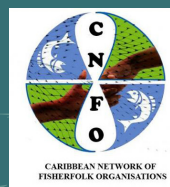
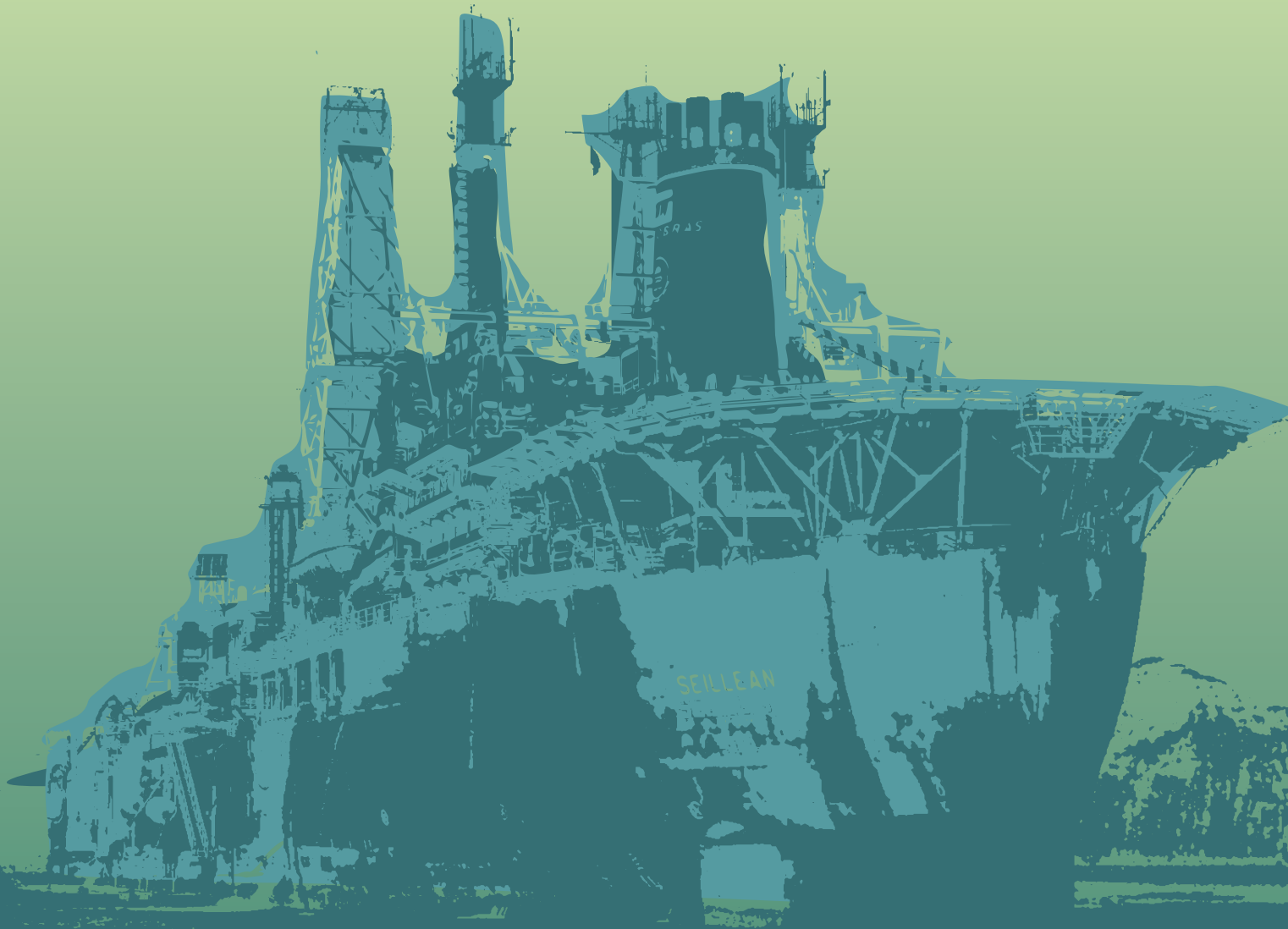


An ocean drowning in capital: Oil, transnational actors and the ocean in Guyana



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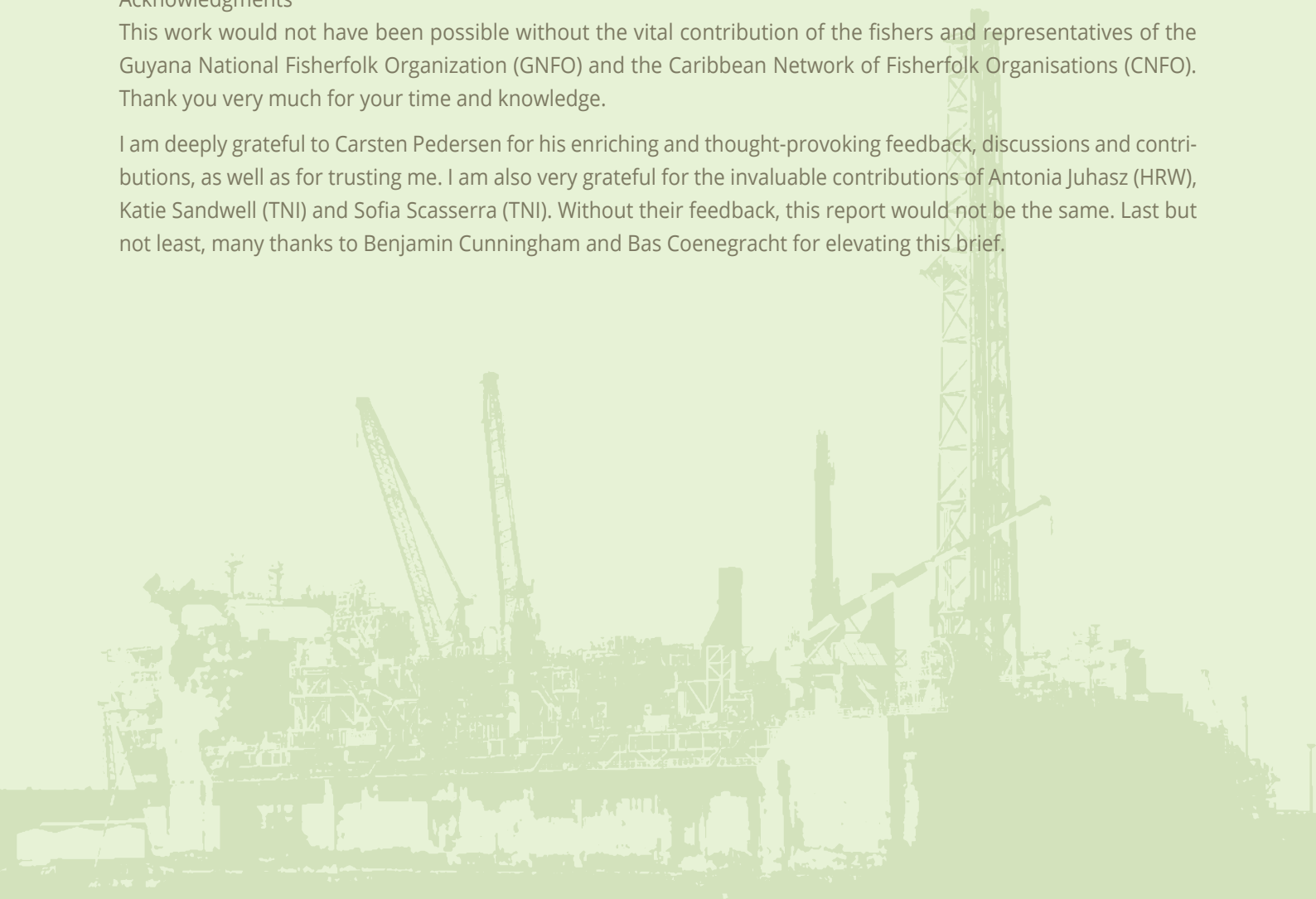


