Submission to the UN Special Rapporteur on the Human Right to a Clean, Healthy and Sustainable Environment on the State of Oceans and Human Rights

Call for Inputs: Oceans and Human Rights

November 2024

Offshore oil and gas activity poses a growing threat to the ocean and the life it sustains. This submission underlines some of the ways in which offshore oil and gas activity—from seismic exploration and drilling in the seabed, to coastal processing and overseas transport of fossil fuels—threatens the world's oceans, a global common on which the realization of the right to a healthy environment, and all life on Earth, depends. It assesses some characteristics of offshore activity that have rendered effective prevention and mitigation of harms to the marine environment, the climate, and human rights particularly challenging, including gaps in regulatory and legal governance. Finally, it offers a non-exhaustive list of recommendations to States aimed at helping ensure holistic, human rights-based approaches to the protection and management of marine, coastal and oceans areas, and resources.

Recommendations:

Considering the information provided below, we respectfully urge the U.N. Special Rapporteur to recognize that offshore oil and gas activity poses a threat to the oceans and by consequence to human rights, and that effectively protecting against that threat requires:

a. **That States take active measures to phase out the production and use of fossil fuels, and, at minimum, prohibit offshore oil and gas activity—including, *inter alia*, exploration, drilling, transportation, and infrastructure development—in areas of particular importance for biodiversity and ecosystem functions and services and correspondingly heightened importance for the realization of the right to a healthy environment and other human rights.**
b. **That States assess through EIAs and other decision-making processes the impact of proposed oil and gas activities on the climate, including all upstream and downstream (Scope 3) and operational emissions, as well as the impact of climate change on the activities.**
c. **That, consistent with the polluter pays principle and the right to remedy, States ensure companies cover the full costs of closure and clean up, by requiring adequate guarantees up front and closing current legal and regulatory loopholes that allow polluters to evade decommissioning costs and liabilities.**

1. Effective protection of the ocean, essential for upholding human rights, requires the establishment of fossil fuel-free zones in areas of high biodiversity and ecological importance.

Offshore oil and gas activity is a massive and growing threat to the marine environment, including marine biodiversity, and the human rights that depend on it. Offshore projects are growing in number, with deepwater oil and gas production expected to rise by an alarmingly 60% by 2030.[1] As fossil fuel companies take their operations to ever deeper and more remote waters, the risk of catastrophic blowouts and the impact of resulting oil spills is amplified.[2] One of the most significant and growing threats to the ocean is the recent boom in the production of liquified natural gas (LNG).[3] Designed to be transported over long distances, LNG has entrenched the use of the ocean as a conduit for the global trade in planet-warming fossil fuels, and littered coastlines with polluting

processing plants, import and export terminals, specialized vessels, and other infrastructure. Transporting massive volumes of crude oil or highly flammable gas over long distances and through fragile marine ecosystems is an inherently hazardous activity, and one that is on the rise.[4] The buildout of infrastructure and shipping routes for expanded oil and gas production and trade is also coming on top of decades of offshore activity and thousands of oil and gas wells and pipelines that the industry has left behind, many of which are leaking and abandoned. This intensified assault on the oceans compounds existing stressors posed by climate change, overfishing, and plastic pollution, threatening the marine environment and the communities, ecosystems, and climate that depend on it. And as fossil fuel activities in the ocean and on coasts increase, the threat to vulnerable species and fragile habitats becomes more urgent, with harmful impacts on human rights.

To protect human rights that depend on a healthy, biodiverse ocean, States need to make areas off limits to oil and gas activity. Given the importance of healthy ecosystems for the realization of human rights—among them the rights to life, health, food, livelihood, and culture—fossil fuel activity must be prohibited *at minimum* in ecosystems of high ecological integrity and areas of particular importance for biodiversity and ecosystem functions and services. A healthy ocean is the basis for ecosystem services critical to the availability of food, medicine, employment, and other basic needs, as well as the regulation of Earth's climate.[5] A decline in marine biodiversity threatens food security, access to clean water, and even cultural practices, thereby infringing on fundamental human rights, particularly those of Indigenous Peoples given their interdependent, spiritual relationship with their territories. Coral reefs, for one, provide the needed habitats for fish while also acting as natural barriers, protecting communities from extreme weather and climate impacts.[6] Preserving the ecological integrity of coastal and marine ecosystems of high biodiversity importance by making them off-limits to offshore oil and gas exploration, production, transportation, and infrastructure development activities is thus essential to a human rights-based approach to ocean protection.

