention in energy security, the assessment fails to describe in any detail how the project will contribute to the strategies and commitments regarding job creation, especially in the context of the economic recovery plan.
191. In assessing the need and desirability of this exploration project, there is a notable absence in explicitly addressing the critical aspect of social equity. The assessment falls short in providing insights into how the proposed project ensures equitable distribution of benefits among diverse segments of the population, thereby preventing the exacerbation of existing inequalities.

¹⁷⁰ Final ESIA. Section 5.2.7 at page 75.

¹⁷¹ Paris Agreement - United Nations Framework Convention on Climate Change (2015) and the National Climate Change Response White Paper (2014).

¹⁷² Final ESIA. Section 5.2.10, at page 76.

192. In August 2021, the Intergovernmental Panel on Climate Change (IPCC) (an international body for assessing the science related to climate change) released its 6th Assessment Report (AR6).¹²⁹ In its summary for policymakers, the IPCC indicates (among other things) that:

192.1. Global surface temperature will continue to increase until at least mid-century under all emissions scenarios considered, and that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO₂ and other GHG emissions occur in the coming decades.¹⁷³

192.2. From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO₂ emissions, reaching at least net zero CO₂ emissions, along with strong reductions in other GHG emissions. Strong, rapid and sustained reductions in CH₄ emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.¹⁷⁴

193. Furthermore, according to the International Energy Agency's ("IEA") recent report, "Net Zero by 2050: A Roadmap for the Global Energy Sector"¹⁷⁵, for instance, achieving net zero by 2050 and limiting the rise in the average global temperature to 1.5 °C above pre-industrial levels "requires nothing short of a total transformation of the energy systems" that underpin the economies of the world and can only be achieved if there are no new oil and gas fields approved for development.

194. The IEA findings are further supported by a report by Dr Dan Calverley and Professor Kevin Anderson of March 2022, titled 'Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets' published by the Tyndall Centre for Climate Change Research. The Tyndall Centre is a partnership of universities bringing together researchers from the social and natural sciences and engineering to develop sustainable responses to climate change. The headline finding of this report is the following: *"To comply with the carbon budget for a 50:50 chance of not exceeding 1.5°C of warming requires immediate and deep cuts in the production of all fossil fuels. There are no exceptions; all nations need to begin a rapid and just phaseout of existing production. The report makes absolutely clear that there is no capacity in the carbon budget for opening up new production facilities of any kind, whether coal mines, oil wells or gas terminals. A transition based on principles*

¹⁷³ Climate Change 2021: The Physical Science Basis, available online at: <https://www.ipcc.ch/report/sixthassessment-report-working-group> at Para B.1.

¹⁷⁴ See not 130 above, at para D.1.

¹⁷⁵ International Energy Agency: Net Zero by 2050 - A Roadmap for the Global Energy Sector (IEA, 2021)

of equity requires wealthy, high-emitting nations to phase out all oil and gas production by 2034 while the poorest nations have until 2050 to end production” (emphasis added).¹⁷⁶

195. Despite the above, the EAP seems to conclude that the findings of the IEA are as follows:

“The report, however, recognises that the route mapped out is a path, not necessarily the only path, and so it examines some key uncertainties, including the speed with which demand and behaviours adapt, the real level of energy efficiency, the pace at which new decarbonisation technologies (such as hydrogen and carbon capture and storage) scale up, etc. The report thus concludes that the proposed pathway to net-zero emissions is just one possible pathway to achieve net-zero emissions by 2050”¹⁷⁷

196. While acknowledging alternative pathways and key uncertainties, the analysis lacks detailed assessment of uncertainties.

Conclusion

197. Consequently, the ESIA did not adequately assess the need and desirability of the proposed project, and relevant considerations were not available to the DG when he took his decision. Need and desirability assessment is a fundamental and significant part of the EIA process and the absence of an acceptable assessment renders the EIA process fatally flawed. The environmental authorisation should not have been granted on this basis alone.

198. In light of the above, the Appellants submit that the FESIA did not include information that is necessary for the DG to consider and come to a decision on the application: the ESIA remains deficient, and the ‘need and desirability’ consideration and motivation incomplete, without at the very least a broad assessment of the climate change impacts should commercially exploitable oil and gas resources be identified through the exploration drilling (and should these resources ultimately be produced and utilised).

199. If they had evaluated the GHG emissions of production and downstream activities, it likely would have weighed in favor of not proceeding with the exploration activities.