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Key messages

- 1 The discovery of large oil reserves in Guyanese waters and ExxonMobil's subsequent activities from 2015 threaten the livelihoods of Guyanese small-scale fishers and access to nutritious food for low-income families.
- 2 The concept of 'circuits of capital' is useful for analysing and deepening the understanding of oil extraction. By applying this analytical lens, the report looks beyond the site of extraction and understand how oil companies in Guyana finance their operations and sell the oil and gas they extract.
- 3 Floating platforms (FPSOs) are making it possible for companies to extract oil in new (marine) territories in much shorter timeframes than they did previously.
- 4 Two of the largest oil companies operating in Guyana, ExxonMobil and Hess Corporation, are owned by numerous actors, with asset management companies and banks holding the largest shares.
- 5 The state of Guyana receives a modest 14.5% of the profits from the sale of oil, whereas oil companies pocket the rest. This casts doubt on the ability of the government to use oil income to meet its green commitments.
- 6 The realisation of the oil industry's ambitions in Guyana will make the country a significant contributor to global CO₂ emissions. This will exacerbate the climate crisis and its dire impacts in Guyana including sea level rise, change of seasonality and a decrease in marine fauna, among others.
- 7 Guyanese fishers claim that their fishing grounds have been taken over by oil exploration vessels and processing platforms. Together with oil tankers, these vessels reportedly cause seismic noise, oil spills and discharge ballast water, all of which threatens fishers' livelihoods and the health of the ocean.
- 8 Guyanese Civil Society is working to come to terms with the rapidly changing landscape of oil and gas extraction. Some actors are already demanding the full recognition and respect of the rights of fishers; an immediate halt to all new or expanded oil operations; the phase-out of existing operations; and financial and technological support for adaptation and mitigation that contributes to a 'just transition'. Given the serious social, climate, and environmental risks of the oil industry, there is an urgent need for wider Guyanese civil society to unite behind shared demands that protect people, livelihoods, and the planet.

Introduction

This issue brief aims to critically analyse different forms of the ocean economy in Guyana, including its socio-economic and ecological impacts, and how different groups are affected by its expansion. It is written, in particular, to inform fishing, coastal, and local communities in Guyana and the Caribbean about the developments in ocean sectors with the hope it will contribute to strengthening networks and alliances pursuing environmental, social and economic justice. The methodological approach coupled with the focus on oil companies also makes the publication relevant for people and organisations beyond the Caribbean. It is the result of a collaboration between the Transnational Institute (TNI), the Caribbean Network of Fisherfolk Organisations (CNFO) and the Guyana National Fisherfolk Organization (GNFO).

In Guyanese waters, three economic sectors stand above the rest: shipping, fishing, and oil and gas. While this publication explores all three sectors, more attention is dedicated to the oil and gas industry because of its massive growth over recent years coupled with the severe impacts on the marine environment, the climate, and the livelihoods of coastal and fishing communities. The analysis explores what Marxist scholars describe as the 'three circuits of capital',¹ namely the extractive or productive circuit; the commodity exchange or value chain circuit; and the financial or money circuit. Analyses of extractive industries often revolve around the first (production) circuit, as they focus on on-site strategies and impacts of extracting raw materials. Extending the analysis to the second (exchange) and third (monetary or financial) circuits allows us to build a holistic picture of the strategies, operations and interconnections between extractive companies.

We hope that this analysis, together with the exploration of the impacts of the three sectors on the Guyanese population and environment, will help movements, alliances and networks to develop or refine their strategies.

This publication begins by introducing the Guyanese fishing sector. The oil and gas industry is then explored from its production, exchange and financial perspectives (the three circuits). Against this background, the brief explores how oil and gas extraction and industrial fishing aggravate the harsh socioeconomic conditions in coastal and fishers communities and negatively impact the Guyanese marine environments. Moreover, the effects and contradictions of relying on an alarmingly polluting industry such as oil and gas to develop Guyana are also explored. Finally, this brief explores how local actors are resisting the expansion of the ocean economy in the country, along with some ideas for future action.

The publication is based on research conducted throughout 2022 and 2023, which included interviews with Guyanese fishers and academics. More concretely, primary research engaged with one representative and two workers in the fisheries sector; one environmental consultant and one expert on nature conservation from Guyana; and two experts in marine spatial use and planning in the Caribbean. It also includes the analysis of several relevant governmental, scholarly, corporate and policy documents, including national and regional governmental plans, reports and scholarly publications on the ocean economy, the fisheries sector or climate change. Core findings were consulted with the co-publishing organisations.

What is happening in Guyanese waters?

Guyana has been inhabited for more than 3,000 years by the ancestors of the nine Indigenous Nations still present in the country.² Christopher Columbus was the first European to set foot on Guyanese soil in 1498. Soon after the Dutch, who captured and enslaved people from Africa to use as forced labor in sugarcane plantations in the mid-17th century, occupied the territory. Over the next two centuries, Guyana was repeatedly invaded by the French and British, until the latter united their colonial territories in 1831 under the name of British Guiana. The British colonisers continued using the forced labor of enslaved Africans in Guyana until slavery was formally abolished in 1807. In the following years, indentured labourers were brought primarily from the British Indian colonies.³

Tens of thousands of Indians were brought to Guyana to work on the sugar plantations.⁴ Sugarcane brought great wealth to the colonial rulers until the late 19th century, when export decreased as a result of the expanding sugar beet industry in Europe.⁵ Beyond their labour, indentured workers brought with them techniques for the cultivation of irrigated rice, a crop that has become key to the subsistence of the population.⁶

In the late 19th and early 20th centuries, gold, bauxite and diamond deposits were discovered and then exhausted within a few decades for the sole benefit of the colonisers.⁷ Over the same period, the Black and Indian populations experienced increased racial consciousness, creating the British Guiana East Indians Association, which was the

Georgetown branch of the Universal Negro Improvement Association.⁸ Class and rural struggles were brought together under the British Guiana Labour Union (BGLU), which played an important role in Guyanese politics in the 1910s and 1920s.⁹

Following Guyana's independence from Britain in 1966, the 1970s came with the expropriation and nationalisation of US and Canadian-owned bauxite companies and sugar plantations under the Booker McConnell companies. These were re-privatised in the 1990s.¹⁰ In 2020, bauxite and sugar were still major exports, accounting for 3% and 1.1% of the total value of exported goods.¹¹ However, their relative trade value has since been eclipsed by crude oil, which accounted for 39% of total value of exported goods in 2020, followed by gold (22%) and rice (9%).¹² The ocean plays a crucial role in sustaining Guyana's population and economy, as the lush rainforest that covers the country (home to a rich biodiversity and indigenous communities) makes land transport difficult, resulting in the country's heavy reliance on the sea.¹³

This brief overview of Guyanese history points at the centrality of the ocean. Enslaved people and indentured workers were transported by sea; the traditions and skills they brought with them enriched and shaped the fishing and farming culture; food items and minerals were, and continue to be, exported by sea; and very recently Guyanese waters have become a site of oil extraction and export.