2. <u>Effective protection of the ocean requires States to ensure EIAs for proposed offshore oil and gas projects include climate risk assessments, and that their findings are not disregarded in favor of purported economic or national interests.</u>

Effective protection of the ocean requires ensuring that any decisions relating to proposed offshore oil and gas activities consider their impacts on and vulnerability to the effects of climate change, which can compound localized risks to the environment and human rights. Through their operations and their products, offshore oil and gas activities generate enormous volumes of greenhouse gas (GHG) emissions that drive climate change—one of the "greatest threats" to the full exercise of human rights.[7] These emissions exacerbate sea level rise, ocean warming and acidification, and other impacts already degrading marine and coastal ecosystems and threatening the basic rights and survival of coastal communities.[8]

The vast majority of GHG emissions from fossil fuel development—in some cases more than 90%[9]—stems from the eventual combustion and use of the extracted oil and gas. Such downstream or "Scope 3" emissions can include emissions from the entire value chain, such as supply chain, transportation, use and disposal of products.[10] However, production, processing, and transport of oil and gas also generate significant emissions of GHGs, including CO_2 and methane, a potent warming agent. Recent developments in satellite technology have revealed that offshore shallow-water platforms have more persistent and significantly higher methane loss rates than typical onshore production sites, and thus disproportionately contribute to climate change.[11]

As the foreseeable consequence of producing fossil fuels, and a key driver of climate-related human rights harm, Scope 3 emissions must factor into decision-making processes concerning proposed offshore activity regardless of where these emissions may ultimately materialize. States are already bound by a number of international legal instruments to assess the climate impacts of proposed ocean-based activities to ensure informed environmental decision-making. The U.N. Convention on the Law of the Sea (UNCLOS), for instance, expressly requires EIAs for planned activities likely to cause substantial pollution or significant and harmful changes to the marine environment.[12] In a 2024 Advisory Opinion clarifying the obligations of States in the context of the climate emergency, the International Tribunal for the Law of the Sea explained that the duty extends to any planned public or private activity that may cause such harm "through anthropogenic GHG emissions," including through the cumulative effects of the activity and other GHG sources.[13] Given their outsized climate footprint, accurate estimates and consideration of Scope 3 emissions are critical to any assessment around a proposed offshore oil and gas activity on coastlines and at sea, as numerous national courts have recognized.[14] Such impacts must be considered prior to authorizing or financing oil and gas activities.

EIAs must also consider how climate change will impact the proposed oil and gas activity and infrastructure, and the corresponding risks posed to surrounding communities and the environment. More frequent and more intense extreme weather events can seriously damage offshore and coastal infrastructure, leading to disastrous releases of hydrocarbons and chemicals into the ocean that can in turn harm human health and coastal livelihoods. In fact, hurricanes and storm surges are a major cause of oil spills involving ships, barges, tankers, pipelines, platforms, and processing and storage facilities.[15] And because existing offshore production sites generally are not built to withstand the effects of rising sea levels and other climate change-driven phenomena,[16] the likelihood of future spill incidents and their consequent impacts on human health, livelihoods, food security, and cultures are all but guaranteed.