¹⁷⁶ P6, ‘Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets’

at <https://research.manchester.ac.uk/en/publications/phaseout-pathways-for-fossil-fuel-production-within-paris-compliance>

¹⁷⁷ Final ESIA. Section 5.2.14, at page 80

VII. FAILURE TO CONSIDER IMPACTS ON FOOD SECURITY

200. Small-scale fishers and fishing-dependent communities are particularly vulnerable to the negative impacts of a large uncontrolled oil spill which could (among other things) be impacted by the trajectory and fate of any surface or sub-surface plume and which could lead to a depletion in the fish stocks upon which the livelihoods of commercial and small-scale fishers and fishing communities depend.
201. A food web represents the intricate network of relationships between various species such as certain zooplankton and ichthyoplankton species in an ecosystem, where each organism plays a unique role in maintaining the balance of the ecosystem. Assessing the cascading impacts involves understanding how changes or disturbances caused by the exploratory well drilling and potential oil spill can ripple through the food web, affecting different species and ultimately disrupting the overall functioning of the ecosystem, particularly where the area support concentrations of species which are key to the area.¹⁷⁸
202. Furthermore, the interconnectivity within an ecosystem means that changes or disturbances in one component can trigger cascading effects throughout the entire system. This is true of oil spills and well blow out in deepwater environments. The risks associated with oil spills include significant and potentially irreversible adverse effects on fish stock protection and abundance. This, in turn, has implications for commercial fishing, marine mammals, prey abundance, and the preservation of species of special concern, such as endangered species. The adverse impacts on these aspects can have lasting consequences for future generations. In the context of small-scale fishing communities who rely on species that migrate or spawn in close vicinity to the area of interest or its broader permit area, this can have significant implications for their food security.
203. The Fisheries Specialist Impact Assessment outlines that:

“The temporary exclusion of vessels from operating within 500 m of the well drilling unit is likely to present a localised and short term impact on only the large pelagic longline sector, which is active within the proposed area of interest for well drilling particularly during the winter months of May, June and July. Fisheries research surveys are also routinely conducted within the inshore portion of the area of interest for well drilling. The impact of exclusion on these sectors is assessed to be of overall LOW significance to the large pelagic longline sector, after the implementation of mitigation measures”¹⁷⁹

¹⁷⁸ Brussaard, C., Peperzak, L., Beggah, S. et al. 2016. Immediate ecotoxicological effects of short-lived oil spills on marine biota. Nat Commun 7, 11206. <https://doi.org/10.1038/ncomms11206>

¹⁷⁹ Appendix 13. Fisheries Impact Assessment, at page iv.

204. The finding above suggests the adoption of a narrow scope, focusing primarily on the large pelagic longline sector and fisheries research surveys, overlooking broader ecosystem impacts on other fishery sectors and other species that are targeted to secure access to food for artisanal, small-scale and traditional fishing communities. The consideration of a temporary exclusion period may not account for potential cumulative impacts over time, especially if drilling activities continue in subsequent spawning and recruiting seasons.
205. Furthermore, the emphasis on the winter months by the Fisheries assessment above, is very likely to overlook the potential impacts on marine life during other seasons, neglecting the year round ecological dynamics of the proposed drilling area.

Unraveling Assumptions, Confronting Limitations, and Illuminating Information Gaps in the Context of Food Security in Fisheries

206. On page 18 of the Fisheries Impact Assessment, the report indicates that the spatial mapping of catch and effort was conducted concerning the identified impacts. However, there are limitations to relying solely on the spatial mapping of fisheries catch, derived from government records primarily completed by commercial sector skippers. This approach may oversimplify the intricate interactions in the marine ecosystem, potentially overlooking indirect or cumulative impacts not captured through spatial analysis alone. Additionally, the report acknowledges the likelihood of erroneous data due to mistakes in electronic data capturing, raising concerns about the accuracy of the information presented.¹⁸⁰
207. The report raises concerns as it notes the absence of studies assessing the effects of underwater sound on local species off the South West Coast. This is particularly worrisome given the critical role of pelagic fish, like sardines and anchovies, as a primary food source for small-scale artisanal fishing communities. These communities depend on a balanced ecosystem free from the impact of oil spill dispersants, waste disposal fluids, and underwater noise. Any disruptions to this balance can lead to declines in fish populations, posing challenges for fishing communities in accessing sufficient and reliable food sources for their livelihoods.
208. Most research on spawning and recruitment of commercially important species was completed in the 1990s to early 2000s, with no follow up to see if these patterns may have changed as a result of the negatively factors such as changes in ocean temperature and chemistry brought on by climate change.¹⁸¹ This includes research that does not cover the spawning and recruitment for anchovies and sardines, even though the bulk of the anchovy recruits can be found along the west coast, with less than 5% found on the inshore south coast. ¹⁸² Importantly, the eggs of both anchovies and

¹⁸⁰ Appendix 13. Fisheries Impact Assessment. Section 2.3, at page 18.

¹⁸¹ Appendix 13. Fisheries Impact Assessment. Section 3.2., at page 22

¹⁸² See note above at page 26.

sardines are frequently found far offshore on the Agulhas Bank, sometimes extending over the shelf break.