A brief introduction to the Guyanese fisheries sector

Guyanese fishers possess an **important cultural heritage** of techniques, skills and traditional knowledge, and the small-scale fishing sector **provides livelihoods for thousands of workers** — from those who put out to sea to pre- and post-harvest workers. In Guyana, fish are an important source of affordable protein that is especially relevant in the diets of low-income families. In 1997, annual per capita fish consumption peaked at 57.6 kilos (kg) — almost four times the world average¹⁴ — and it remains a critically important food today.¹⁵

Guyanese fishing communities live and fish along the 459 kilometre (km) long coastline.¹⁶ Artisanal, semi-industrial and industrial fisheries are found in the country, and most of their activity takes place in relatively shallow waters.^{17 18}

Small-scale fishers mainly use gillnets¹⁹ in boats between six and 24 metres in length, while industrial fishers mostly use trawlers²⁰ and hand-liners.^{21 22 23} The sector employed 8,386 people in 2017, of whom 7,141 were fishers working offshore, 1,125 worked as inland fishers and 125 in aquaculture.²⁴ In addition, the sector could be providing direct and indirect employment (e.g., shipbuilding, repair, and other support industries) to more than 10,000 additional workers.²⁵ It must be noted, however, that official statistics tend to under-represent the size of small-scale fisheries, their catch size and their contribution to the national economy.²⁶ In this regard, a fishers' representative stated that the number of Guyanese fishers amounts to about 15,000.²⁷ Women's work is also critical in small-scale fisheries around the world, especially in post-harvest

processing, retail, and marketing but is especially likely to be undercounted or invisibilised in statistics.

Guyanese small-scale fishers capture a great variety of species, including red snapper, Bangamary (*Macrodon ancylodon*), sea trout (*Cynoscion virescens*) and gillbacker (*Arius parkeri*), which are consumed locally or exported.²⁸ Semi-industrial fishing primarily targets snapper.²⁹ In the

case of industrial fisheries, Atlantic seabob, a prawn with the scientific name *Xiphopenaeus kroyeri*, is the most targeted species. But this has only been the case in recent years, with shrimp caught the most historically.³⁰ While fish are an important export for Guyana and a key component of local diets, the country's production is dwarfed in the global market by mega-exporters like Indonesia.

The staggeringly profitable business of producing, selling and investing in oil and gas in Guyana

Throughout the 20th and 21st centuries, companies such as Standard Oil of California, Shell, Deminex, Mobil or Total have searched for oil reserves in Guyana.³¹ Between 1975 and 2014, 40 exploratory wells were drilled in Guyana and Suriname, but no commercially relevant reserves were found.³² In 2000, a United States Geological Survey assessment study (updated in 2012) predicted that the country had large reserves of oil and gas in the seabed.³³ ExxonMobil was the first company to successfully extract oil in 2015, attracting international attention and prompting a rush of transnational companies looking to buy prospecting licences in the Guyana-Suriname basin.³⁴

Today, Guyana's marine territories are divided into eight drilling and exploitation areas (also known as blocks), each owned by a consortium of transnational and Guyanese companies (see Figure 1). In April 2022, the Stabroek block was the most active in terms of oil discoveries — 27 out of 31 drillings there found oil.³⁵ The private companies operating in the Stabroek block are major beneficiaries of oil extraction in Guyana, including: ExxonMobil's subsidiary Esso Exploration and Production Guyana Limited (which holds 45% of the block), Hess Guyana Exploration Ltd (a subsidiary of the US Hess Corporation, which holds 30%) and CNOOC Petroleum Guyana Limited (a subsidiary of the China National Offshore Oil Corporation (CNOOC), which holds 25%).³⁶ As explored below, these three private companies are responsible for extracting and beginning to refine the oil and gas, which is then marketed by oil major BP. The profits from the sale are shared between the Stabroek operators and the Guyanese state.

In 2022, ExxonMobil was the world's fourth-largest oil company by revenue.³⁷ Headquartered in Irving, Texas (US) and listed on the New York Stock Exchange (NYSE), ExxonMobil employed 63,000 people in 2021 and was present in more than 200 countries by 2015.^{38 39 40} Esso Exploration and Production Guyana Limited is registered in the Bahamas.⁴¹ Also headquartered in the United States (New York) and listed on the NYSE, Hess Corporation operates in North America, the Caribbean and Malaysia.^{42 43} Although Hess Guyana Exploration Limited has offices in Guyana's capital Georgetown, the subsidiary is headquartered in the Cayman Islands.⁴⁴ As of October 2023, oil major Chevron Corporation had acquired Hess Corporation.⁴⁵ Finally, CNOOC, headquartered in Hong Kong and listed on the NYSE, the Hong Kong Stock Exchange (SEHK) and the Toronto Stock Exchange (TSX), is the largest oil and gas producer in China and operates in all five continents.^{46 47}

ExxonMobil has praised the rapid development of the oil and gas industry in Guyana.⁴⁸ This rapid development followed the discovery of recoverable oil resources estimated at more than 13.6 billion barrels of oil and 906 trillion cubic meter of gas across the Guyana-Suriname basin.⁴⁹ This amount is comparable to Algeria's proven reserves in 2021 (12.2 billion barrels), though smaller than the largest national reserves (303.8 billion barrels for Venezuela and 258.6 billion barrels for Saudi Arabia).⁵⁰ Seen in perspective, Guyanese reserves represent a small fraction of global reserves — just 0.8%. But they are found in a country populated by fewer than 1 million people.^{51 52 53}

The first circuit of capital: extracting and processing oil and gas

This brief on the expansion of the oil and gas industry in Guyana focuses not only on the processes and impacts of producing oil and gas, but also on the processes and actors involved in buying and selling oil and financing the industry. Academic and political analyses of extractivism

tend to emphasise the processes and impacts of producing raw materials.⁵⁴ This approach can overlook the exchange and financial circuits, with implications for social movement strategies and resistance.⁵⁵ Together, these three circuits (production, exchange and finance) make

up what has been dubbed the ‘expanded conception of extractivism’. It is this expanded conception that guides this analysis.

The **productive circuit** of the oil industry encompasses the infrastructure, technology and labour needed to extract

and process oil and gas before it is sold as a commodity.⁵⁶ The infrastructure deployed in Guyana comprises wells on the seabed (which extract oil and inject water and gas), pipelines that carry oil, gas, water or electrical signals, and oil processing platforms (mainly floating production, storage and offloading platforms).