The value of EIAs as a tool to help prevent and minimize foreseeable risks to the environment and human rights is undermined when States allow offshore oil and gas projects to nonetheless advance in the name of "national interest" or "public interest." International human rights law permits limitations on the realization of fundamental rights only when they are necessary for the "general welfare" and "just demands" of a democratic society.[17] "[N]o valid public objective is found in mere commercial purpose, private gains or revenue-raising objective."[18] Moreover, before a decision or action that infringes on human rights or poses environmental harm can be justified in the name of overriding national or public interest, viable alternatives, less damaging to the environment and human rights, must be considered.[19] While securing energy access or ensuring public revenues may be legitimate public interests, they do not justify pursuit of offshore oil and gas activities when alternatives, such as renewable energy or other revenue-generating activities, exist. When EIAs show that offshore oil and gas activity will adversely impact the marine environment with harmful consequences for human rights, those findings must not be ignored or overridden in the name of national interest. States must thus ensure that claims of national or public interest do not give decision-making authorities the green light to disregard EIA findings that proposed offshore oil and gas activities will significantly harm the environment and human rights, which the State has a duty to respect and protect.

3. Protecting oceans from the toxic legacy that offshore oil and gas projects leave long after production ceases requires considering the end-of-life costs up front and putting in place stronger legal and regulatory regimes to ensure that polluters pay.[20]

Protecting the ocean from oil and gas activity requires addressing the lasting harm posed by abandoned offshore infrastructure. Legions of unplugged or poorly plugged wells and abandoned rigs and pipelines are proliferating in the ocean, spewing enormous amounts of planet-warming gases into the atmosphere and toxins and radioactive particles into the marine environment. In the Gulf of Mexico alone, more than 32,000 out of 55,000 permanently or temporarily abandoned wells have been ignored for decades,[21] a shocking percentage of which is largely unaccounted for and may be leaking.[22] In the North Sea, one-third of the region's abandoned wells could be releasing between 3,000 and 17,000 tons of methane every year,[23] roughly equivalent to the annual CO_2 emissions of 16,000 to 91,500 gas-powered cars.[24] Furthermore, the vast network of abandoned pipelines littering the seafloor risk hydrocarbon spills and pose lasting damage to sensitive ecosystems when segments are displaced by mudslides, ocean currents, and other disturbances.[25]

Offshore facilities threaten the human rights of coastal communities long after operations cease, including the rights to health, food, and an adequate standard of living. In addition to impacts detailed above, aging offshore infrastructure endangers the health of adjacent communities by leaking toxic compounds,[26] some of which can bioaccumulate in seafood and cause cancer and other illnesses.[27] Abandoned pipelines pose navigational hazards to fisherfolk,[28] while rigs left in place can facilitate the spread of invasive species that can decimate fish stocks,[29] jeopardizing food security. The eyesores created by abandoned offshore infrastructure can negatively affect local tourism, further harming livelihoods.[30] Additionally, risk of leaks also presents a threat to cultural heritage.[31]

The exceptionally high costs associated with the proper decommissioning of offshore oil and gas infrastructure has contributed to this toxic legacy, and is yet another reason not to open up new offshore projects. Shutting down offshore oil and gas facilities is substantially more expensive than closing onshore ones—and the bill only increases the deeper the water.[32] Per *lease*, decommissioning can cost tens of millions of dollars in shallow water and hundreds of millions of dollars in deep water.[33] And as offshore facilities age and are damaged by environmental stressors at sea, including impacts from climate-intensified storms,[34] costs of clean up and the risk of pollution further rise.[35] These high costs increase the likelihood that companies will avoid clean-up, foisting the burden of cleanup or the environmental impacts of aging and leaking infrastructure onto the public, undermining their rights. The best way to avoid such outcomes is not to permit new offshore oil and gas activities at all. At minimum, if projects do proceed or where they exist, States should require companies to set aside sufficient funds up front to cover the costs of closure and clean up as well as liabilities that may arise if plugged wells leak.

States must eliminate loopholes that enable companies to evade decommissioning liabilities. Many loopholes in bankruptcy law, tax codes, and contracts that have allowed oil and gas companies to shift the expense of onshore cleanup to the public are equally applicable offshore.[36] Some are unique to the offshore context such as: (1)"rigs-to-reefs" programs and (2) proposals to convert depleted oil and gas fields into offshore carbon capture and storage (CCS) facilities. "Rig-to-reefs" programs—which permit companies to convert old platforms to artificial reefs in lieu of removing them—have questionable ecological benefits,[37] and may do more harm than good. Studies show that artificial reefs have the potential to damage marine environments by harboring and facilitating the spread of invasive species, creating adverse changes in natural food-web dynamics and ecological community structure, and releasing contaminants as rigs corrode.[38] Meanwhile, CCS projects have dubious efficacy from a climate perspective, as they have a long

history of underperforming.[39] What's more, injecting CO_2 under the seabed presents uncalculated risks and untested monitoring challenges, and puts more pressure on the world's already-stressed oceans.[40]