209. Drilling activities are likely to impact species that spawn far offshore, closer to proposed drilling sites than near the onshore areas. If these species are affected, it could have cascading effects on fishing communities that rely on them for food, impacting their ability to secure a vital food source.
210. The assessment¹⁸³ emphasizes the vulnerability of the linefishery, particularly in the Western Cape, where snoek, Cape bream, geelbek, kob, and yellowtail are crucial for small-scale, artisanal, and traditional fishers' employment, livelihoods, and food security.¹⁸⁴ While the assessment acknowledges snoek's inshore catch, it neglects to address whether the same applies to other key species like Cape bream, geelbek, kob, and yellowtail. This oversight raises concerns about the assessment's consideration of the likely impact on these vulnerable species, given external threats such as underwater noise, oil spills, and waste disposal. The decision maker's conclusions appear to lack adequate consideration of these potential impacts.
211. The Fisheries Impact Assessment estimates that drilling and vessel noise will generate a roughly 80 km² behavioral disturbance zone for commercial fish species, but does not analyse how this displacement will impact fish populations or the ecosystem as a whole.¹⁸⁵ Additionally, the only mitigation measure that the assessment offers related to vessel and drilling noise pollution is to communicate with "the various sectors allowing them to focus fishing in other areas."¹⁸⁶ This mitigation measure should have been accounted for in the Marine Faunal Assessment, as it will inevitably increase fishing pressure and vessel traffic in other areas.
212. The Fisheries Impact Assessment concludes that:

*"Fishing effort at this outer limit is sporadic. Operating ranges vary greatly but most of the activity is conducted within 15 km of a launch site. Figure 3.51 shows the spatial extent of traditional linefish grounds in relation to the DWOB licence block and Area of Interest for proposed drilling. Fishing effort is primarily coastal, with vessels operating in waters shallower than 100 m. Activity in deeper waters are reflected in the vicinity of Cape Canyon at a distance of 55 km offshore of Saldanha Bay, as well as and Hope Canyon due South of Cape Point. There is no overlap with the licence block, the AOI or the zone of noise disturbance"*¹⁸⁷

213. The finding above lacks comprehensive analysis of the potential impacts of fishing efforts in waters near the DWOB license block. The sporadic nature of fishing efforts and the varying operating

¹⁸³ Appendix 13. Fisheries Impact Assessment, at page 68-71.

¹⁸⁴ Fisheries Impact Assessment at page 104.

¹⁸⁵ Fisheries Impact Assessment at p. 135

¹⁸⁶ Fisheries Impact Assessment, p. 136

¹⁸⁷ Fisheries Impact, p. 71.

ranges need a more-in-depth examination to assess their compatibility with the proposed drilling activities. The assessment offers no such examination.

214. While figure 3.51 provides a visual representation of traditional line fish grounds, the text does not sufficiently delve into the potential disruptions that drilling activities might cause to these grounds. A more detailed evaluation of how drilling might affect fishing patterns and the livelihoods of those relying on coastal fishing is essential. However, no such evaluation appears to have been undertaken.
215. The exclusive focus on the absence of overlap of fishing areas with the license block, area of interest and noise disturbance zone is insufficient to determine the overall impact on fishing activities and by virtue, food security. A more nuanced understanding of the spatial dynamics, considering the broader marine ecosystem and potential indirect impacts was necessary as outlined in paragraphs 45 to 62 above.
216. Lastly the emphasis on distance from the license block oversimplifies the potential impacts on fishing. The spatial extent alone does not provide a comprehensive understanding of how fishing activities might be affected, especially in terms of ecological and economic considerations.

Summary of key arguments

217. Small scale fishers and fishing dependent communities are highly vulnerable to the negative impacts of a large uncontrolled oil spill. The potential depletion of fish stocks could severely affect the livelihoods and the rights to food security of both commercial and small-scale and fishing communities.
- 217.1. The intricate food web and ecosystem dynamics must be considered when assessing the impacts of exploratory well drilling and potential oil spills. The cascading effects on different species and the disruption of the overall ecosystem functioning, especially in areas vital for certain species, needed thorough evaluation.
- 217.2. The interconnectedness within ecosystems means that disturbances like oil spills can have lasting and irreversible adverse effects on fish stock commercial fishing, marine mammals and endangered species can extend across generations, impacting the food security of small scale fishing and traditional fishing communities.
- 217.3. The Fisheries Specialist Impact Assessment narrow scope, focusing primarily on large pelagic long line sectors and fisheries research surveys, overlooked the broader ecosystem impacts on other fishery sectors. The temporary exclusion period might not consider the potential cumulative impacts over time, especially if drilling activities persist in subsequent spawning seasons.

217.4. The emphasis on winter months by the Fisheries assessment neglects potential impacts on fish species during other seasons, thereby disregarding the year round ecological dynamics of the proposed drilling area.

217.5. Relying solely on spatial mapping of fisheries catch derived from government records, raises concerns about the oversimplification and potential errors in data, particularly in capturing indirect or cumulative impacts. The acknowledgement of likely erroneous data due to electronic data capturing mistakes, further suggests that the accuracy of information relied upon and presented as questionable.

217.6. Lack of follow up studies on spawning and recruitment patterns of commercially important species, considering the changes in ocean temperature and chemistry, raises concerns about the relevance and reliability of older research in the current climate induced context.

217.7. The vulnerability of the line fishery, particularly in the Western Cape, is highlighted, but the Fisheries Assessment fails to address whether the same vulnerability applies to other key species. This oversight questions the assessment's consideration of the likely impact on these vulnerable species (snoek, Cape bream, geelbek, kob, and yellowtail), given external threats

217.8. The Fisheries Impact Assessment lacks analysis of how the displacement caused by drilling and vessel noise will impact fish populations or the ecosystem as a whole. The suggested mitigation measures to focus fishing in other areas raises concerns about increased pressure and traffic in those areas.