FIGURE 1:



Source: Guyana Energy Agency

Today, there are **three oil floating platforms operating in the Stabroek block, and this number could grow to 10 by 2030.**⁵⁷ The active platforms are Liza Destiny, which began producing oil in December 2019, Liza Unity, which began operations in February 2022, and Prosperity, which began operation in November 2023.^{58 59 60} A fourth FPSO, One Guyana FPSO, is expected to come online in 2025.⁶¹ ExxonMobil has commissioned the Amsterdam-based company SBM Offshore to manufacture these four floating platforms.^{63 64 65 66} Norwegian company DOF Subsea is responsible for their inspection, maintenance and repair (IMR) from 2022 to 2025.⁶⁷

Liza Destiny, Liza Unity, Prosperity and One Guyana FPSO are all floating production, storage and offloading (FPSO) vessels. An FPSO is a ship-shaped vessel used to produce and process extracted oil and store it until it is transferred to a tanker.⁶⁸ In Guyana, drilling and injection wells are installed in the seabed, extracting oil while pumping in water and gas in order to keep the pressure of the reservoirs constant.⁶⁹ Extracted crude is pumped into the FPSOs, where it arrives mixed with gas and water. The FPSO then separates the oil from the gas, begins to process them, and can store both until they can be exported to a refinery.⁷⁰ However, rather than store and refine gas, many FPSO's flare or vent off all or part of the gas into the atmosphere.

The first FPSOs were developed in the late 1970s. Since then, several technological advances have made this type of vessel **the most widely used offshore production and storage infrastructure.**⁷¹ Another key reason for its rapid deployment (especially from 1999 onwards) has been cost savings to industry, as it centralises multiple operations offshore and out of sight from regulators and the public.⁷² This is a clear example of how the race to access new (remote) peripheries has driven technological advances.⁷³ For example, in Guyana, oil extraction started less than five years after the discovery of reserves.⁷⁴

Rapid and large deployments in previously unexploited areas allow oil companies to make quick and abundant profits. This rapid expansion has been termed 'extensive', as it aims to cover as many extraction areas as possible.⁷⁵ However, in Guyana, oil companies are looking not only to expand as much as possible, but also to extract as much oil as possible through technological developments — a strategy that has been termed 'intensive'.⁷⁶ Hence, oil companies and their partners in Guyana try to combine extensive and intensive strategies to expand the frontier of resource extraction in the most efficient way — and thus maximise economic returns.



Photo 1: A floating production storage and offloading (FPSO) vessel in the Brazilian state of Espírito Santo. Photo by the Programa de Aceleração do Crescimento.

The second circuit of capital: selling the extracted oil and gas

The **exchange circuit** of the oil and gas industry is characterised by the physical and social infrastructures and processes needed to sell and transport the oil from the production site to the destination countries.⁷⁷ As of 2023, there are no oil refineries in Guyana, although the Guyanese government plans to build one at the mouth of the Berbice River by 2025.^{78 79} This means that, at least until 2025, all oil produced in Guyana has to be sold and refined elsewhere.

The extracted oil is sold on the world market through intermediaries contracted for this purpose by the Guyanese government. From 2023, the London-based oil supermajor BP is responsible for this task, which involves negotiating the sale of crude oil and providing the Guyanese government with analysis of the oil market.⁸⁰ Prior to BP, Aramco Trading Limited — the trading subsidiary of the Saudi Arabia-based oil company Saudi Aramco — was responsible for marketing Guyana's oil.^{81 82} Once an oil

shipment is sold by the appointed intermediary, it is transported to the buyer's facilities. This task is performed in Guyana by shipping companies such as Pritchard-Gordon Tankers, a UK-based company specialising in the maritime transportation of crude oil in the Caribbean Sea, the United States, and Central and South America.^{83 84}

In 2020, the value of oil trade in Guyana reached \$1.1 billion and in 2021 it nearly tripled to \$2.9 billion.⁸⁵ The portfolio of oil importing countries is diverse, with the US leading the way in 2020 and 2021, and the rest spread across the Caribbean, Europe and Asia. In 2020, 54.7% of Guyana's oil was exported to the US, 22.8% to Asia⁸⁶, 11.2% to Barbados and about 9% to Europe (UK and Italy), with similar figures in 2021^{87 88}. However, in 2022, amid the Ukraine-Russia conflict, European countries began accounting for a larger share, about 49% of the total export.⁸⁹

The third circuit of capital: financing the oil and gas industry

The **financial or money circuit** of the oil and gas industry comprises investors such as banks, asset management corporations, pensions funds and private equity.⁹⁰ The financial circuit encompasses, among others, financial actors, debt instruments and regulatory frameworks.⁹¹ These different actors and mechanisms play a fundamental role in the productive capital circuit and the commodity capital circuit (exchange circuit). The extractive sector is capital-intensive and complex, all the more reason to delve into the money circuit.⁹²

The five largest shareholders of ExxonMobil are Vanguard Group (with a 9.1% share), BlackRock (7.2%), State Street Corporation (5.5%), Fidelity Investments (3.5%), and Geode Capital Management (1.8%).⁹³ All five are investment management corporations⁹⁴ headquartered in the United States.^{95 96 97 98 99} As for Hess Corporation, its four main shareholders are the same as those of ExxonMobil but with a different shareholding. Fidelity Investments holds 14.5% of the company, Vanguard Group holds 10.2%, BlackRock holds 8.2%, and State Street Corporation holds 6.1%.¹⁰⁰ The fifth major shareholder of Hess Corporation is Capital World Investors (with 3.2% of all shares), another investment management corporation based in the United States.^{101 102}

Neither ExxonMobil nor Hess has a majority shareholder, meaning that **no individual or investment company**

owns more than 50% of the company and effectively controls it. In the case of both ExxonMobil and Hess, each shareholder has voting rights in proportion to the shares held (one share equals one vote).^{103 104} Thus, the forementioned investment management companies vote according to the number of shares they manage, with the objective of maximising the value of the company and representing the interests of their clients on company matters requiring a vote.¹⁰⁵

One key group of financial actors behind the expansion of the oil and gas industry in Guyana and elsewhere are banks. In 2021, **the 60 largest private banks in the world invested \$145.9 billion in the 100 biggest oil, gas and coal companies.**¹⁰⁶ Of this amount, \$13 billion went to Saudi Aramco and \$10 billion to ExxonMobil.¹⁰⁷ In Guyana, three banks have fuelled the expansion of the oil sector, namely J.P.Morgan Chase & Co, Citigroup and Bank of America.¹⁰⁸ These three banks have collectively contributed \$15 billion of the total \$87 billion invested in the Guyanese oil industry between 2016 and 2021.¹⁰⁹ They are all headquartered in North America and, **together with Wells Fargo, were the world's largest oil investors between 2016 and 2022.**¹¹⁰

Banks don't just provide loans and other financing to oil companies. Increasingly, **they also own them.** Among the largest shareholders of ExxonMobil we find several banks:

JPMorgan Chase & Co (holding 1.31% of the company), Norges Bank (1.16%), and Bank of America (1.14%).¹¹¹ JPMorgan Chase & Co and Bank of America are both lenders and owners of ExxonMobil. Norges Bank, the central bank of Norway, is also an important player.¹¹² It is a separate, state-owned legal entity responsible for managing Norway's foreign exchange reserves and the Government Pension Fund Global (GPF).¹¹³ The bank has the mandate to 'obtain the highest possible return' on the funds it manages, which includes using public pension funds to invest in the fossil fuel industry.¹¹⁴