4. The many transboundary risks inherently associated with oil and gas activity at sea and on coasts necessitates stronger mechanisms and guidelines for meaningful cross-jurisdictional participation in the decision-making processes around proposed offshore buildout.

Recognition of the inherently transboundary nature of the risks and impacts of industrial activities in and on the ocean is not yet matched with commensurate opportunities for those affected to influence the decision-making processes around these activities. There is no question that offshore oil and gas activity poses inherent transboundary risks—not only from accidents but from routine operations—that require cross-jurisdictional prevention, preparedness, and response. A number of legal instruments exist specifically to promote and facilitate States' cooperation and coordination in responding to major oil spill incidents, while others establish standards relating to accidental and operational pollution from offshore infrastructure and vessels.[41] Furthermore, treaties like the UNCLOS, the Convention on Biological Diversity, and the recently-finalized the High Seas Treaty, require States to carry out EIAs for proposed activities that may adversely affect the environments of other States,[42] in line with the transboundary harm principle. What remains a major gap, however, is the lack of binding obligations based in human rights law for States as well as companies to effectively consult *and consider* the interests of neighboring States in harm's way—and communities within those States—in relation to planned offshore oil and gas expansion.

Some instruments, while not specific to the offshore context, can inform the scope and content of such obligations. The Convention on Environmental Impact Assessment in a Transboundary Context ("Espoo Convention"), for instance, institutionalizes a standardized process of transboundary EIAs so that Parties take appropriate and effective measures to prevent, reduce, and control significant adverse environmental impacts from proposed activities with cross-jurisdictional impacts, including offshore hydrocarbon production and oil and gas pipelines.[43] States in whose jurisdiction the proposed activity will take place must ensure that the public in the affected State(s) are able to participate meaningfully in the decision-making process, including through engagement in notice and comment processes around EIAs, hearings, and consultations.[44] Similarly, EU directives relating to strategic environmental assessments and EIAs contain similar provisions.[45]

Generally lacking, however, are binding international instruments that set human rights-based standards for transboundary consultations and impact assessments and that are tailored to the heightened and broader range of transboundary impacts associated with industrial activities occurring at sea. Existing guidance including under Espoo and EU directives, for instance, may not necessarily ensure the processes align with international human rights norms including those relating to Indigenous Peoples and Free, Prior, and Informed Consent—which should be expressly incorporated. Consideration of the full scope of risks posed by offshore oil and gas projects—from both accidental and routine impacts—should thus inform any bilateral mechanisms relating to reparations and remedies that would be triggered if the State of origin does not take adequate measures to prevent and mitigate harm to affected States and communities within their jurisdiction.

Conclusion

CIEL thanks the Special Rapporteur for the opportunity to present this submission. For any questions or clarification, please do not hesitate to reach us at ukhatri@ciel.org.