Conclusion

218. The DG appears not to have factored critical considerations into the assessment of need and desirability of authorizing the exploratory well drilling project. These considerations include the vulnerability of small-scale, artisanal and traditional fishing communities, the intricate ecosystem dynamics, potential cascading impacts, limitations in assessment methodologies, and insufficient evaluation of the broader ecological and economic implications. A more thorough and holistic analysis was essential to align decision making with the broader goals of sustainability, environmental stewardship, and food security for fisher communities. The decision however and the findings do not provide evidence that such critical considerations were taken into account when granting the authorization of the exploratory drilling. On this basis, the authorisation should be withdrawn by the Minister.

VIII. FAILURE TO ADEQUATELY ASSESS THE NO-GO ALTERNATIVE

219. Section 24O of NEMA requires an environmental impact assessment to consider all feasible and reasonable alternatives to the proposed project. Section 24(4) provides that this must be done through a procedure which includes an investigation of the potential impacts of the alternatives to

the activity on the environment and the significance of those impacts. In terms of section 24O, when considering an application for an environmental authorisation the competent authority must take into account, where appropriate, any feasible and reasonable alternatives to the activity, including feasible and reasonable modifications to the activity.

220. Appendix 3 of the EIA Regulations provides that one of the objectives of an environmental impact assessment process is to determine the nature, significance, extent, duration and probability of the impacts occurring to inform the identified preferred alternatives.

221. In the reasons for his decision, the Director-General provides the following analysis of alternatives:

Project Alternatives: The site/location, timing/scheduling, no-go, design and technology, rehabilitation and offsetting alternatives were identified and briefly assessed. However, due to the nature of proposed exploration operations, no in-depth assessments were carried out. The preferred location (AOI) within the Block was selected to avoid all Marine Protected Areas (MPAs) and Ecologically or Biologically Significant Areas (EBSAs). The operations are scheduled to avoid the Austral Winter, where the likelihood of shoreline oiling for a well blowout is highest. If the operations cover this period, the spill response plan will be enhanced. The no-go alternative was not preferred due to the preclusion of the opportunity for the development of potential future oil and gas resources and associated economic and social benefits that may be derived.

222. In terms of need and desirability, the Guideline requires that:

“the consideration of ‘need and desirability’ during an application process... must consist of a primary description of the relevant considerations... in relation to feasible and reasonable alternatives. During the actual assessment stages of an EIA process the need and desirability must be specifically assessed and evaluated, including specialist input/studies as required.”¹⁸⁸

223. Reasonable and feasible alternatives include the option of not implementing the activity. The implications of the no-go alternatives are described at paragraph 5.8 of the FESIA. It starts with one paragraph setting out that the impacts of the activity will not occur in the absence of the project. The next 12 paragraphs are devoted to setting out why the project should go ahead, in that the benefits it associates with the project (in terms of downstream use only) would not materialize if it

¹⁸⁸ Page 9 of the Guideline.

did not. It fails to identify any benefits that might accrue from not implementing the activity and fails to provide a balanced consideration of the no-go alternative.

224. A proper assessment of the No-Go alternative should have identified and assessed the potential ecological and socio-economic benefits of the no-go option for small-scale fishers and fishing dependent communities. The assessment should also necessarily have included a consideration of alternative means to generate energy and provide sustainable feedstocks for associated industrial applications, including renewable energy alternatives that do not pose a significant inter-generational ecological and socio-economic risk. It casts aside renewable energy alternatives on the basis that they provide intermittent power, and that grid capacity is constrained in the high yield areas for renewable energy, in order to position gas extraction and beneficiation as favourable. It does not provide any detailed assessment of alternatives.
225. Consequently, the option of not implementing the activity has not been adequately assessed in the FESIA.

IX. FAILURE TO ASSESS TRANSBOUNDARY IMPACTS

226. The National Environmental Management: Integrated Coastal Management Act (ICMA) requires DMRE to manage any activity in coastal waters “in accordance with the Republic’s obligations under international law.”¹⁸⁹ South Africa has two key obligations with respect to environmental authorisations for coastal activities with transboundary impacts: first, the decision-making authority must ensure that any transboundary impacts are adequately assessed and second, the authority must consult with any other relevant authorities.
227. The ESIA recognises the possibility of a transboundary oil spill, but fails to consider any non-domestic impacts. Additionally, the ESIA does not include any evidence to support that relevant foreign authorities were consulted in the development of the ESIA or EMPR, as required by South Africa’s international obligations.

Failure to adequately assess transboundary impacts

228. The ESIA fails to adequately assess the non-domestic impacts of transboundary oil spills as required by South African law. As a result, the Competent Authority issued an environmental authorisation without considering all relevant information.
229. The International Court of Justice’s decision in the *Pulp Mills* case establishes that the assessment of transboundary impacts is not solely a treaty-based obligation but a requirement under general international law. This decision, taking into account Principle 17 of the Rio Declaration on Environment and Development and Article 7 of the International Law Commission’s draft articles on

¹⁸⁹ NEM:ICMA Section 21(b)

transboundary harm, confirms that a transboundary EIA should be conducted before implementing a project that may cause significant harm across borders.