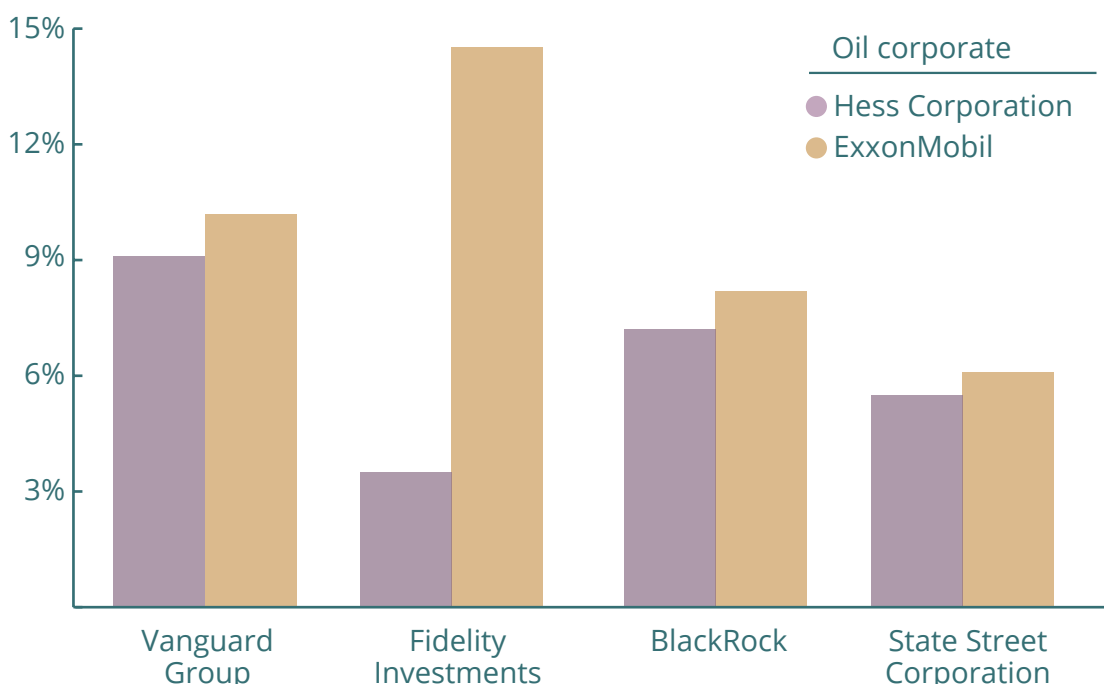
Oil remains a very profitable business. In 2021, ExxonMobil stated in its Annual Report that it had achieved 'exceptional growth in earnings'.¹¹⁵ One year later, amid the Russo-Ukrainian War, the corporation beat all forecasts and reached the astounding \$55.7 billion in profits (prompting serious discussion in Europe and elsewhere of the need for 'windfall taxes' on corporations reaping super-profits from global crises).^{116 117} In this context, the contract between the oil companies and the state is a key regulatory mechanism determining who benefits from the oil industry. The current contract stipulates that the Starbroek consortium (consisting of the Guyanese subsidiaries of ExxonMobil, Hess and CNOOC) will **get 75% of total profits until they recover their initial investments**.¹¹⁸ The remaining 25% of profits are shared equally between

the consortium and the state. The state will receive an additional 2% of total revenues from the former as royalties for the exploitation of the Guyanese environment.¹¹⁹

In practical terms, in 2021, the Starbroek consortium had revenue worth \$2.6 billion, with 75% of this revenue (\$1.9 billion) used to recoup the companies' initial investment.¹²⁰ The remaining 25% amounts to \$645 million, which has been shared equally between the oil companies and the Guyanese state (\$322 million each).¹²¹ Finally, a 2% royalty on total revenues should be added to the latter figure, resulting in a total of \$374 million in profits for the Guyanese state in 2021.¹²³ In its current form, **the contract between both parties has been criticised for sharing too little of the profits with the state**.¹²⁴ In announcing its agreement to acquire Hess, Chevron described the Stabroek block as 'an extraordinary asset with industry leading cash margins'.¹²⁵ The Guyanese population, especially fishing and coastal communities, **are being exposed to great threats while receiving just 14.5% of total revenues in return**.^{126 127} This figure is much smaller than, for example, the 42% of the total revenue that the Norwegian state receives from oil and gas production in its territories.¹²⁸ In Guyana, companies are making staggering profits while putting coastal and fishing communities, the environment and the climate at risk. The next section explores these risks.

FIGURE 2:

Percentage of shares owned by shared shareholders of ExxonMobil and Hess Corporation (Source: own).



The social and ecological costs of extracting oil and gas

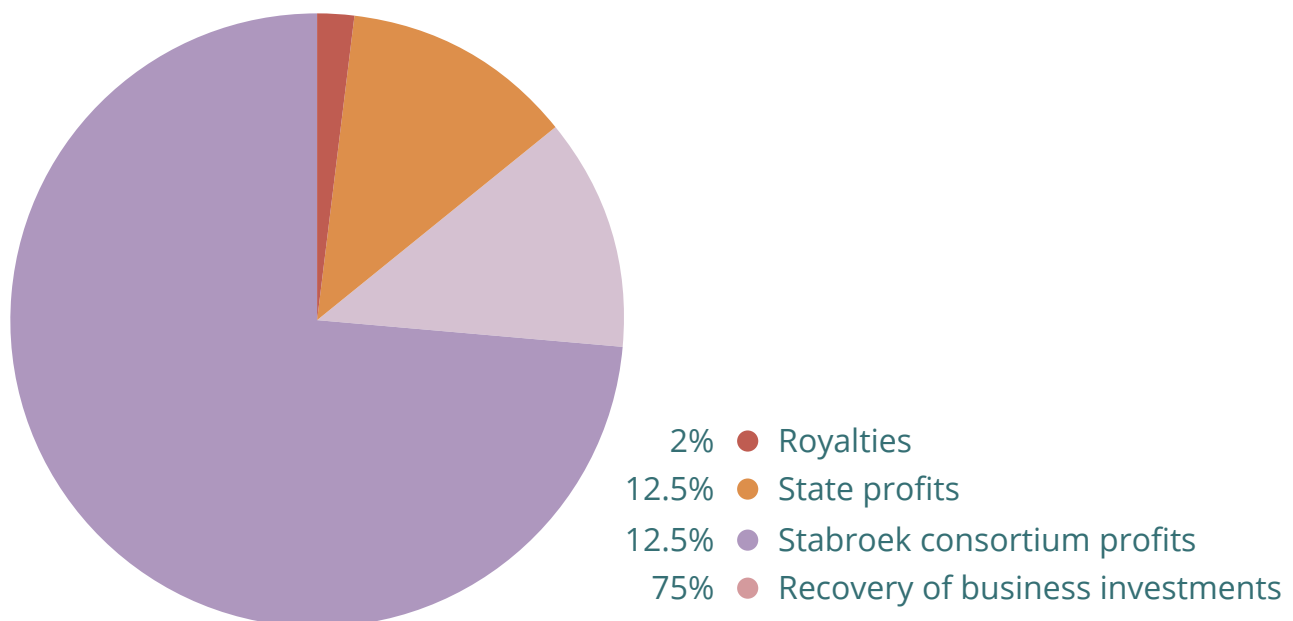
In recent years, an increasing number of economic and political projects, including energy projects, have encroached upon marine resources and territories, **threatening the ability of small-scale fishers to access, use and control them.**¹²⁹ Very often, **these projects are accompanied by high environmental impacts**, ranging from water pollution from oil or sewage spills to the destruction of the environment or the depletion of marine life.^{130 131} In Nigeria, the local subsidiary of Royal Dutch Shell was found guilty in 2021 of polluting the Niger Delta's villages, crops and mangrove forests, affecting hundreds of thousands of residents, threatening the livelihoods of fishers and farmers, and seriously damaging the environment.¹³² In Ghana, fishers were excluded from fishing within 1 km of the oil rigs and thereby prevented from accessing their traditional fishing grounds.¹³³ Similar cases have played out around the world.

