Five Years Lost

How Finance is Blowing the Paris Carbon Budget

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Introduction

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The thirty years of rapidly rising prosperity and falling inequality after the Second World War are referred to in France as the *"trente glorieuses."* With the election of a new US administration with climate action at the center of its agenda, and commitments from governments around the world to various forms of the Biden-Harris campaigns' "build back better" from Covid slogan we could be on the brink of a *trente glorieuses* for the climate: 30 years in which we rid the world of the scourge of fossil fuels.

The growing number of commitments from governments, corporations and financiers to "net zero" carbon emissions by mid-century basically set a 2050 expiry date on the fossil fuel industry. If these commitments are kept, the next 30 years would see the end of fossil fuels as a major sector of the global economy. (This presumes that public pressure will ensure that dodgy carbon accounting tricks like offsets can be minimized, and that any carbon capture and sequestration technologies that actually work and do not cause social and environmental harms will be used to go carbon negative rather than just to balance out continued emissions).

2050 is also the date at which the Intergovernmental Panel on Climate Change says global emissions need to be zeroed out if we are to have even just a 50% chance of keeping global warming under the key threshold of 1.5°C. But critically, the IPCC shows, staying under 1.5° means not just ending emissions by 2050, but cutting them sharply, starting right now. Already by 2030, emissions need to be at around half of their 2010 level.

The 12 case studies in this report showing that governments and coal, oil and gas companies are planning massive increases in the amount of hydrocarbons dug out and sucked from the ground, are therefore alarming indeed. There will be no staying under 1.5°, no long-term future for coastal cities, no hope that large parts of the world will remain at livable temperatures, no hope of forests avoiding megadroughts and fires, no survival for coral reefs, if this explosion of fossil fuel extraction and combustion is allowed to happen.

And, as this report makes clear, it is not just governments and oil and gas majors that are holding a gun to our collective heads with these carbon bomb projects. It is also the many top global financiers who are standing right behind the fossil fuel companies with their checkbooks open, ready and willing to keep the money pipeline flowing with just as much culpability for the climate crisis as the coal miners and oil and gas frackers.

Analysis from Oil Change International shows that potential emissions from coal, oil and gas fields already in production would already push us far beyond 1.5°, and likely even 2°C, so any expansion of fossil fuel extraction, or building of new infrastructure like pipelines and power plants that drive continued extraction, is incompatible with the Paris Agreement.[1] So banks and investors cannot credibly say that they are committed to aligning with Paris while simultaneously funding projects like those outlined in this report.

The good news in the math of fossil fuel extraction, however, is, as OCI also shows, that while expansion is the gateway to extinction, if we stop expansion in oil and gas, the supply of these fuels would decline over time at a rate that is roughly compatible with a 1.5° trajectory. The "natural depletion" rate at which oil and gas fields are exhausted averages around 4% a year globally – a rate that if continued for the next three decades would get us to zero emissions.[2] It is also a rate which seems compatible with a rapid, but realistic, ramp up of renewables and the essential electrification of transport, heating and other key energy sectors.

The financial industry may decide to callously continue on with business as usual, pumping dollars into the climate wreckers like ExxonMobil, Chevron, Total, Shell and rest of the venal fossil fuel industry. But it can decide to live up to its rhetoric about climate responsibility and take serious action to immediately stop financing any new fossil fuel projects and the companies that are building them, rapidly phase fossils out its portfolios, redivert those funds to the clean economy, and thus play its part in ensuring that the *trente glorieuses* for the climate comes to pass.

Executive Summary

Author: Urgewald, Jacey Bingler

Two days ahead of **the 5th Paris Agreement anniversary**, 18 NGOs are releasing a joint report showcasing 12 of the most devastating fossil fuel projects that are currently being planned or under development. These expansion projects alone would use up three-quarters of the total remaining carbon budget if we are to have a 66% probability of limiting global warming to **1.5° Celsius**.

This report exposes the **banks and investors** that are providing financing to the leading **fossil fuel companies** developing large-scale, contested coal, oil and gas expansion projects. The 12 case studies highlight the immense **environmental damage, violation of Indigenous rights, negative health impacts, human rights concerns** and expected **CO_2 emissions** caused by each of the projects. The organizations behind the report have formulated concrete **policy demands** for the finance industry. Our joint call is to rapidly move money out of the fossil fuel sector. The first priority should be to no longer enable coal, oil and gas expansion projects - such as those covered in the report - to move forward.

The 12 expansion projects and affiliated carbon emissions

The case studies covered in the report were chosen based on the detrimental impact they are having across the globe. They are being pushed forward against local resistance and despite numerous calls by scientists and numerous political leaders to phase out fossil fuels.[3] The case studies are: gas extraction in **Mozambique**; oil and gas development in **Suriname**; oil and gas drilling in the **US Permian Basin**; oil and gas extraction in **Argentina's Vaca Muerta** region; coal and gas consumption in **Bangladesh's Payra Hub**; **China's new coal power plants**; **India's coal mines**; coal expansion in the **Philippines**; gas extraction as part of **Australia's Burrup Hub**; drilling for oil & gas in the **Norway Barents Sea**; oil and gas extraction and pipeline construction in the **East Mediterranean**; and offshore drilling in the **UK**.

Together, these 12 projects are expected to cause at least **175 gigatons of additional CO_2 emissions**, should they move forward as intended by the involved companies. This is **almost half** of the 395 Gt of remaining carbon budget to limit global warming to 1.5° with a 50% probability. **It is almost 75% of the remaining 235 Gt carbon budget which would provide a 66% probability of limiting global warming to 1.5°C.**[4]

Big Oil is everywhere

Eight of the world's biggest integrated oil and gas companies are involved in several of the devastating extraction projects showcased in the Five Years Lost report. The companies represented in the most case studies are **ExxonMobil**, **BP** and **Total**. The oil majors are each involved in **six out of the eight oil and gas projects** in the report. **Royal Dutch Shell** and **Chevron** are each involved in **five of the eight oil and gas projects**. **Equinor** are involved in **four**, while **Repsol** and **Eni** are each represented in **three**.

Fossil finance is alive and well

The report finds that financial institutions have provided **$1.6 trillion** in loans and underwriting since January 2016 and, as of August 2020, invested **$1.1 trillion** in bonds and shares in the **133 companies** driving the 12 fossil fuel expansion projects.[5] On the banking side, the companies having received the most funding since the Paris Agreement are **BP, ExxonMobil, Petrobras, State Grid Corporation of China** and **Occidental Petroleum** with a total of **$358 billion** in loans and underwriting from January 2016 to August 2020. The companies in the report with the highest investment value are **Chevron, ExxonMobil, Royal Dutch Shell, Total,** and **BP**. Together, investors hold bonds and shares in value of **$394 billion** in these five companies, as of August 2020.