230. The ESIA recognizes that the proposed project may have significant transboundary impacts. The ESIA's oil spill modelling found that, in the event of a well blowout, "the [oil] slick would spread into Namibia and International waters beyond the EEZ and thus be of international extent."¹⁹⁰ In fact, a large proportion of a potential oil slick would enter Namibian waters. However, the ESIA arbitrarily constrains its assessment of oil spill impacts at the South African border. For example, the ESIA's Socio-Economic Assessment concluded that the "social impacts of a spill reaching the coast would be international in extent [and therefore,] considered to be of very high significance,"¹⁹¹ but never assessed impacts specific to Namibian communities. The oil spill impact magnitude analysis considered impacts to South African coastal tourism, South African coastlines, South African fishing revenue, and South African GDP without doing the same for Namibia.¹⁹² Given that the Namibian economy is roughly 1/30th the size of South Africa's, the socio-economic consequences of oil spill impacts on fisheries, ecology, tourism cannot be equated. An oil spill with a "very high" impact on South African communities could be debilitating to Namibian communities, which have different levels of dependency on coastal resources, different legal systems, and different capacities for oil spill recovery-none of which was assessed in the ESIA.

Failure to consult with Namibian Government relating to transboundary impacts

231. The ESIA was also developed without meaningful consultation with relevant Namibian authorities, in contravention of South Africa's international commitments.

232. In addition to the requirements set out in the *Pulp Mills* case, South Africa and Namibia are a signatory to the Benguela Current Convention (BCC) and the Abidjan Convention both of which would require meaningful consultation if marine ecosystems are potentially threatened. These conventions play a significant role in ensuring environmentally responsible industrial development, cooperation, and the protection of biodiversity. The Abidjan Convention, which covers a vast marine area from Mauritania to South Africa, imposes an obligation on states to avoid transferring damage or hazards from one area to another. The Benguela Current Convention commits Angola, Namibia, and South Africa to prevent and eliminate pollution, conduct environmental impact assessments, protect vulnerable species, enhance scientific information exchange, and reverse habitat alteration and loss. This convention requires a cooperative approach to activities such as seabed mining and oil and gas exploration to ensure that one country's actions do not harm the marine environment of another. As a signatory, South Africa is obligated to promote a coordinated regional approach to the conservation and sustainable use of the Benguela Current Large Marine Ecosystem, including the territorial waters of Namibia.

¹⁹⁰ ESIA at p. 462

¹⁹¹ Socio-Economic Assessment at p. 77

¹⁹² Socio-Economic Assessment at p. 77

233. In our comments on the DESIA, we pointed out that there is no evidence of such consultation or notification in the record, which constitutes a flaw in the consultation process and a violation of South Africa's international obligations. The ESIA responded to our comment by stating that “[t]he initial project I&AP database compiled for the project included various contact persons from the [Namibian Government] and various Namibian commercial fishing associations,” and that “these stakeholders have been afforded [an opportunity] to review and comment on all available project documentation to date.”¹⁹³
234. This vague statement does not specify who in the Namibian Government was part of the database, whether and how they were contacted, and what process was set in place to facilitate notice and good faith consultation. This statement is wholly inadequate to demonstrate compliance with South Africa’s international obligations to prevent transboundary harm specified above and are from. According to the I&AP Section of the ESIA, the notice letters and SMS messages sent to Namibian authorities only contained a generic invitation for public comment on draft documents, the same request sent to the general public.¹⁹⁴ These letters did not provide any indication that impacts could extend to Namibian or international waters, giving Namibian authorities no reason to think that they should be interested in the proposed project. They also did not provide a method for Namibian or international officials to engage in the ESIA process aside from an invitation to participate in the same public meetings and public comment procedures available to “all stakeholders.” Approving an environmental authorisation for a project with transboundary impacts that was developed without any effort to meaningfully consult with relevant authorities is in direct conflict with South Africa’s international commitments.

X. THE FAILURE TO ADEQUATELY ASSESS CULTURAL AND HERITAGE IMPACTS

235. In the DESIA comments we highlighted the failure of the DESIA to assess the cascading impacts on the sense and spirit of place resulting from physical landscape alterations as well as the failure to assess the impacts to cultural and spiritual identities and practices of coastal communities.
236. These key considerations remain absent from the final ESIA and thus could not have informed the decision to authorise the project activities, despite constituting potentially significant impacts which ought to have been assessed under the EIA Regulations and section 24O of NEMA.

The failure to assess the cascading Impacts on the Sense and Spirit of Place Resulting from Physical Landscape Alterations caused by an oil spill

237. The cultural and heritage impact assessment states that “the sensitivity of this receptor will increase from medium to high if an unplanned event occurs. This is because valuable heritage towns and locations depend on the sense of place to attract visitors, researchers and investors. If the place is negatively impacted by an oil spill, these patrons and researchers will not come to the place,

¹⁹³ ESIA Appendix 6.8 at p. 179

¹⁹⁴ See ESIA Appendix 6.3

thereby destroying the ‘sense’ of place”.¹⁹⁵ This is an overly simplistic interpretation of sense of place.