In Guyana, fishers have reported cases where fishing grounds were occupied by survey vessels that forced them to leave. Given the high costs of putting to sea, such situations threaten fishers' livelihoods. An affected fisher from the Essequibo Islands-West Demerara region claimed that fishers 'were forced out of a certain zone to facilitate the oil exploration', and thus the area 'belongs to ExxonMobil right now' which has 'full control over it'.¹³⁴

Beyond the dispossession of fishers from space and resources, the social and economic impact of oil and gas extends to other spheres, including labour. Technical development in extractives often means that the industry needs fewer, but more highly skilled, workers.¹³⁵ In Guyana only 12% of the population has completed tertiary education (well below the Latin American and Caribbean average of 44%) with fisherfolk often among the least

FIGURE 3:

Percentage of revenues by type. The purple corresponds to oil companies' profits and the red to state profits (Source: own).



educated.¹³⁶ Hence, the **relatively few jobs created by the oil industry are inaccessible to those who need them most**, and whose livelihoods are among those most likely to be threatened by oil and gas exploitation.

The oil and gas sector also perpetuates existing gender asymmetries in the workforce. Currently, 30.9% of women are employed in Guyana compared to 54.6% of men. As noted by the International Labour Organization, '[the oil] industry and its value chain have traditionally shown very low rates of women employment'.¹³⁷ In concrete terms, 3,163 Guyanese nationals were employed in the oil and gas sector in January 2023, representing 65% of the entire sector (i.e., 35% of the work force is made up by skilled foreign nationals and only about 1% of Guyana's labour force is employed in the industry).¹³⁸ ¹³⁹ Indeed, the Ministry of Natural Resources of Guyana has conceded that the new industry will provide a limited number of jobs, most highly skilled —and it will therefore be **unable to replace the livelihoods disrupted by oil and gas activity**.¹⁴⁰

The oil and gas industry can negatively impact the marine environment in four main ways: the production of seismic noise in prospecting; oil spills; discharge of ballast water; and the changes in ocean conditions caused by climate change. 'Seismic noise' refers to vibrations in the earth's crust occurring naturally or produced artificially by oil prospecting.¹⁴¹ Given the large number of wells drilled in the Suriname-Guyana basin since 2015, it is more than likely that this phenomenon has occurred in, at least, the Starbroek block (see Figure 1).

Research on underwater seismic noise has concluded that it negatively impacts marine life.¹⁴² Fish living in areas affected by seismic noise tend to become disoriented, panic and eventually flee to quieter areas.¹⁴³ Areas with seismic noise tend to correlate with reduced catches.¹⁴⁴ The fishers interviewed stated that, in prospecting areas, catches have been lower.¹⁴⁵ A fish processor from Georgetown explained that fishers were concerned

about seismic noise, as the ground is 'shaking' and, under these conditions, 'normally fish would go away'.¹⁴⁶ Furthermore, the effects of seismic noise on marine health must be considered in the short and long term, as it can negatively affect the mating, spawning and migration of some species.¹⁴⁷

Another critical environmental risk is oil spills at sea. The media outlet Guyana Daily News released a video on 4 December 2021 showing an oily substance floating in Guyanese waters.¹⁴⁸ This is consistent with claims by some fishers who have observed oil in the water and in their nets.¹⁴⁹ It seems possible that these apparent spills originate from the operations of the FPSOs and/or oil tankers.

The third environmental risk that emerged during the interviews is the discharge of ballast water. Ballast water is key to maintaining the stability of cargo vessels.¹⁵⁰ When ships are emptied (e.g., of oil and gas), they are simultaneously filled with ballast water from the surrounding ocean to ensure the vessel's manoeuvrability.¹⁵¹ Once the vessels reach their destination and are loaded again, the ballast water is released, **where it can damage marine ecosystems by polluting them with chemicals or introducing species from other territories**.^{152 153}

Finally, the oil and gas industry is a major contributor to climate change, which is transforming the world's oceans.¹⁵⁴ Given the gravity of this threat, the next section reviews the impacts of climate change in Guyana and the Caribbean Sea.

All these negative effects occur in a context of inadequate Environmental Impact Assessments (EIAs). According to an expert interviewed, the shared eagerness of the government and the industry to begin extracting oil may have led to rushed granting of permits, limiting the ability of those responsible to conduct proper EIAs.¹⁵⁵ The Environmental Protection Agency of Guyana, responsible for approving EIAs, has admitted to being lenient during the first contract.¹⁵⁶ In response, it appointed a new director in 2021 and tightened its procedures.¹⁵⁷

The factors behind dwindling marine fauna

The risks and damages above are occurring amid an already worrisome decline in catches. Existing data indicates that Guyanese fish production peaked in 2012, and since then, captures have steadily decreased, except for 2016 and 2018.^{158 159} Available records show that the decrease in catches is a long-term issue that was present before the drilling operations started. Among the most affected species, the Atlantic seabob has experienced a drastic reduction in numbers after a peak in 2018.¹⁶⁰

Some blame small-scale fishers for the decline of marine wildlife, arguing that the scarcity of livelihood opportunities in the country, the ease of obtaining fishing licences and the lax regulation of the fisheries sector is leading to overfishing.^{161 162 163 164} However, in addition to the possible (an still unproven) contribution of small-scale fishers, this research has identified other factors that could put significant pressure on fish populations.

The adverse environmental impacts of oil and gas activity in the ocean are one major potential factor. Although oil companies and the government claim that the industry's practices are safe, impacts such as seismic noise, oil spills, ballast water discharge have detrimental effects on marine life. The ongoing impacts of climate change likewise pose a well-documented risk, with impacts preceding the beginning of local extraction.