The top investors

20 investors provided almost half of the total investments – **$535 billion** of the total **$1.1 trillion** – identified in the report. Among the top investors, US financial institutions are clearly leading the list. With bonds and shares worth **$110 billion**, **BlackRock** (USA) is the top investor in the report's coal, oil and gas companies. **Vanguard** (USA) is following closely behind with **$104 billion** in bonds and shares. **State Street** (USA) is in third place with **$50.8 billion**, followed by **Capital Group** (USA) with **$48.4 billion**. Only four of the top 20 investors are not from the US: the **Norwegian Government Pension Fund** with **$31.9 billion** in fifth place, **UBS** (Switzerland) with **$11.8 billion** in 11th place, **Deutsche Bank** (Germany) with **$10.4 billion** in 19th place and **Legal & General** (UK) with **$9.8 billion** in 20th place.

The top banks

The top 20 banks provided more than half of the total funding to the fossil fuel companies involved in the case study projects: **$949 billion** out of the total **$1.6 trillion**. The **US banks CitiGroup**, **Bank of America** and **JPMorgan Chase** are leading the field with a cumulative **$295 billion**. There are eight European banks among the top 20. Together, they provided **$308 billion**, led by **Barclays ($66.4 billion)** and **HSBC ($55.2 billion)**, followed by **BNP Paribas ($52.7 billion)**, **Deutsche Bank ($27.6 billion)**, **Credit Suisse ($22.5 billion)** and **Santander ($21.1 billion)**. The Japanese banks in the top 20, **Mitsubishi**, **Mizuho** and **SMBC**, provided financing worth **$149 billion**. Also among the top 20 financiers are the **Bank of China ($26.5 billion)** and the **Industrial and Commercial Bank of China ($24.9 billion)**, and the **Royal Bank of Canada ($24.7 billion)**.

The 12 case studies in the Five Years Lost report are a litmus test for the industry

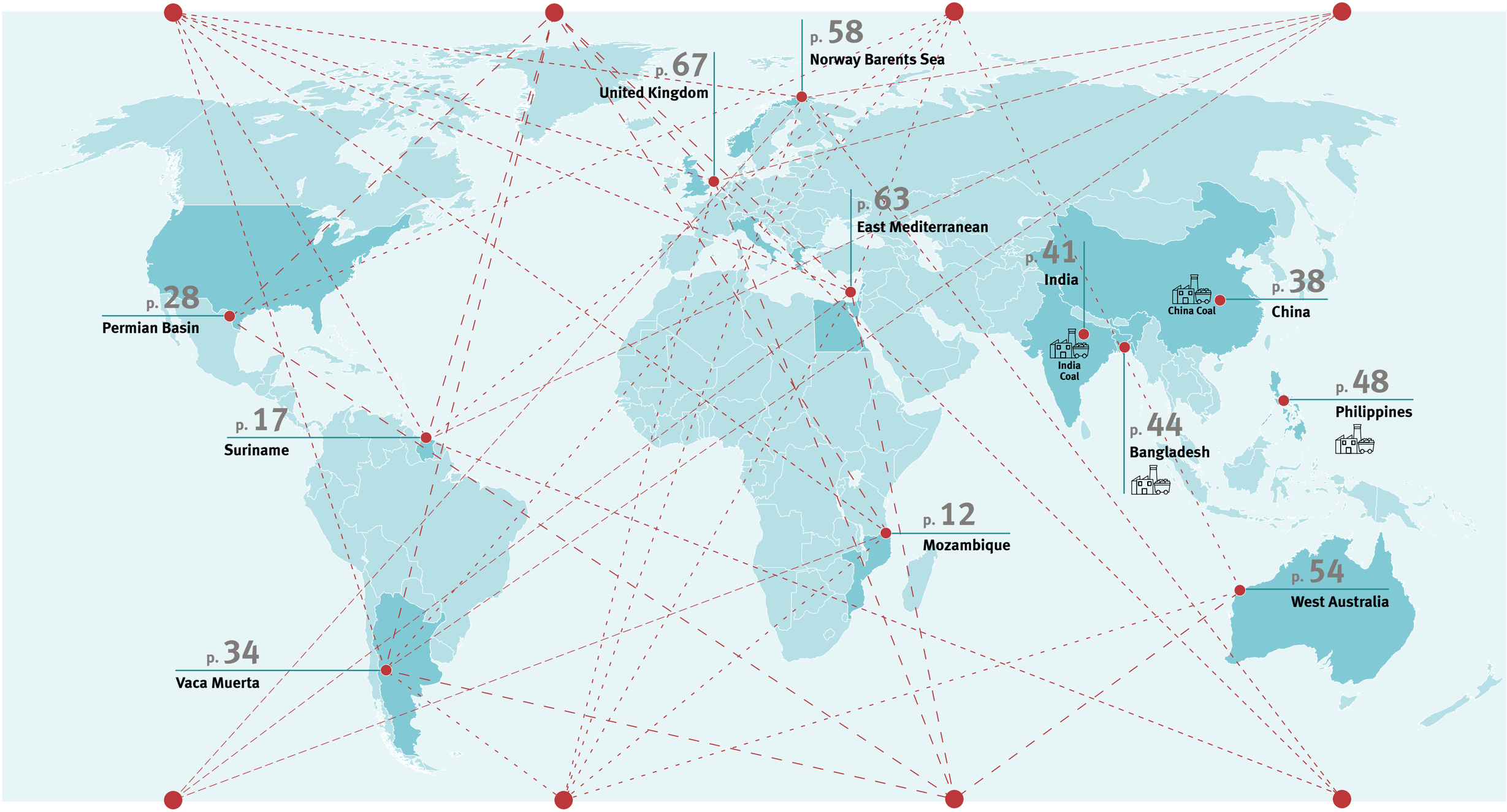
A multitude of new exclusion policies and sustainability commitments have recently been released by banks, investors, and insurers. However, the findings outlined in the "Five Years Lost" report prove that the finance industry is far off from having aligned its business model with the Paris Agreement. The 12 case studies, while by no means the only examples of unhindered fossil fuel expansion, should be seen as a litmus test for the industry. As long as financiers do not divest from the top companies driving these fossil fuel expansion projects forward, their sustainability announcements clearly ring hollow. **Effective exclusion policies need to ensure that companies leading new fossil fuel extraction programs do not receive the funding to waste any more of our time in the fight against the global climate crisis.**

TOTAL

ExxonMobil

Chevron

equinor



eni

bp

Shell

REPSOL

Methodologies

Author: LINGO, Kjell Kühne

How we calculate potential emissions

In this report, you will find figures for potential CO_2 emissions from the projects discussed, expressed in gigatons CO_2. A gigaton is 1 billion tons, roughly equivalent to the annual emissions of Mexico and Brazil combined. These are potential emissions because we still have time to avoid them. Only if we let the projects go forward will these emissions occur. Our data mostly stems from governments, the Intergovernmental Panel on Climate Change and the companies themselves. In order to be transparent about our calculations, we describe below the methods for arriving at our emissions estimates for different categories of projects. These methods are kept relatively simple for two reasons. Firstly, we hope to avoid the setting off of these carbon bombs. Knowing their rough size is enough for defusing them, you don't need any digits behind the comma for that. Secondly, we invite our readers to apply these methods to other projects to estimate their emissions potential.