238. In the DESIA comments we noted that *“The statement that the impacts of offshore drilling on the sense of place will be negligible is overly simplistic and ignores the potential for significant harm. The sense of place is a complex concept that encompasses the emotional, cultural, and psychological connections that people have with their surroundings. It is important to note that even if the impacts and their consequences are rated as “very low”, they can have a cumulative effect over time. For example, a small oil spill may not have a significant impact on a coastal ecosystem, but a series of small oil spills can have a devastating impact”*.

239. We stand by the objections raised in the DESIA comments. Not only are these relevant considerations from a socio-economic perspective (as raised above), but crucially, the impacts of a potential spill on the sense and spirit of place are relevant culture and heritage considerations. The SEIA notes that a spill would have devastating socio-economic impacts for communities, however the extent of such impacts is not assessed in any sufficient detail.

Failure to assess the impacts to cultural and spiritual identities and practices of coastal communities

240. The CHIA acknowledges the connection of small-scale fishers with the ocean but does not sufficiently assess the potential impacts of the project – particularly of a spill – on some of these aspects of cultural heritage and identity: *“Some of the groups encountered, such as Small-scale Fishers (SSF), demonstrated greater cultural proximity to the ocean and coast. Thus, they personalised the ocean and coasts more, recognised the agency of the sea itself and the social personalities of marine life. They also more keenly noted human-ocean symbiosis, the reliance of humans on the sea not only for subsistence but for sensory experience and holistic existence. In this regard, SSF have a cultural heritage relationship with the sea. Their connection with the sea and coast is not just about subsistence or commercial use of the sea”*.¹⁹⁶

241. In the DESIA comments, we stated that *“the CHIA report did not adequately assess the cultural impacts of offshore drilling on fishers, including those who are not Khoisan or Nguni peoples. The report focused on the ancestral and ritual practices of Khoisan peoples, and Nguni peoples to a lesser extent, but did not address the role of the ocean and marine resources in constituting cultural identities, local ecological knowledge, cultural and customary practices, sense of place, and cultural ecosystem values of fishers. As a result, the impact ratings in the report are inaccurate.”*

242. The final CHIA has not addressed any of these deficiencies. As such the CHIA continues to be flawed with a number of material deficiencies including:

¹⁹⁵ P60, CHIA.

¹⁹⁶ P38, CHIA.

242.1. **Loss of cultural identity:** The ocean and marine resources are an important part of the cultural identity of fishers. Offshore drilling could disrupt fishing activities and lead to a loss of access to these resources, which could damage the cultural identity of fishers

242.2. **Loss of local ecological knowledge:** Fishers have a deep understanding of the ocean and marine environment. This knowledge is passed down from generation to generation and is essential for managing and protecting marine biodiversity. Offshore drilling could lead to the loss of this knowledge, which could have a negative impact on the sustainability of marine ecosystems.

242.3. **Disruption of cultural and customary practices:** Fishers have a number of cultural and customary practices that are related to fishing. These practices are important for maintaining social cohesion and cultural identity. Offshore drilling could disrupt these practices, which could have a negative impact on the social and cultural well-being of fishers.

242.4. **Loss of sense of place:** The ocean and coastal areas are an important part of the sense of place for fishers. Offshore drilling could disrupt the relationship between fishers and the ocean, which could lead to a loss of sense of place and a decline in well-being.

242.5. **Damage to cultural ecosystem values:** The ocean and coastal areas are home to a number of cultural ecosystem values, such as beauty, recreation, and tourism. Offshore drilling could damage these values, which could have a negative impact on the economy and quality of life in coastal communities.

243. On this basis the cultural and heritage impacts of the proposed activities could not have been properly assessed, and considered by, the decision-maker.

I. THE METHODOLOGY OF IMPACT SIGNIFICANCE RATING IS FLAWED

244. The current EIA methodology, as adopted in this FESIA, has been criticized for potentially misleading decision-makers by underplaying the impacts of certain events or developments.¹⁹⁷ This is often done by assessing these impacts as low probability, and consequently, rendering them low significance in their overall rating, even if the potential impact would be devastating. This approach has been highlighted as a concern in the literature, as it may lead to an underestimation of the true risks and impacts associated with certain projects or activities.¹⁹⁸

¹⁹⁷ Morgan, R. K. (2012) 'Environmental impact assessment: The state of the art', *Impact Assessment and Project Appraisal*, 30(1), pp. 5–14. doi: 10.1080/14615517.2012.661557.

¹⁹⁸ As per the research of Aphiwe Moshani, PhD Candidate, UCT and One Ocean Hub.

245. The EIA process is designed to identify and evaluate the potential environmental effects of proposed projects, but the way in which the assessment is conducted can significantly influence the outcomes. Research has shown that the current methodology may not fully capture the potential for high-impact, low-probability events, leading to an underestimation of their significance in the decision-making process.¹⁹⁹ Furthermore, the current EIA methodology's focus on probability-based assessments may not adequately account for the full range of potential impacts, especially those with low probability but high consequence. This has raised concerns about the ability of the current approach to provide decision-makers with a comprehensive understanding of the potential risks and impacts associated with such proposed projects or activity.
246. As such, the utilized EIA methodology's reliance on probability-based assessments may lead to the underestimation of the significance of potential high-impact, low-probability events. This has the potential to mislead decision-makers by downplaying the true risks and impacts associated with certain projects or activities. Therefore, there is a need for a more comprehensive and nuanced approach to EIA that takes into account the full range of potential impacts, regardless of their probability, to ensure that decision-makers are not misled by an incomplete assessment of potential risks and impacts.
247. In this application, the decision-maker has followed the same approach, authorising the project, despite the catastrophic impacts of an oil spill.²⁰⁰ There is no rationale for coming to this conclusion, and consequently, the DG erred in granting authorisation in the face of major impacts which cause result from an unplanned event.