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[1] Fraser McKay & Angus Rodger, "Global deepwater production to increase 60%," Wood Mackenzie, Nov. 24, 2022.
[2] Alejandra Borunda, "We still don't know the full impacts of the BP oil spill, 10 years later," *National Geographic*, April 20, 2020 (citing Lucija Muehlenbachs et al. "The impact of water depth on safety and environmental performance in offshore oil and gas production," *Energy Policy* v.55 (2013).
[3] Institute for Energy Economics and Financial Analysis (IEEFA), Alam et al., Global LNG Outlook 2024-2028, April 2024, 6 (explaining that LNG projects that are already being built or have received financial backing backed by financially strong investors could increase supply by 193 million metric tons per year from 2024 to 2028, a 40% rise over five years.)
[4] In fact, fully 40% of maritime trade now consists of shipping fossil fuels and fossil fuel products from one place to another. Michael Barnard, "How Will Climate Action Change the Face of Global Shipping," *Forbes*, Dec. 5, 2023.
[5] Josep Lloret,"Human health benefits supplied by Mediterranean marine biodiversity," *Marine pollution bulletin* v.60, no. 10 (2010): 1640-1646; Michael N. Moore et al."Oceans and human health (OHH): a European perspective from the Marine Board of the European Science Foundation (Marine Board-ESF)." *Microbial ecology* v. 65 (2013): 889-900.
[6] Anna J. Woodhead et al, "Coral reef ecosystem services in the Anthropocene," *Functional Ecology* 33, no. 6 (2019): 1023-1034.
[7] Inter-American Commission on Human Rights, *Resolution No. 3/2021, Climate Emergency: Scope of Inter-American Human Rights Obligations,* (2021), 8 ("Emphasizing that climate change is one of the greatest threats to the full enjoyment and exercise of human rights of present and future generations, to the health of ecosystems and all species that inhabit the planet.").
[8] IPCC, *Climate Change 2023: Synthesis Report, Summary for Policymakers. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)], IPCC, Geneva, Switzerland: A.2.4 C. (noting that in some parts of the world, ocean warming and ocean acidification are already adversely affecting food production from fisheries and shellfish aquaculture); IPCC, 2019: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)], Cambridge University Press, Cambridge, UK and New York, NY, USA: Ch. 4, 4.1.3 (explaining that rising sea level rise is exposing coastal communities to hazards such as permanent submergence of land, more frequent and intense coastal flooding, coastal erosion, salinization of soils, ground and surface water, impeded drainage and loss and change of coastal ecosystems); Ellycia R. Harrould-Kolieb and Ove Hoegh-Guldberg, "A governing framework for international ocean acidification policy," *Marine Policy* v.102 (2019): 1 (explaining that ocean acidification is already causing "substantial disruptions to socio-economic systems over the coming decades and centuries, including via reduced access to protein, economic losses from fisheries and tourism, decreased coastal protection and impacts to human health and cultural identity.").
[9] IEEFA, Bruce Robertson & Milad Mousavian, *The Carbon Capture Crux: Lessons Learned*, September 2022: 33.
[10] WBCSD & WRI, *The Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard* (2011), 25 (providing guidance on the categories of Scope 3 emissions).
[11] Alana K. Ayasse et al, "Methane remote sensing and emission quantification of offshore shallow water oil and gas platforms in the Gulf of Mexico," *Environ. Res. Lett.* 17 (2022): 9; Nichola Groom, "Methane emissions from U.S. shallow offshore platforms exceed those on land, study finds," Reuters, August 11, 2022.
[12] United Nations Convention on the Law of the Sea, 10 December 1982, 1833 U.N.T.S. 3, arts. 204, 205, 206; South China Sea Arbitration (Phil. v. China), PCA Case No. 2013-19, Arbitral Award, ICGJ 495 (PCA 2016) (July 12, 2016), para. 948 (Arbitral Tribunal constituted under Annex VII of UNCLOS, 2016).
[13] Request for Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law, Advisory Opinion, Case No. 31, May 21, 2024, ITLOS Rep. 2024, to be published, para. 441(3)(l).
[14] For example, in January 2024, the Oslo District Court invalidated permits for three new oil and gas fields in the North Sea because they were approved without consideration of the climate impacts stemming from the downstream consumption of the oil and gas produced from the fields. Similarly, the UK Supreme Court held that in assessing planning applications for new oil and gas extraction wells, the government should have considered the climate impacts from the inevitable and intended use of the produced fossil fuels, not just emissions from drilling the wells. Oslo Tingrett [OT] [Oslo District Court] 2024-01-18 Case No. 23-099330TVI-TOSL/05 (Nor.) [North Sea Fields Case]; Nerijus Adomaitis and Gwladys Fouche, "Three Norwegian Oil and Gas Field Permits Invalidated on Environmental

Grounds," Reuters, January 18, 2024; R (on the application of Finch on behalf of the Weald Action Group) v Surrey County Council and others [2024] UKSC 20 [para. 174] (appeal taken from Eng.); Tom Clarke, "Future of New Oil and Gas Projects in UK Thrown into Doubt after Landmark Supreme Court Decision," *Sky News*, June 20, 2024.