Oil projects. We use resource figures from Rystad (Estimated Ultimate Recovery - EUR) where available, which are reported for oil as barrels (volume). We include crude oil, condensate and "natural gas liquids" in oil equivalents, while gas is calculated separately as described below. These are converted to tons (weight), then to joules (energy content) and finally multiplied by an emissions factor of CO_2 per joule from the IPCC. This gives a global average of 0.42 tons of CO_2 per barrel of oil. If you encounter reserves figures expressed in mbl (million barrels) or mboe (million barrels of oil equivalent), multiply them by 0.42 and you get million tons of CO_2 emissions.

Gas projects. Fossil gas reserves are reported in cubic feet or meters (volume), which we directly convert to joules (energy content) before multiplying with the IPCC emissions factor to arrive at CO_2 values. This gives a global average of about 2 million tons of CO_2 per billion cubic meters (bcm) of gas. If you encounter figures in billion cubic feet (bcf) you need to divide them by 35 to arrive at bcm figures. We also use the Rystad database for gas projects. In fact, oil & gas extraction usually occur together and the oil & gas industry is one complex. Methane emissions are added to the CO_2 total (see below).

LNG terminals. Gas is liquefied in enormous plants that cost billions of dollars and their capacity is quantified in million tons of LNG production per annum (mtpa). Besides the gas burnt at the end of the process, there are emissions for liquefying, shipping and regasifying, and a percentage of gas leaking into the atmosphere. For the report, we calculated potential emissions through multiplying the processing capacity of the facility with this emissions factor and the assumed lifetime.

Coal power plants. We use a method developed by Global Energy Monitor (GEM) which multiplies a coal plant's capacity in MW with a capacity factor (expressing what percentage of hours a plant is running at full capacity each year), with a heat rate and an emissions factor depending on the type of coal and the number of years of expected lifetime for the plant. Details can be found in GEM's Global Coal Plant Tracker - a comprehensive list of all coal power plants worldwide.

Gas power plants. We multiply the plant capacity with its operating hours (capacity factor) and a lifecycle figure for CO_2 emissions per kWh. This annual number is then multiplied by the expected lifetime of the plant.

Coal reserves. We transform reserve weights in tons into joules (energy content) through energy content tables which specify the type of coal, and then use emissions factors provided by the IPCC for different types of coal to calculate the CO_2 emissions per joule. When country-specific or mine-specific data is available we use it, else we use global averages. A ton of coal - depending on its type - causes roughly 2 tons CO_2 on average.

Gas Pipelines. We use a simple calculation of the capacity that can be transported through the pipeline multiplied by an emissions factor from IPCC 2006 and assuming a 40-year lifetime. A billion cubic meters (bcm) of gas, the common unit to express pipeline capacity, results in about 2 million tons of CO_2.

Methane leakage. In the case of LNG terminals, gas pipelines and gas reserves, we have added methane emissions to CO_2 figures, producing CO_2 equivalent (CO_2 e) figures of total climate impact. Methane is commonly converted into CO_2 equivalencies by multiplying it with a factor of either 86, for 20-year equivalency (Global Warming Potential over 20 years, or GWP20) or 36 for 100-year equivalency (GWP100). This masks the immediate warming impact of methane in real life where no statistical watering down over a longer time is available. The immediate warming ef-

fect of methane is more than 100 times as strong as CO_2. However, after 12 years, methane is mostly gone from the atmosphere. In our report, we used the GWP20 value which is closer to its immediate impact.

Example:
The Suriname-Guyana offshore oil & gas basin has

11.2 billion barrels of oil equivalent x 0.42 emissions factor = 4.7 gigatons CO_2
+
371 billion cubic meters of gas x 2 emissions factor = 742 Million tons CO_2 (0.7 Gt CO_2)
+
371 bcm x 2.3% supply chain leakage rate x 0.666 (kg per cm) x 86 (CH4 emissions factor)
= 489 Million tons CO_2 (0.5 Gt CO_2)

= Total: 5.9 gigatons CO_2 equivalent

Oil reserves

What	Amount	Unit	Source
Oil weight	0.1364	tons per barrel	*https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf*
Crude oil energy content	41.868	TJ per ktoe	*https://unstats.un.org/unsd/energy/balance/conversion.htm*
Crude oil emissions factor	73300	kg CO_2 per TJ	*https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf*
Oil reserves CO_2 emissions	0.4186	tCO_2 per barrel	