Another potential factor is the substantial ecological impact of (semi)industrial fisheries in Guyana. For instance, the Atlantic seabob population has decreased remarkably in recent years, and this species is mainly targeted by industrial trawlers, with small-scale fishers capturing very little.¹⁶⁵ Moreover, seabob trawlers also have some of the highest rates of 'by-catch' — capture of non-target species — increasing the pressure on marine fauna.¹⁶⁶ Industrial fishing in Guyana used to focus on shrimp, but overfishing apparently caused a drastic decline in numbers to the point where it was no longer profitable.¹⁶⁷

One more additional factor that might be affecting the marine environment is foreign fishing. In the northern and southern parts of the Guyanese coast, foreign vessels without fishing permits from Venezuela, Suriname, and potentially other countries, operate in the country's waters.¹⁶⁸ All in all, the **dwindling marine life in Guyana seems far more likely to be a combination of all the above factors than the sole responsibility of small-scale fishers' actions.** However, the lack of monitoring and research on the Guyanese fisheries makes it difficult to

assess the relative contribution of each of these factors and how to address them adequately.¹⁶⁹

Whatever its causes, the effects of this decline are becoming increasingly clear. **One of the clearest impacts is the lack of access to fish for the local population.**^{170 171} As prices rise due to the reduced availability of fish, some species that were traditionally available to locals are now mostly exported. This, further deprives local consumers of a valuable food source.¹⁷² **Fishers are also struggling to make a living from fishing.** Considering the high cost of acquiring, running and maintaining fishing boats, not having enough returns can quickly make the business unsustainable.¹⁷³ As a result, a number of fishers have been unable to make ends meet in recent years.¹⁷⁴ Both small-scale and industrial fishers have experienced economic difficulties, although the latter are more affected.¹⁷⁵

Against this backdrop of poor marine health and harsh social and economic conditions, the government of Guyana decided to stop collecting VAT on fisheries inputs in 2020 and pushed forward an ambitious plan to expand aquaculture.¹⁷⁶ The government has acknowledged that the expansion of aquaculture was partly a reaction to declining catches, and believes that the subsector holds 'great promise as a source of growth'.^{177 178} The government's plans have taken shape with the 2021-2026 update of the inland and aquaculture strategy and the construction of 66 brackish water shrimp ponds by March 2022 (and the promise to build 76 more thereafter).^{179 180} The government expects to double annual shrimp production to 500,000 kg by 2025.¹⁸¹

Aquaculture has steadily grown worldwide at a 6-7% rate since the 1990s, to the point where the sector's contribution to fish supply exceeded wild fish catches in 2018. Historically, aquaculture production has been shared between small and medium-sized enterprises. However, this trend has changed in recent decades. Since the 2007-2008 financial crisis in particular, a decreasing number of large companies have taken over ownership of the sector globally, both at the farming and feeding level.¹⁸² The Guyanese government has argued that aquaculture offers a sustainable source of food amid a rapid decline in marine wildlife and the climate crisis.^{183 184} What the government does not mention is that aquaculture poses a threat to fishing communities, as their territories are grabbed to build rearing facilities while they are unable to access the new (often poorly paid) jobs.^{185 186 187}

Recent research has shown that **aquaculture does not reduce pressure on marine life, as the sector tends to complement rather than curb potential overfishing.**¹⁸⁸ Moreover, fishers in India, Vietnam and The Gambia are seeing their catches decline as billions of wild edible fish are exported to European countries to feed farmed aquatic animals.¹⁸⁹ Aquaculture also comes with environmental impacts such as the escape of aquaculture species, the spread of diseases and the release of polluting substances

into the environment.¹⁹⁰ In light of these impacts, the **government should consider implementing sound management practices for the country's marine spaces and resources instead of further expanding the aquaculture industry.** A strategy for the management and planning of marine activities that centres the needs of coastal and fisher communities and the environment can ensure Guyana's food sovereignty¹⁹¹ and sustain marine life in the long term.



Photo 2: Red snapper is one of the most commonly fished species by small-scale fishers in Guyana.
Photo by **Florida Fish and Wildlife**

The unrealistic desire to ‘catch up’ by selling oil and gas

In February 2022, Guyana's Vice President, Dr. Bharrat Jagdeo, stated that Guyana was at the service of the world in addressing environmental challenges, as long as this did not jeopardise the 'legitimate right of the Guyanese people to prosper and achieve what they want out of life'.¹⁹² In a questionable move to achieve both aims, the Guyanese government intends to develop the country and protect the environment by using profits from oil and gas to build green infrastructure.¹⁹³ Thus, oil revenues will be used to implement the Guyana's Low Carbon Development Strategy 2030, which plans to curb deforestation, create new jobs by expanding low-carbon economic sectors, and 'protect the coast'.¹⁹⁴ Guyana is also a member of the Global Ocean Alliance, which aims to protect at least 30% of the world's oceans by 2030.¹⁹⁵ The government is thus pushing a vision whereby 30% or more of its waters are protected and the rest is left to the interests of the oil or (industrial) fishing sectors.

Arguing that Guyana has a 'legitimate right' to 'sustainably' develop the country through oil revenues obscures the risks posed by drilling oil wells. The industry carries substantial socio-ecological risks and brings unavoidable climate impact, while past experiences with extractive industries around the globe shows that promises of social development often fail to materialise. According to one of the interviewed experts, there is a risk that the development of the oil industry will take precedence over key social and ecological needs, overshadowed by the agenda of the oil industry and the will of Guyana to 'catch up' with other Latin American countries.¹⁹⁶

If the industry's vision for the country becomes a reality, Guyana might become a significant per capita emitter of CO₂ from oil production.¹⁹⁷ According to projections, the country's oil operations could end up emitting 13 million tonnes of CO₂ per year at peak production around 2030, **more than five times the annual CO₂ emissions before oil production began** (2.32 tonnes of CO₂ per year in 2018).¹⁹⁸ ¹⁹⁹ These emissions would primarily come from gas flaring, an industrial practice to burn discharged gas.²⁰⁰ ²⁰¹ Flaring can be carried out for safety reasons (burning gas after sudden increases of pressure), economic and technical reasons (when the gas can not be otherwise

discharged from the production plant) and regulatory ones (bans on the export of gas).²⁰²

Gas flaring is already a critical issue in Guyana. Between the beginning of oil production in 2019 and 2022, ExxonMobil's subsidiary in Guyana has been flaring gas intermittently from its offshore FPSO.²⁰³ ²⁰⁴ One of the reasons given by the company for flaring is the deficiency of a gas compressor equipment. In 2021, the company asked permission to flare for 36 days, during which time the company was expected to fix the equipment.²⁰⁵ In this period alone a total of 41,472 tonnes of CO₂ were emitted leading the government to sue the company for \$1.3 million.²⁰⁶ In broad terms, the EIA for the Liza Destiny FPSO estimated that no more than 396 million cubic metre of gas would be flared.²⁰⁷ As of May 2022, the vessel had already flared about 501 million cubic metre, exceeding the government's prediction by 104.8 million cubic metre in the first years of its operations alone.²⁰⁸ In doing so, ExxonMobil is jeopardising hopes for a low-carbon Guyana.²⁰⁹

Whatever the Guyanese government's expectations, the threats posed by climate change put an untenably high price on its 'low-carbon' plans. In April 2022, the Intergovernmental Panel on Climate Change (IPCC) published the latest global assessment of the state of climate change.²¹⁰ One of the main conclusions is **that global emissions have continued to rise in the period 2010-2019, making an already serious crisis even more critical.**²¹¹ This crisis is **also affecting the ocean**, causing more acidic marine environments, decreasing levels of dissolved oxygen, increasing temperatures and raising sea-levels.²¹²

These changes are affecting the marine life around the world. Marine species are suffering reductions in their growth, reproduction and survival, their geographical location is changing, and their habitats are suffering changes in seasonal activity.²¹³ ²¹⁴ The Caribbean is no exception. The literature and interviewees agree that the effects of climate change in the region are apparent, as evidenced by increased intensity of storms and extreme weather conditions, rising sea levels, a Sargassum algae influx and the bleaching of coral reefs.²¹⁵