II. THE PUBLIC PARTICIPATION PROCESS DID NOT ACHIEVE MEANINGFUL CONSULTATION

248. Public participation is an integral part of environmental law in South Africa, as it plays a key role in ensuring that procedural fairness is achieved in decision making. The preamble of NEMA states that:

" . . . it is desirable . . . that the law should establish procedures and institutions to facilitate and promote public participation in environmental governance".

¹⁹⁹ *Ibid*; Nita, A., Fineran, S. and Rozyłowicz, L. (2022) 'Researchers' perspective on the main strengths and weaknesses of Environmental Impact Assessment (EIA) procedures', *Environmental Impact Assessment Review*. Elsevier Inc., 92(October 2021), p. 106690. doi: 10.1016/j.eiar.2021.106690.

²⁰⁰ Environmental Authorization at 17.

249. This is amplified by the national environmental management principles set out in section 2 of NEMA, including:
- 250. the participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured (section 2(4)(f));
 - 251. decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional knowledge and ordinary knowledge (section 2(4)(g)); and
 - 252. decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law (section 2(4)(k)).
253. Section 24(2)(a)(v) of NEMA requires that the EIA process provide interested and affected parties with a reasonable opportunity to participate in participation procedures. The EIA Regulations, 2014, prescribe the minimum public participation procedures that ought to be followed in applying for environmental authorisation. These must be read in the context of the NEMA section 2 principles. Public participation must include consultation with, *inter alia*, all potential, or, where relevant, registered interested and affected parties (regulation 40 of the EIA Regulations).
254. Regulation 41(2) of the EIA Regulations requires that a person conducting a public participation process must take into account any relevant guidelines applicable to public participation, as contemplated by section 24J of NEMA.
255. In 2017, the Public Participation Guideline (“the PP Guideline”) was issued by the then Department of Environmental Affairs. The PP Guideline recognises that public participation may be different depending on the type of application process and should be informed by, *inter alia*, the scale of the anticipated impacts of the proposed project, the sensitivity of the affected environment and the degree of controversy of the project, and the characteristics of the potentially interested and affected parties.
256. The public participation process failed to achieve meaningful consultation, for a number of reasons, as set out below.
257. Firstly, coastal communities and the general public have been overwhelmed with the number of offshore oil and gas related applications running in parallel processes, particularly those which may impact the south-west and west coast of South Africa. During 2023, I&APs have been called upon to respond to multiple offshore oil and gas EIA processes, without taking into account legislative public participation processes for the Upstream Petroleum Resources Development Bill and the draft

Marine Spatial Plans during a similar period. The EAP in the current application, SLR, has been appointed to conduct three of these parallel EIAs.

258. This confusion is evident in the Comments and Responses Report. Participants were confused about the project they were being asked to comment on. There were references to TEEPSA 567 and other mining applications. This confusion is clearly evident from the comments and responses section of the report.

259. Secondly, the chosen meetings venues were very far from areas where disadvantaged I&APs live and this issue was raised during the meetings but the responses from the EAP was, that venues near areas where disadvantaged I&APs live were not available on the dates preferred by the EAP and that there are EIA timeframes which the EAP must meet. I&APs present at the meetings suggested that the EAP make use of community halls nearer to affected communities, schedule meetings at times convenient for everyone (especially people that will be affected by the exploration), and many I&APs indicated their rejection of the exploration to the EAP. However, the EAP refused to schedule meetings at convenient times, venues nearer to the disadvantaged communities, and make use of alternative measures that accommodate disadvantaged, illiterate and disabled people.

260. Thirdly, I&APs present at the meetings were constantly referred to the EAP's written responses to comments. This is problematic as the EAP is legally required to make use of alternative methods that accommodate illiteracy, and disabilities.

261. Section 2(4)(f) of NEMA requires that people be given an opportunity to develop an understanding, skills and capacity necessary for achieving equitable and effective public participation. Refusing to schedule meetings at appropriate times, venues, and provide people with sufficient information about the exploration is a contravention of this section. The assumption that meeting NEMA's minimum requirements for public participation is sufficient, is not only a tick box exercise, but it is also extremely incorrect because minimum requirements for public participation are derived from various sources (including NEMA, Court jurisprudence, etc.), and the circumstances of I&APs must be considered in each application. Failure to arrange a public participation process that complies with the jurisprudence on the minimum requirements for public participation, result in failure to meet the minimum requirements for a meaningful consultation.

262. Accordingly, the EAP's argument that NEMA EIA regulations (on notifications, RI&AP, Comments) were met is misguided as it implies that a public participation process that results in meaningful consultation as interpreted by courts, is actually going beyond the minimum requirements. There is nothing (including EIA timeframes) that prohibited the EAP from organising more meetings for those fishing communities that requested that meetings be scheduled during times (August to September for most fishers including trawlers) that also accommodate them.