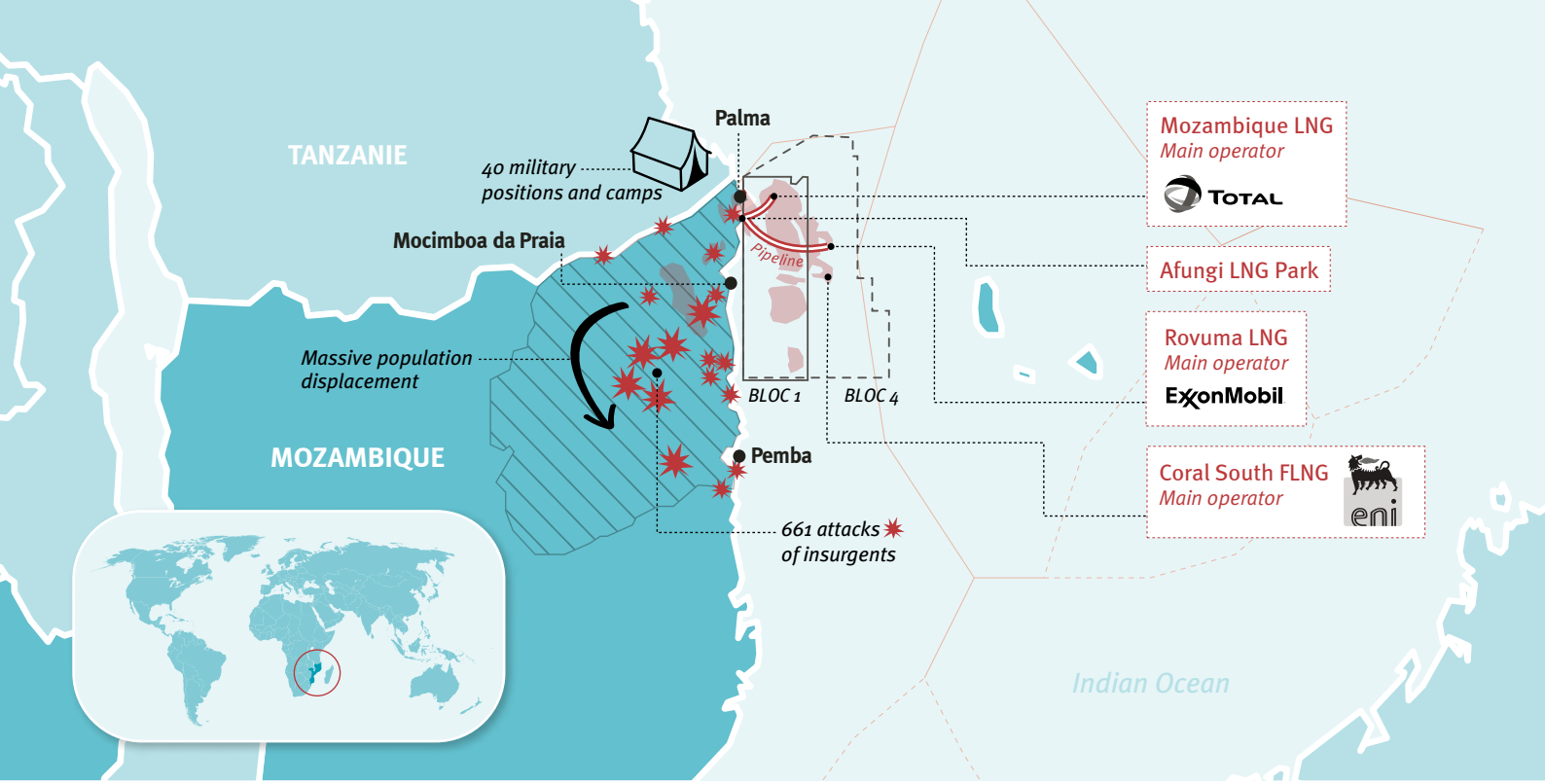
Gas reserves

What	Amount	Unit	Source
Gas energy content	36000	TJ per bcm	*https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf, page 66*
Gas emissions factor	56.1	tCO_2 per TJ	*https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf*
Gas reserves CO_2 emissions	2.0196	million t CO_2 per bcm	

Financial Research

The authors of the individual case studies determined the top 25 companies that are essential to driving the respective projects forward. The total list of 133 companies (due to overlap of companies among projects) was submitted to the research organization Profundo. Profundo used Refinitiv and Bloomberg databases to research the companies' financiers and investors. Corporate loans, and underwriting of bond and share issuances are considered financing. The scope of this research for credit activities is January 2016 to August 2020. Bondholdings and shareholdings were analysed at the most recent filing dates in August 2020.

The tables with the top 30 Banks and top 30 investors derived from the research results and displayed in each of the case studies refer to the companies listed in the respective chapters. The financial data displayed in the chapters represents mainly corporate finance, not project finance, unless mentioned separately and in addition to the company finance research results.



MOZAMBIQUE

Author: Friends of the Earth France, Cécile Marchand, Lorette Philippot; Re:Common, Alessandro Runci

Huge gas reserves, massive capital flows

Between 2010 and 2013, huge gas deposits were discovered in Mozambique. More than 3 trillion cubic meters were found, making this the 9th largest gas reserve in the world.[6] This discovery kicked off a fierce race between foreign multinationals for these resources, and a massive influx of international capital. The multinationals plan to invest more than $60 billion just in the exploitation of an initial small portion of the huge Mozambican gas field, the largest private investment ever made in sub-Saharan Africa. A dizzying sum, it represents more than half of the amount required to face the coronavirus challenge across the continent, according to an estimate by African finance ministers.[7] This investment would be 50 times the money collected by the UN to fund reconstruction efforts in Mozambique after the ravages of tropical cyclones Kenneth and Idaï in 2019[8]. The IMF estimates that a total of $100 billion of foreign direct investment could be injected into Mozambique over a 30-year period and into the gas reserves[9].

Coral South FLNG

Main operator: Eni
Gas field: Coral
Capacity: 3.4 Mtpa
Volume of investments: $8 billions
Date of final investment decision: June 2017
Expected date of operation: 2022

Mozambique LNG

Main operator: Total
Gas field: Golfinho et Atum
Capacity: 12.9 Mtpa
Volume of investments: $24 billions
Expected date of final investment decision: June 2020
Expected date of operation: 2024

Rovuma LNG

Main operator: ExxonMobil
Gas field: Mamba
Capacity: 15.2 Mtpa
Volume of investments: $30 billions
Expected date of final investment decision: 2021
Expected date of operation: 2025

Key facts:

- **3,316 billion** cubic meters of gas reserves
- **677 families** forced to resettle and **1,049 families** economically directly negatively impacted by loss of land to gas projects
- Already **$60 billion** of investments are planned, representing 4 times the Mozambican GDP
- 3 years of conflicts and attacks are responsible for at least **2,193 killings** and **355,000 people fleeing** their homes

Fish drying in the sun in Milamba in the Cabo Delgado region

However, this 'windfall' is already proving a curse for the population of Mozambique, especially for local communities in Cabo Delgado province, fuelling corruption, violence and militarization, generating human rights abuses, poverty and social injustice.

Top Fossil Fuel Companies currently operating and/or holding licenses
Bharat PetroResources
China National Petroleum Corp. (CNPC)
Delonex Energy
ENI
Empresa Nacional de Hidrocarbonetos (ENH)
ExxonMobil
Gabriel Couto
Galp Energia
Indian Oil Corp Ltd (IOC)
INPEX
JGC Corp
Kogas (Korea Gas Corporation)
Mitsui
Oil India
ONGC Videsh
Petronas
PTT Exploration & Production (PTTEP)
Qatar Petroleum
Rosneft
Saipem
Sasol
TechnipFMC
Total
Tullow

Oil reserves:
1887 *mboe*

Gas reserves:
3316 *bcm*

Total potential emissions:
11.9 *Gigatons of CO_2e*

Fossil gas - starting point of a corruption scandal and of the debt crisis in Mozambique

A corruption scandal closely linked to the fossil gas industry plunged the country into an economic and financial crisis in 2016. In 2013, the Mozambican government issued $850 million of bonds, officially intended for the creation of a tuna fishing fleet, called the "tuna bonds", and facilitated by Credit Suisse, Russia's VTB Group and France's BNP Paribas.[10] It appears that three years later the Mozambican government secretly guaranteed three international loans totalling $2 billion.[11]

The true goal of this colossal illegal debt: financing a defence programme designed to ensure the country's sovereignty over its exclusive economic zone and the fossil fuel reserves it contains. Way before any gas projects were even on the table, these reserves were thus already the cause of corruption and misuse of public funds, pushing Mozambique into a deep crisis. It locked the country into a vicious circle, where the only path for recovery is by leaving the field free for foreign powers and multinationals to exploit and sell the gas reserves, for the purported benefit of the Mozambican people[12].