These effects have major consequences for humans and non-humans alike. The disappearance of coral reefs will be a major ecological disaster, as they are home to numerous species that live only in these habitats.²¹⁶ Sargassum is proliferating beyond its historical regions (the northern Caribbean Basin and the Atlantic Ocean) due to changing marine conditions.²¹⁷ Now observed throughout the Caribbean, Sargassum is causing marine mammals and turtles to drown, reducing oxygen concentrations, limiting navigation, damaging ships, and more.^{218 219} Along with lowered oxygen levels and rising acidity in the water, this is also hindering shell formation, reducing marine populations, and are expected to increase fish migrations from the southern to the northern Caribbean.²²⁰

In Guyana, the fishers claim that the largest impacts attributable to climate change are more irregular seasons and the proliferation of Sargassum.^{221 222} Historically, Guyana had two rainy seasons, one around mid-June and the other around December-January.²²³ However, unusual heavy rains seem to have recently become the norm at any period of the year. This lack of seasonality is affecting the fishers, making it more difficult to put to sea in unstable conditions.²²⁴

It is therefore no surprise that in 2018, the Food and Agriculture Organization (FAO) of the United Nations considered the vulnerability to climate change of Guyana's fisheries sector 'very high'.²²⁵ According to the last Synthesis Report from the IPCC, **staying within 1.5°C and 2°C of global warming compared to pre-industrial levels implies 'rapid, deep, and in most cases immediate GHG [greenhouse gases] emission reductions'**, particularly from fossil fuels as they have been the main source of greenhouse gas emissions over the past 50 years. Given that 'there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all', avoiding the threats outlined above can only be achieved in one way: **stop all oil and gas extraction in Guyana now.**²²⁶ Global North countries and companies have enriched themselves through the historical extraction of wealth from the Global South, and are **responsible for some 92% of the historical excess of carbon emissions.** From this perspective, ending all oil activity in Guyana must be made possible by climate reparations by Global North countries, including technology and finance to build a 'just transition',^{227 228} adapt to the climate crisis and compensate for loss and damage for all harms that cannot be repaired.²²⁹



Photo 3: Fishing boats on the Berbice River in Guyana. Photo by [Ian Mackenzie](#).

What is to be done? A proposal for action

We live in a period of intersecting crises, which exacerbate one another and whose effects are increasingly clear and damaging. Corporate and state actors are pushing for ‘solutions’ that do anything but tackle the root of the problems. This, make several contradictions evident. If inequality and poverty are worsening amid rising global prices and the lingering effects of COVID-19, then governments worldwide incentivise job creation and development by profit-making corporations. If the health of the oceans is reaching an alarming state, then corporations and governments ditch traditional fisheries and boost aquaculture and inland fisheries. If climate change is becoming a daily danger to millions of people, then governments boost staggeringly polluting industries in order to fund ‘sustainable’ and ‘green’ futures.

Finding alternative and effective ways of confronting these crises requires a broadened understanding of the present situation and the possible ways out. The three circuits of capital framework is valuable in this regard, as it provides an integrated picture of the actors, strategies and impacts of producing and exchanging oil and financing its industry. The first circuit made it possible to explore the infrastructure needed to produce oil and gas, notably the FPSO platforms that can process and store oil in new extraction frontiers. The exploration of the second circuit revealed that BP markets the extracted oil to its various destinations (North America, Asia, the Caribbean and recently Europe). The monetary circuit of capital has been key to uncover the investment companies (such as Vanguard Group or BlackRock) that are shareholders of the oil companies expanding in Guyana, and the banks that finance this expansion (such as JPMorgan Chase & Co or Bank of America). All of them making staggering profits from an industry with alarming environmental, climate and social impacts.

This brief is in no way intended to argue that Guyana should not be further developed. Rather, it aims to critique how development in the 21st century is often underpinned by the dogma of (endless) growth, how its implementation heavily relies on fossil fuels, and how it ends up excluding those who need it most —not to mention its incalculable toll on nature. Section 3 outlined how the industry and the Guyanese government’s plans are accelerating the degradation of the environment and the decline in marine species. However, the small-scale fishers are largely blamed for the decline, and other important factors are

disregarded — namely the impacts of (semi)industrial fishing on marine life (such as by-catch deaths), the impacts of the oil industry on the environment (such as the production of seismic noise, oil spills, or the discharge of ballast water) and the change in ocean’s conditions caused by climate change.

The false solution pursued by the Guyanese government is to expand the oil industry with the aim of using its revenues to develop a low-carbon economy. This poses an alarming contradiction, given that the industry that should bring abundant wealth is currently capturing 85% of all oil profits while being a major driver of climate change and responsible for alarming environmental risks like oil spills. Emissions coming from gas flaring will exacerbate climate change in a country that is highly vulnerable to it, with most of its population living next to an ocean that is increasing in level, temperature and acidity —threatening coastal settlements, the marine environment and the livelihoods and identity that depend on them.

Against this backdrop, the struggle for a (better) future becomes crucial. Caribbean and Guyanese civil society has not stood idly by, but has organised to respond to the threats presented. The Guyana National Fisherfolk Organisation (GNFO) and the Caribbean Network of Fisherfolk Organisations (CNFO) are fighting for the rights of fishers in the region and denouncing the impacts of the oil industry in Guyana.²³⁰ Another important actor with the same goal is the ‘A Fair Deal for Guyana – A Fair Deal for the Planet’ movement. Founded in 2018 by concerned citizens and the international lawyer Melinda Janki, they took the Guyanese government to court for granting production licenses to the Stabroek consortium when only one of its members had an environmental permit.²³¹ Although they lost the case, the movement has continued to seek justice, for example, by filing a lawsuit claiming that the oil development in Guyana is unconstitutional.²³²

Small-scale fishers and other civil society groups can only contest the threats exposed in this brief if they build alliances with a broad spectrum of allies among working people, as well as fight for climate reparations, loss and damage compensations, and a full implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF guidelines).²³³ The implementation the SSF Guidelines involves, among others, ensuring that fishers are not arbitrarily evicted and their tenure rights are

not infringed by the oil or other industries, and ensuring that the knowledge, culture, traditions and practices of small-scale fishing communities are recognised and supported.²³⁴ The alarming hazards described in this brief highlight the urgency of phasing out fossil fuels in Guyana (and beyond). However, given the historical responsibility of wealthy countries and the right to peoples of the Global South to decent livelihoods, this should be accompanied

by making the countries most responsible for the climate crisis provide technology and finance for adaptation and mitigation, pay climate reparations, compensate for loss and damage harms that cannot be repaired, and otherwise contribute their fair share to building what movements of working people around the world might recognise as a just transition.²³⁵



Photo 4: Fossil Free Virunga Climate March in Goma, Democratic Republic of Congo. Photo by **MNKF Creatives**.

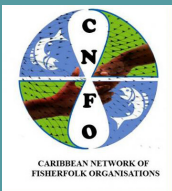
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The Guyana National Fisherfolk Organisation (GNFO) was officially formed in 2008 as an umbrella body to unite fisherfolk in Guyana. Relunched in 2021 after six years of inactivity, it is currently the largest fishers' organisation in the country, with some 5,000 members.



The Caribbean Network of Fisherfolk Organizations (CNFO) is a network of fisher organisations founded in 2009 to achieve sustainable fisheries management, ensure food security and fishers' livelihoods, and combat climate change in the Caribbean. CNFO comprises the national fisher organisations (NFOs) and other fishers' organisations from 13 countries in the Caribbean



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