[15] For instance, the U.S. National Oceanic and Atmospheric Administration reported a total of 55 oil spills in the two weeks after Hurricane Ida, a Category 4 storm that in 2021 ravaged the Gulf Coast and parts of the Caribbean and South America. Blacki Migliozzi, Hiroko Tabuchi, "After Hurricane Ida, Oil Infrastructure Springs Dozens of Leaks," *New York Times,* September 26, 2021.

[16] *See*, *e.g.* IPCC. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Chapter 15 ("Small Islands"), edited by Hans-Otto Pörtner, Debra C. Roberts, Edvige S. Poloczanska, Karin Mintenbeck, Michael Tignor, Adrián Alegría, Monalisa Craig, Sheila Langsdorf, Susanne Löschke, Verónica Möller, and Anesu Okem. Cambridge, UK and New York, NY, USA: Cambridge University Press: 2064 (noting that, based on projections for sea level rise, "almost all port and harbour facilities in the Caribbean will suffer inundation in the future); Jinxin Dong et al, "Climate Change Impacts on Coastal and Offshore Petroleum Infrastructure and the Associated Oil Spill Risk: A Review," *J. Mar. Sci. Eng.* v. 10 no. 7 (Summer 2022): 4 (explaining a troubling 72% of hydrocarbon production sites in the Niger Delta are vulnerable to changing rainfall patterns, flooding, and drought); United States Government Accountability Office, Report to Congressional Requesters, Climate Change: Energy Infrastructure Risks and Adaptation Efforts, January 2014, 12n.24 (explaining that governmental audits have revealed that the more than 4,000 oil and gas platforms located in the U.S.'s outer continental shelf "were not designed to accommodate a permanent increase in sea level.").

[17] UN General Assembly, Universal Declaration of Human Rights, UN Doc. No. 217 A (III), 10 December 1948, art. 29. American Convention on Human Rights "Pact of San Jose, Costa Rica," art. 23(1)(a), November 22, 1969, OASTS No. 36, 1144 UNTS 123, art. 32. In considering the rights of Indigenous Peoples, EMRIP observed that limitations on rights "necessary and proportionate for the purpose of achieving the human rights objectives of the society as a whole and be non-discriminatory." Study of the Expert Mechanism on the Rights of Indigenous Peoples, Free, prior and informed consent: a human rights-based approach, A/HRC/39/62 (August 10, 2018), para. 38.

[18] *Id.* (citing S. James Anaya and Sergio Puig, "Mitigating State sovereignty: the duty to consult with indigenous peoples," *University of Toronto L. J.*, v. 67 no. 4 (Fall 2017)).

[19] Many international instruments that address EIAs require meaningful consideration of alternatives. *See*, *e.g.*, Convention on Environmental Impact Assessment in a Transboundary Context, *adopted* February 25, 1991, *entered into force* September 10, 1997, 1989 UNTS 309, 30 ILM 800 (1991) ["Espoo Convention"], art. 5; Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, *opened for signature* June 25, 1998, 2161 UNTS 447, 38 ILM 517 (1999), art. 6(6)(e); Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment [2011] OJ L 026, art. 5(3)(d). *See also* Hilal Elver (Special Rapporteur on the Right to Food), Report on Her Mission to the Philippines, A/HRC/31/51/Add. 1 (December 29, 2015), para. 36.

[20] The insufficiency of regulations addressing oil and gas transportation and decommissioning are among the many challenges to effectively protecting the oceans from the harmful impacts of oil and gas activity. Increased oil and gas vessel traffic in protected areas and along migratory routes undermines the health of the oceans, on which human rights depend. We focus on decommissioning here as one major regulatory gap, but would be happy to elaborate on others.