Compound of US oil company Anadarko

Top 30 Banks January 2016 - August 2020	
Banks	**Total Loans & Underwriting (in mln US$)**
Citigroup	25,038
Bank of America	21,498
JPMorgan Chase	20,883
Barclays	13,294
HSBC	13,095
Société Générale	10,884
VTB Group	10,454
State Bank of India	8,734
SMBC Group	7,858
Mitsubishi UFJ Financial	7,830
Mizuho Financial	7,618
BNP Paribas	7,264
Crédit Agricole	7,031
Russian Regional Development Bank	6,416
Morgan Stanley	6,360
Bank of China	5,063
China Minsheng Banking	5,050
UniCredit	5,032
Deutsche Bank	4,828
Eximbank of the United States	4,700
Goldman Sachs	4,563
Industrial and Commercial Bank of China	4,320
DBS	4,082
Standard Chartered	3,812
JBIC	3,699
Intesa Sanpaolo	3,582
Wells Fargo	3,458
Agricultural Bank of China	3,029
CITIC	2,935
Punjab National Bank	2,683
Total	**235,095**

Top 30 Investors as of August 2020	
Investor	**Total Bonds & Shares (in mln US$)**
BlackRock	24,076
Vanguard	23,453
State Street	11,243
Norwegian Government Pension Fund	8,179
Fidelity Investments	3,894
Geode Capital Holdings	3,553
Capital Group	3,483
T. Rowe Price	3,143
Bank of New York Mellon	2,991
Northern Trust	2,839
Sumitomo Mitsui Trust	2,831
Crédit Agricole	2,739
Mitsubishi UFJ Financial	2,438
Wellington Management	2,164
Dimensional Fund Advisors	2,137
UBS	2,092
Charles Schwab	2,072
Public Investment Corporation	2,038
Mizuho Financial	2,008
Franklin Resources	1,904
State Farm	1,875
Deutsche Bank	1,771
KWAP Retirement Fund	1,668
Invesco	1,632
Permodalan Nasional Berhad	1,579
Bank of America	1,559
Life Insurance Corporation of India	1,450
Caisse de dépôt et placement du Québec	1,448
TIAA	1,446
JPMorgan Chase	1,426
Total	**125,131**

The resource curse

The oil and gas majors involved in Mozambique and their bankers say the new gas projects will help develop the country and generate income that will lift Mozambique out of poverty. But all the signals are red in terms of Mozambique already falling into the often-seen phenomenon of the "natural resource curse" whereby the exploitation of natural resources for export enriches a small elite but further impoverishes the majority of the population and further entrenches corruption, social divisions, and political instability.

First of all, the projects do not aim to increase the population's access to energy: 90% of the LNG production is destined for export;[13] only three small local industrial projects have been selected, two of which are to export fertilizers (Yara) and liquid fuels (Shell). Moreover, the gas reserves are almost exclusively held by dozens of transnational corporations – with the exception of Mozambique's state-owned ENH. The main operators of LNG projects are France's Total, Italy's ENI and United States' ExxonMobil, and they are being developed with financial support from foreign public and private banks – with a strong role played by international ECAs and French commercial banks. Siemens Energy will participate in the project by delivering six turbines and four centrifugal compressors to the Total-led project. Most of the jobs created for the development of gas infrastructure in the Cabo Delgado region escape its inhabitants, as the majors and their contractors have preferred to bypass the weak requirements for hiring local workers.

Construction site resettlement village

At the same time, the gas companies are in a strong position to impose their conditions and capture all the profits. The agreements between the government and the operators stipulate that it will be at least a decade before export revenues start to fill the state coffers under the most optimistic scenarios. This means that the gas companies stand to recoup their investments in the more-certain near term, but the state will bear the risks of the long-term uncertainties over LNG demand and pricing in a time of rapid changes in energy markets. The tax package set up for the first LNG terminal project, Coral South FLNG, is structured so as to encourage tax evasion and fraud. Instead of benefitting the Mozambican people, the gas reserves have been feeding a corrupted elite that has been protecting the majors' interests for years.

In Cabo Delgado, communities trapped in violence and fear

Since October 2017, insurgent attacks have been on the rise in the Cabo Delgado province. The violence has resulted in the deaths of at least 2,193 people, predominantly among the local communities,[14] and over 355,000 people had to flee their homes.[15] Villages have been burnt to the ground, young women have been kidnapped, community members and journalists have been missing for months. In the middle of 2020, Cabo Delgado became one of the most dangerous and unstable regions of the globe. The insurgency, allegedly associated with ISIS and Al-Shabab, has fed on a morass of social, religious and political tensions, exacerbated by the rising inequality and human rights violations that have arrived with the gas projects.[16]

Confronted with this situation, the Mozambique government has opted for a strategy of increased militarisation to protect gas infrastructure, with the major gas operators paying the Mozambican government to mobilise troops to protect them. Faced with the weakness of the Mozambican army, Russian, American, South African and French private security companies are also present. In August 2020, Total and the Mozambican government signed a security pact which creates a joint task force to protect the French oil and gas giant's infrastructure. This security agreement has been denounced as discriminatory by Mozambican civil society, as it focuses on protecting Total's interests and ignores the impact of the much broader armed conflict elsewhere in the province of Cabo Delgado.[17]

The gas industry and its financiers' responsibility for human rights abuses[18]

Local populations are the first victims of gas exploitation. In order to build onshore infrastructure, entire villages have been razed to the ground. Transnational corporations have already forced over 677 families from their homes and lands.[19] In compensation, companies have offered local communities land a mere tenth of the size of the original plots. The land is often inaccessible, more than 20 kilometers away from the places where people are being resettled. The same applies to their access to the sea, as the buses made available to get to the coast do not correspond to fishing schedules. This geographical remoteness also makes the resettled communities more vulnerable to attack by armed groups. These rural populations dependent on fishing and agriculture thus find themselves impoverished and deprived of all means of subsistence, creating a serious situation of food insecurity.

There is a fierce competition for land in the resettlement areas. The people already living in these territories are confronted with the requisition of land for displaced communities, the arrival of companies that have come to take advantage of the gas boom, and the installation of the Mozambican security forces, when their villages or cities are not occupied by insurgents.

Human rights violations are increasing against communities caught between insurgents, and governmental and private security forces. The military response, co-developed by the Mozambican government and gas companies, and in particular Total, has only instilled more fear in the very communities they are supposed to protect. Soldiers are abusing their power by imposing random curfews and physically assaulting vulnerable people. While the word spread that the communities being resettled were receiving some small compensation, soldiers started targeting the communities, using blackmail and violence to steal the compensation money from them. People fear leaving their homes, in case

they are attacked by extremists or mistaken for extremists by the military. According to Amnesty International, security forces are guilty of serious crimes against prisoners and alleged insurgents.[20] Videos and pictures show torture, attempted beheading, dismemberment, possible extrajudicial executions, and the transport and discarding of a large number of corpses into apparent mass graves.

People trying to tell these stories are intimidated or kidnapped by governmental forces. Mozambican journalists have been arrested or detained on contrived charges for reporting on the gas industry and violence. Journalist Ibrahimo Abu Mbaruco has been missing since April 7. His last message was one informing his mother that the military was arresting him. Many believe that he has since been killed. A very vocal community member, Mr Selemane of Palma, disappeared on 20 May, 24 hours after speaking out against the mistreatment and heavy-handed nature of the military in the area. He is still missing at the time of writing.

A new carbon bomb for a country already on the front line of climate change

The exploitation of Mozambique's fossil gas pushes yet another African country into dependency on fossil fuels, the use of which climate science tells us must be rapidly phased out. The three gas projects under development could release as much as the equivalent of seven times France's annual greenhouse gas emissions, and 49 times Mozambique's current national annual emissions. This is a ticking climate bomb ready to explode and will contribute to pushing the world even further towards an irreversible climate crisis. Ironically, Mozambique is at the forefront of the impacts of climate change. It is classified as one of the most vulnerable countries to global warming and was hit by extreme weather events just over a year ago. Cabo Delgado province is severely exposed to climate risk: it is just recovering from the strongest cyclone ever recorded in Mozambique – Cyclone Kenneth – although no tropical cyclone had hit the province for centuries.