263. In fact, NEMA and the EIA Regulations (specifically regulation 3(7)) anticipate such circumstances where EIA processes may take longer periods than required. Regulation 3(7) which provides that

"In the event where the scope of work must be expanded based on the outcome of an assessment done in accordance with these Regulations, which outcome could not be anticipated prior to the undertaking of the assessment, or in the event where exceptional circumstances can be demonstrated, the competent authority may, prior to the lapsing of the relevant prescribed timeframe, in writing, extend the relevant prescribed timeframe and agree with the applicant on the length of such extension."

264. Thus, the EAP's response that a request for meetings to be scheduled between August and September to accommodate fishers including trawlers, will result in the EIA process going beyond the prescribed timeframes, is not a valid reason to exclude illiterate and disadvantaged I&APs whose livelihoods may be impacted by the exploration.

265. In light of the above, we submit that the public participation process was not meaningful and effective, and consequently that the environmental authorisation should not have been granted.

III. FAILURE TO MAKE THE OIL SPILL CONTINGENCY PLAN AND THE BLOWOUT CONTINGENCY PLAN AVAILABLE FOR PUBLIC COMMENT IS PROCEDURALLY UNFAIR

266. Whilst a separate oil spill modelling report is contained in FESIA, it does not include an Oil Spill Contingency Plan, an Emergency Response Plan, or a Blowout Contingency Plan.

267. Condition 5.5.2 of the Environmental Authorisation requires TEEPSA to submit the Shipboard Oil Pollution Emergency Plan, the Emergency Response Plan, the Blowout Contingency Plan, the Oil Spill Contingency Plan, amongst others, to PASA. The EA does not require these plans to be approved by PASA or any other authority, or require them to be subject to any public consultation.

268. The FESIA explains these documents as follows:

268.1. "TEEPSA will have a Blowout Contingency Plan (BOCP) in place that sets out its detailed response plan and intervention strategy, to be implemented in the unlikely event of a blowout."²⁰¹

268.2. "Any oil spill related discharges would be managed by an Oil Spill Contingency Plan (OSCP) that TEEPSA will be required to compile and have approved by government",²⁰²

268.3.

268.4. "As part of TEEPSA's Emergency Response Plan, a detailed Oil Spill Contingency Plan and Blowout Contingency Plan (BOCP) will be prepared specifically for each of the drilling operations which considers the project specific conditions, well location, metocean

²⁰¹ Page 107 of the FESIA.

²⁰² Page 122 of the FESIA.

conditions, equipment and resources used in line with applicable requirements (including national/local regulations) and guidelines related to oil spill preparedness and response.”²⁰³

269. The ERP and the OSCP are identified as “project controls”.²⁰⁴ In Table 6, the plans are described as preventative and response barriers / mitigations to deal with oil spills:²⁰⁵

269.1. “The OSCP specifies how best to control an unlikely spill, how to prevent certain sensitive habitats / environments from exposure to oil, and what can be done to minimise the damage done by the spill (containment and recovery) and is based on the specific project conditions for that well. The OSCP is the operational document prepared and aligned with local and national regulations, including the South Africa's National Oil Spill Contingency Plan, applicable international conventions and internal rules. The primary objective of the OSCP is to set in motion the necessary actions to minimise the effects of an oil spill.”

269.2. “As standard practice, an Emergency Response Plan (ERP) / Evacuation Plan will be prepared and put in place. A Medical Evacuation Plan (Medevac Plan) will form part of the ERP.”

269.3. “A BOCOP will set out the detailed response plan and intervention strategy to be implemented in the event of a blowout to stop any discharge of oil.”

270. The FESIA does not indicate how it will deal with a multiple block simultaneous blowout scenario, with all authorised projects relying on the same capping equipment based in Saldanha and Aberdeen.

271. These plans are essential mitigation measures, the details of which are necessary to inform the impact assessment, and without the details of which, the EAP cannot reasonably evaluate the significance of an impact post mitigation. The Appellants submit that these plans are crucial to the environmental impact assessment process, and should have formed part of the EIA documents commented on by I&APs.

272. 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 both the Saldanha Bay and Aberdeen 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.

273. The response is integrally connected to the mitigation of this impact. .

²⁰³ Page 452 of the FESIA.

²⁰⁴ Page 431 of the FESIA.

²⁰⁵ Page 454 of the FESIA.

274. Notably, condition 5.5.2 of the EA requires TEEPSA to submit a number of plans, including the BOCP and the OSCP, presumably to the competent authority. There is no requirement for these plans to be made available to I&APs, and no provision for any commenting process.

275. The failure to make these plans available for comment by I&APs during the EIA process is procedurally unfair, and consequently, the decision to authorise the exploration drilling is unlawful.

CONCLUSION

276. The Appellants have sent out in this appeal a number of grounds on which the decision to grant environmental authorisation to TEEPSA 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.

277. For all the reasons set out in this appeal, Natural Justice and the Green Connection submit that the appeal should succeed and that the environmental authorisation granted to TEEPSA by the Director General should be refused.