[21] "US: 3,500 Unused Gulf Wells Must Be Plugged," *NBC News,* September 15, 2010; "27,00 Abandoned Gulf Oil Wells May Be Leaking," *CBS News,* July 7, 2010; Robert Schuwerk, Greg Rogers, and Stephen Greenslade, "Double or Nothing: How Regulators Are Gambling on the Future Self-interest of Large Oil and Gas Companies to Decommission the Gulf of Mexico's Aging Infrastructure," Carbon Tracker, June 9, 2022, 7. Additionally, more than 1,000 rigs and platforms that have long been sitting idle in the Gulf.

[22] Alarmingly, a 2021 research plan prepared by the Bureau of Ocean Energy Management (BOEM) indicates that the US federal agency specifically tasked with managing the development of offshore energy and mineral resources "in an environmentally and economically responsible way" is unaware of which abandoned oil and gas wells in the Gulf of Mexico are leaking. BOEM, Gulf of Mexico Regional Office, "Environmental Studies Program: Studies Development Plan: FY 2022–2023," March 30, 2021.

[23] Lisa Vielstädte et al., "Shallow Gas Migration Along Hydrocarbon Wells—An Unconsidered, Anthropogenic Source of Biogenic Methane in the North Sea," *Environmental Science & Technology* v. 51, no. 17 (August 16, 2017): 10265. Another recent investigation in the North Sea revealed that over 52 percent of the almost 1,800 supposedly plugged wells studied by scientists are likely to leak and could emit anywhere between 0.9 and 3.7 kilotons of methane every year: Hannah Seo, "Unplugged: Abandoned Oil and Gas Wells Leave the Ocean Floor Spewing Methane," *Environmental Health News,* December 8, 2020.

[24] Zainab Mirza et al., "Fixing Abandoned Offshore Oil Wells Can Create Jobs and Protect the Ocean," *Center for American Progress*, April 20, 2022.