The northern coast of Mozambique is home to an incredible biodiversity at risk from gas projects and climate change. About 60% of the remaining mangrove forests in East Africa are in Mozambique. These are important reserves of biodiversity, providing important ecosystem services. The Quirimbas National Park – which is part of a UNESCO-listed biosphere reserve is situated only 8 kilometres from the gas fields. Some of the species present are considered to be endangered, such as the sei whale, the yellow-nosed albatross and several species of sea turtles. Degradation of natural habitats, noise, potential for collisions with ships and offshore drilling, the risk of fires and explosions are real dangers linked to gas activities that threaten these species.

While gas development in Mozambique is still in its early stages, it has already generated disastrous damage. The massive investments already happening and expected for the future would generate a lock-in effect and prevent the country and its population from ever accessing a just and sustainable development. The public and private financial players backing these investments have to urgently stop pouring oil onto Cabo Delgado's ongoing fire.

Project financing for Coral South FLNG

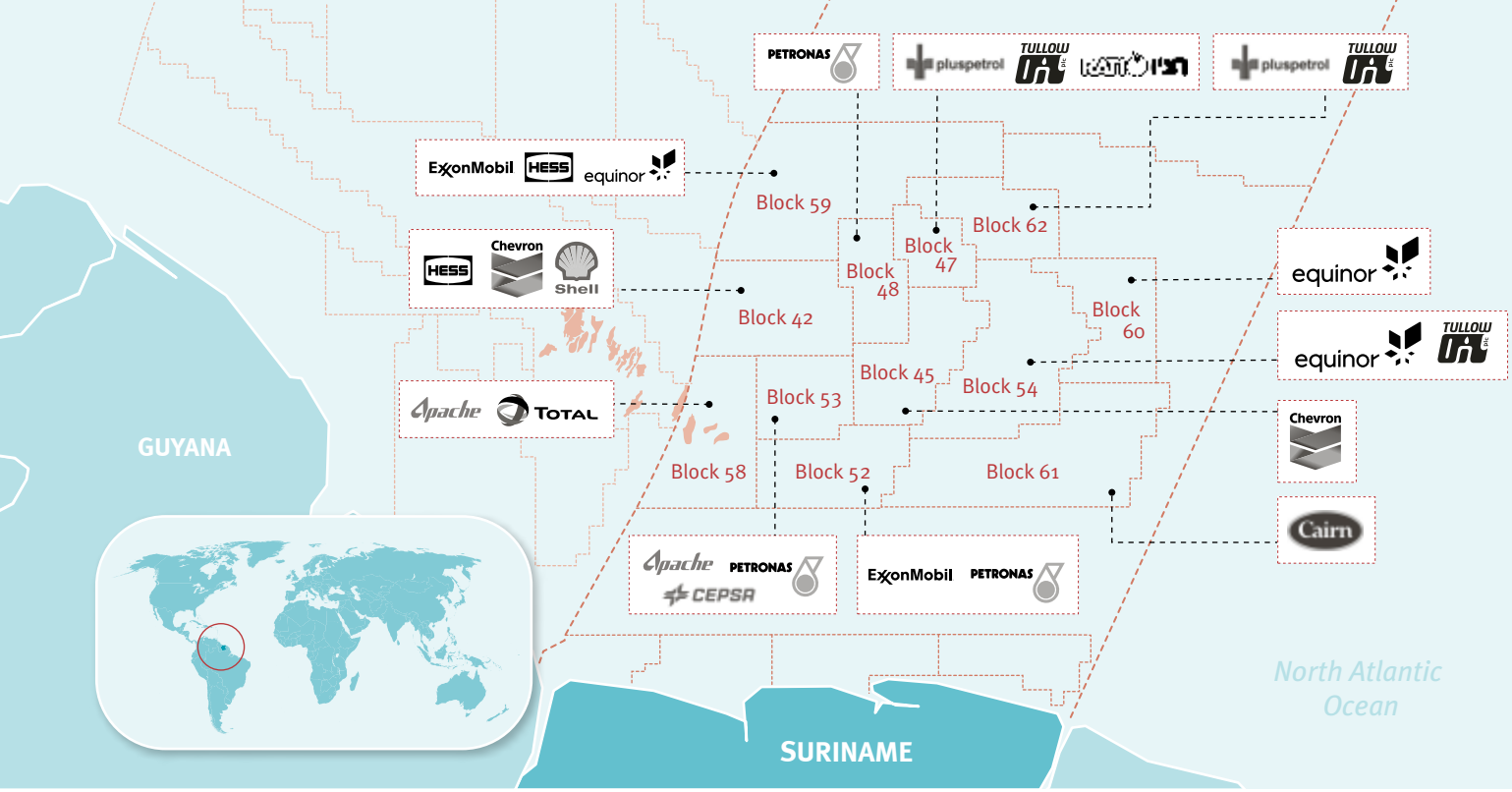
Public financial institutions	Financial advisors
Financiers: Korea Eximbank KDB Financial Group Bank of China Industrial and Commercial Bank of China China Eximbank	Crédit Agricole Portland Advisers
Refinancier: SFIL bank	
ECAs coverage: Bpifrance SACE Ksure Kexim Sinosure	

Project financing for Mozambique LNG

Public financial institutions	Financial advisors
Financiers: JBIC US Exim EXIM Thailand African Development Bank African Export-Import Bank Development Bank of Southern Africa ICBC UK Export Finance Industrial Development Corporation of South Africa Export-Import Bank of United States	Société Générale Taylor DeJongh
ECAs coverage: NEXI Atradius DSB ECIC UK Export Finance SACE	

Project financing to Rovuma LNG

Public financial institutions	Financial advisors
Financiers: US Exim	Crédit Agricole



Big Oil has set its eyes on SURINAME

Author: Urgewald, Jacey Bingler

120 miles off the north-east coast of South America lies one of the biggest fossil fuel discoveries of our time.[21] The U.S. Geological Survey assesses the currently known reserves in the Guyana-Suriname basin at 13.6 billion barrels of oil and 32 trillion cubic feet of fossil gas.[22] An updated appraisal, which the agency had planned for 2020 but which has been postponed due to the COVID pandemic,[23] is expected to yield even higher numbers. Industry media indicate that Suriname's part of the basin's offshore reserves may be underexplored and underestimated.[24]

Production has not started yet in Suriname's offshore oil fields. However, three major discoveries made in Suriname's Block 58 in 2020 have further attracted the attention of international oil companies. Rystad Energy estimates the findings to sum up to a combined 1.4 billion barrels of oil equivalent resources.[25]

Top Fossil Fuel Companies Exploring or Drilling Off Suriname:
Anadarko Petroleum/Occidental
Apache Corp
BASF
Cairn Energy
CEPSA
Chevron
CNOOC
DEA
Eco Atlantic Oil & Gas
Equinor
ExxonMobil, ExxonMobil Exploration and Production Suriname B.V.
Frontera Energy
Hess Corp
Kosmos Energy
Murphy Oil
Noble Energy
Occidental Petroleum
Petronas, Petronas Suriname Exploration & Production B.V.
Pluspetrol
Qatar Petroleum
Ratio Petroleum
Repsol
Ratio Oil Exploration
Schlumberger
Total
Tullow Oil

Sea mud flats with concrete wall

Developing these three most recent discoveries in Block 58 alone could result in a peak production of 450,000 barrels of oil per day.[26] In comparison, the UK's total oil production is currently 1.1 million barrels per day.[27]

The oil & gas development in the Guyana-Suriname basin has been met with growing concern and criticism over the past year. Local and international civil society organisations[28] have especially called attention to Exxon's and the World Bank's involvement in the drilling program in Guyana.[29] Big Oil's increasing advances into Suriname's share of the basin, however, are still at an earlier stage and have so far received less public scrutiny.

Big Oil has set its eyes on Suriname

A host of US and European oil majors are currently expanding their presence in Suriname's offshore oil fields: ExxonMobil (USA), Total (France), Apache (USA),

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
Bank of America	46,930
Citigroup	42,975
JPMorgan Chase	37,667
Barclays	23,539
HSBC	19,451
Société Générale	17,849
Mitsubishi UFJ Financial	15,663
Wells Fargo	12,989
Mizuho Financial	11,191
Morgan Stanley	10,270
BNP Paribas	10,259
Goldman Sachs	9,222
Deutsche Bank	8,576
SMBC Group	6,359
Scotiabank	6,295
Crédit Agricole	5,926
ING Group	5,648
Royal Bank of Canada	4,875
Standard Chartered	4,856
Banco Bilbao Vizcaya Argentaria (BBVA)	4,392
UniCredit	4,319
Credit Suisse	3,451
Bank of China	3,284
US Bancorp	3,209
Northern Trust	3,185
Toronto-Dominion Bank	3,029
PNC Financial Services	2,917
Santander	2,867
BPCE Group	2,796
DNB	2,642
Total	**336,631**

Top 30 Investors as of August 2020

Investor Parent	Total Bonds & Shares (in mln US$)
Vanguard	46,394
BlackRock	45,301
State Street	27,087
Capital Group	12,998
Norwegian Government Pension Fund	12,301
Fidelity Investments	9,190
Dodge & Cox	7,546
Geode Capital Holdings	7,133
Northern Trust	6,104
Bank of New York Mellon	5,615
T. Rowe Price	5,094
UBS	4,890
State Farm	4,775
Bank of America	4,714
Invesco	4,482
Dimensional Fund Advisors	4,278
JPMorgan Chase	4,230
TIAA	4,139
Franklin Resources	4,096
Wellington Management	4,073
Deutsche Bank	4,036
Charles Schwab	3,807
Crédit Agricole	3,661
Morgan Stanley	3,128
Legal & General	2,977
Allianz	2,929
Wells Fargo	2,699
Equitable Holdings	2,521
Ameriprise Financial	2,362
Goldman Sachs	2,325
Total	**254,884**

Hess (USA), Tullow Oil (UK), Anadarko (USA), Chevron (USA), CNOOC (China), Repsol (Spain) and Equinor (Norway) are just some of the fossil fuel companies currently vying for licenses in the area.

Suriname's national oil company, Staatsolie, launched a bidding-round for three offshore blocks - Block 58, 59 and 60 - in the Guyana-Suriname basin in 2014.[30] While Block 58 received two bids that year, the others garnered none. At the time, the hesitancy to invest in the area was blamed on low oil prices.[31]

Three years later, ExxonMobil, with its partners Hess and Equinor, signed a production sharing agreement with Staatsolie in Block 59.[32] Apache and Total might also enter an agreement with the Surinamese state-owned company, following major discoveries made in Block 58 in 2020. Staatsolie has the right to a stake of up to 20%. This would cost the company $1-$1.5 billion to acquire given total development costs of $6-$7 billion.[33]

Examples of the biggest players in the region:

Exxon

ExxonMobil is one of the leading fossil fuel companies in the Guyana-Suriname basin. The US company hopes to be able to recover 9 billion barrels of oil equivalent from Guyana's Stabroek block alone.[34] In Suriname, ExxonMobil acquired a 50% participating interest in Block 52 from the Malaysian government-owned oil company Petronas in May 2020.[35] This added significant acreage to the US company's portfolio in Suriname, following its initial contract with Staatsolie in 2017.[36]

Apache and Total

Apache has referred to Suriname as a "world-class hydrocarbon resource".[37] Its discoveries in Suriname have been referred to as "among the most anticipated in the world" and seen as central to the US company's efforts to reduce its reliance on the Permian Basin.[38]

In December of 2019, one day before Christmas Eve, the French oil major Total announced a 50% working interest and operatorship with Apache in the "highly prospective Block 58 offshore Suriname, further expanding Total's footprint in the Guyana-Suriname basin."[39] Over the next seven months, the partners would announce three major oil discoveries in Block 58: "These very encouraging results confirm our exploration strategy in this prolific zone, which targets large volumes of resources at low development costs."[40] At the time of writing, Apache and Total are aiming for a fourth offshore discovery in Suriname.[41]

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Aerial view of bridge over the Suriname river in Paramaribo

Equinor

Equinor was comparatively early to the exploration race in Suriname's offshore oil fields. In November 2011, the Norwegian oil company - back then called Statoil until it went through a name change to signify a "future beyond oil" - entered a joint operation with Tullow Oil (USA) for Block 47.[42] Six years later, Equinor spoke of "a strengthened exploration position" in Suriname[43] after signing agreements for additional exploration licenses with consortium partners ExxonMobil and Hess. To date, Equinor holds production sharing contracts for Block 54, 59 and 60.[44]

Total CO_2 emissions in the entire Guyana-Suriname basin:

Oil reserves: **11,219** *mboe*
(**Of which are in Suriname** **1,636** *mboe*)

Gas reserves: **370** *bcm*
(**Of which are in Suriname** **64** *bcm*)

Total potential emissions **5.9** *Gigatons of CO_2e*

A carbon sink threatened by sea level rise

Suriname is recognized as the most forested country in the world and as such plays an important role in mitigating global CO_2 emissions as a carbon sink.[45] The country has a total population of 576,000. Most citizens live in the coastal capital Paramaribo, which is already threatened by rising sea levels. A UNFCCC report from April 2020 concludes that the lowest value of the maximum projected sea level rise for Suriname is 80 cm. The highest value of projected sea level rise cited by the study is close to 2 meters.[46] Some of the expected effects of increasing sea level rise are a decrease in fresh-

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Marina in Suriname's capital city Paramaribo

water availability in aquifers and surface water bodies, saltwater intrusion in rivers and aquifers, pollution of surface water resources, increased frequency of flooding and drought, and damages to coastal infrastructure, which would hit Paramaribo, Suriname's economic center, the hardest.

One of the World Bank's new focus areas?