[25] Amy MacIntosh et al., "Ecotoxicological Effects of Decommissioning Offshore Petroleum Infrastructure: A Systematic Review." *Critical Reviews in Environmental Science and Technology* 52, no. 18 (May 7, 2021): 3303–3307.
[26] Janet McConnaughey, "Report Criticizes Offshore Oil and Gas Environmental Agency," AP News, April 20, 2021.
[27] *See*, *e.g.*, Margherita Ferrante et al, "PAHs in seafood from the Mediterranean Sea: An exposure risk assessment," *Food Chem. Toxicol.* (2018); Center for Disease Control, Agency for Toxic Substances and Disease Registry, "What Health Effects Are Associated With PAH Exposure?", *Case Studies in Environmental Medicine* (2009) (discussing the toxicity of Polycyclic Aromatic Hydrocarbons (PAHs)).
[28] Janet McConnaughey, "Report Criticizes Offshore Oil and Gas Environmental Agency," AP News, April 20, 2021; Frank Manago and Bonne Williamson, eds., 1998. *Proceedings: Public Workshop, Decommissioning and Removal of Oil and Gas Facilities Offshore California: Recent Experiences and Future Deepwater Challenges*, Ventura, CA, September 23–25, 1997, Santa Barbara, CA: Southern California Educational Initiative, 102.
[29] Stella Correia Cesar Coelho et al. "Western boundary currents drive sun-coral (*Tubastraea spp.*) coastal invasion from oil platforms," *Scientific Reports* v.12 (2022) ("Indeed, oil platforms behave as stepping stones, connecting oceanic regions with the coastline").
[30] According to an analysis of communities on the Gulf of Mexico, counties in the region that did not house offshore infrastructure like pipelines and refineries brought in 50% more tourism dollars per capita compared to localities with such infrastructure. "Oil Drilling Infrastructure Drives Away Tourism Dollars," Southern Environmental Law Center, February 1, 2016.
[31] BOEM, Gulf of Mexico Regional Office, "Environmental Studies Program: Ongoing Study," October 17, 2023, 1–2 (documenting Native American communities' concerns that leaking abandoned wells will contaminate archaeological sites).
[32] While the cost of plugging a conventional onshore well can range between $20,000 and $50,000, plugging an offshore well can cost around $150,000 per shallow water well and at least $21 million per deep water well. The process of removing and disposing of rigs is likewise pricey, costing anywhere between $85,000 and $4.6 million for fixed platforms in shallow water and $30 million or more for floating rigs and associated equipment in deep water. Daniel Raimi et al., "Decommissioning Orphaned and Abandoned Oil and Gas Wells: New Estimates and Cost Drivers," *Environmental Science & Technology* 55, no. 15 (July 14, 2021): 10224; Decommissioning onshore fracked wells, however, can cost an average of $300,000 per well. Mike Lee, "Should Feds Plug 'Orphan' Wells? States Offer a Warning," *E&E News,* June 22, 2020; *Offshore Oil and Gas Resources: Information on Infrastructure Decommissioning and Federal Financial Risk*: *Testimony Before the Subcommittee on Energy and Mineral Resources, Committee on Natural Resources, House of Representatives*, 115th Cong. 1 (2017) (statement of Frank Rusco, Director, Natural Resources and Environment), 15.
[33] *Offshore Oil and Gas Resources*, 2.
[34] Offshore Oil and Gas Resources, 2.
[35] *Id*; US Government Accountability Office, "Offshore Oil and Gas: Interior Needs to Improve Decommissioning Enforcement and Mitigate Related Risks," January 2024, 2.
[36] One such tactic entails larger companies selling aging assets to smaller operators with the aim of extracting maximum profit from depleted wells before they become non-productive. These operators, often inexperienced and under-resourced local companies, are left to inherit the decommissioning obligations. However, lacking the means to cover these costs, the operators may declare bankruptcy and thereby shirk closure and cleanup costs, shifting them to the public. Center for International Environmental Law, *Toxic Assets: Making Polluters Pay When Wells Run Dry and the Bill Comes Due* (2021): 9.
[37] Many in the scientific community are skeptical that leaving gargantuan unnatural structures under the sea could be beneficial to the environment and point to "substantial unpredictability and uncertainty regarding the effectiveness of artificial reefs, considering the variability and complexity of global marine ecosystems. MacIntosh et al, "Ecotoxicological Effects of Decommissioning Offshore Petroleum Infrastructure," 3302.
[38] Peter I. Macreadie, Ashley M. Fowler, and David J. Booth, "Rigs-to-reefs: Will the Deep Sea Benefit from Artificial Habitat?," *Frontiers in Ecology and the Environment* v.9, no. 8 (March 24, 2011): 455.
[39] IEEFA, Bruce Robertson and Milad Mousavian, *The Carbon Capture Crux: Lessons Learned* (2022): 71.
[40] CIEL, *Deep Trouble: The Risks of Offshore Carbon Capture and Storage* (2024): 16.
[41] *See*, *e.g.*, Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, art. 2(4), 1340 UNTS 61, 1341 UNTS 3); International Convention on Civil Liability for Oil Pollution Damage, *adopted* November 29, 1969, 973 UNTS 3, 9 ILM 45 (1970); Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969, *adopted* November 27, 1992, 1956 UNTS 285; International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, *adopted* December 18, 1971, 1110 UNTS 57, 11 ILM 284 (1972) (amended by Protocol of Nov. 27, 1992); Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region, Convention for The Protection and Development of the Marine

Environment of the Wider Caribbean Region, *adopted* March 24, 1983, *entered into force* October 1, 1986) 1506 UNTS 224, 22 ILM 240.

[42] UNCLOS, art. 204; Convention on Biological Diversity, *opened for signature* June 5, 1992, *entered into force* December 29, 1993, 1760 UNTS 79, 143; 31 ILM 818 (1992), art. 14(1)(a); Agreement Under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, UN Doc. A/CONF/232/2023/4 (June 19, 2023), art. 28.

[43] Espoo Convention, arts. 3-6, Appendix I.

[44] *See*, *e.g.*, Ministry of the Environment of Lithuania, "Poland informs Lithuania of environmental decision on Poland's first nuclear power plant project," LRV.LT (Dec. 8. 2023).

[45] Directive 2011/92/EU, art. 7; Directive 2001/42/EC of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment [2001] OJ L 197, art. 7.