The World Bank Group's Climate Change Knowledge Portal entry on Suriname states: "Suriname has taken the initiative to move away from business-as-usual and to chart a course towards climate compatible development."[47] It is currently unclear how or if the World Bank Group will assist the development of Suriname's oil reserves. However, it is important to note that the World Bank Group approved a $23 million technical assistance operation for Suriname in July 2019 aimed at development of the extractive industries, which could include oil and gas.[48]

As long as the World Bank pays to pave the way for big oil to exploit the Guyana-Suriname basin's resources at the cost of its people and the environment - as has been recently documented in similar cases[49] - any promises around climate responsibility ring hollow. The Bank's warning that the region will be severely impacted by the climate crisis and resulting sea-level rise is beyond cynical.

ExxonMobil has a dark history when it comes to oil spills. In March 1989, the Exxon Valdez oil tanker spilled 11 million gallons of crude oil into Alaska's Prince William Sound. 30 years later, the tremendous damage has still not been repaired.[50] An accident in the Guyana-Suriname basin could impact the Caribbean as a biodiversity hotspot, together with the industries depending on intact ecosystems in the entire region.

An oil spill could impact neighboring countries in the Caribbean

Aside from its devastating impact on the global climate, the extraction program in the Guyana-Suriname basin bears risk of accidents. Most of the resources in the region are located in 5,000 meters depth below 1,000 - 2,000 meters of water.[51] [52] Such ultra deep-sea drilling involves high pressures at the sea bed, which makes it exceedingly dangerous.[53] A recent study shows that each 100 feet of added depth increases the probability of accidents, such as blowouts, injuries, and oil spills, by 8.5%.[54] In the Guyana-Suriname basin's case, a spill could impact neighboring countries in the Caribbean,[55] potentially damaging marine and landborne species alike.[56] The Caribbean depends on its eco-tourism sector, an industry that in pre-pandemic times was worth US$ 16 billion annually and created 650,000 jobs.[57]

An ailing industry stuck in the past

Big Oil has placed a high bet on the Guyana-Suriname basin becoming one of its most productive and profitable crude deliverers. The COVID-19-related price crash has hit oil and gas producers with a record low that saw the first negative oil price in history.[58] ExxonMobil, for example, reported a $1 billion loss for the second quarter[59] and a $680 million loss for the third quarter[60] of 2020. Nonetheless, the US oil major is doubling down on its extraction strategy. At the time of writing, the company is seeking approval for additional wells in the Guyana-Suriname basin[61], while announcing new findings of yet more "high quality" reservoirs.[62]

Exxon, Total and Apache alone have received $280 billion in financing since the Paris Agreement from private financial institutions. Such funding - together with support from public institutions like the World Bank - allows the struggling oil industry to continue exploiting one of the biggest crude discoveries in recent history at a climate cost that is too high to pay.

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Flamingos dancing in the shallow water

European Central Bank

The role of public finance

Public international finance institutions play a crucial role in perpetuating the fossil fuel industry worldwide – far more so than the face value of the financing might suggest. Financing from national export credit agencies (ECAs), development finance agencies (DFIs), and multinational development banks (MDBs) for fossil fuel projects decreases perceived project risk and so helps leverage multiple times more private sector financing for projects. MDB policy and technical assistance loans shape development paths by creating host country legal frameworks that enable large fossil fuel projects to move forward. And, ECA, DFI and MDB policies become international standards that often influence private bank policies (e.g. IFC Performance Standards underpin the Equator Principles). Hence, public finance institutions must remain a crucial focus of efforts to curb fossil fuels globally.

Export Credit Agencies

Author: Friends of the Earth USA, Doug Norlen

Background: Export Credit Agencies (ECA) provide government-backed loans, guarantees, insurance and other financial products to support the export of goods and services.[63] While "goods and services" may sound relatively benign, in the fossil fuel sector "goods" can include vital components for construction and operation of fossil fuel extraction, mining, transport, processing, refining, and power generation and related infrastructure. Fossil fuel "services" can include engineering, construction, and service firms necessary to build, operate and maintain fossil fuel infrastructure.

Despite their relative obscurity, ECAs are the largest source of public financing for fossil fuel projects abroad. According to a report by Friends of the Earth U.S. and Oil Change International, between 2016 and 2018, total annual G20 public financing for fossil fuel projects abroad was at least $77 billion, of which ECAs provided $40.1 billion annually, compared to $25.1 billion by development finance institutions and $11.5 billion by MDBs. In contrast, during this time, G20 ECAs provided $2.9 billion for clean energy.[64]

The Worst Actors: Export Development Canada (EDC) provided the most fossil fuel finance among G20 ECAs during the 2016-2018 period, providing an average of $10.6 billion annually. This is partly the result of an expansion of EDC's mandate allowing financing for domestic projects in response to the global recession beginning in 2008. This allowed financing for carbon bomb fossil fuel projects in Canada, including tar sands extraction, the Trans Mountain tar sands pipeline and

the Coastal Gaslink fracked gas pipeline, all of which have been criticized for violating indigenous rights.[65] [66]

Japan's ECAs, the Japan Bank for International Cooperation (JBIC) and Nippon Export and Investment Insurance (NEXI) are collectively the second worst fossil fuel financiers among G20 ECAs during the 2016-2018 period, providing an average of $8.4 billion annually. Japan ECAs are distinct from their G20 counterparts due to their extensive exploitation of loopholes in international coal plant financing restrictions, providing financing for coal projects in Vietnam, Indonesia and Bangladesh.[67]

China's ECAs, China Export and Credit Insurance Corporation (SINOSURE) and the Export-Import Bank of China (CHEXIM) are collectively the third worst fossil fuel financiers among G20 ECAs during the 2016-2018 period, providing an average of $7.7 billion annually. China's ECA tends to focus on mega-projects, creating carbon bombs in countries including Brazil, Angola and Russia.[68] [69]

Korean ECAs are collectively the fourth worst fossil fuel financiers among G20 ECAs during the 2016-2018 period, providing an average of $5.3 billion annually. Despite the fact that most G20 ECAs are decreasing their financing for coal, Korean ECA support includes $2.5 billion for the Nghi Son 2 coal plant and the Vinh Tan 4 extension in Vietnam and the Jawa 9 and 10 and Cirebon 2 coal plants in Indonesia. If completed, these projects will increase deadly air and water pollution into the surrounding communities.

Fossil fuel finance from the U.S. Export-Import Bank (EXIM), historically among the top G20 ECA fossil financiers, peaked at around $10 billion in 2012.[70] In subsequent years EXIM's Congressional authority lapsed, rendering the agency unable to finance large fossil fuel projects. However, in 2019 EXIM regained its full authority, and subsequently the agency's fossil fuel financing skyrocketed, including nearly $5 billion in support for the Mozambique LNG project, the largest transaction in the agency's history.

The Italian ECA, SACE, has traditionally been a major supporter of the fossil fuel industry, especially of companies such as Eni and Saipem. In 2019, oil and gas corporations have been the top recipients of SACE's financing, with $4.6 billion. The Italian ECA has heavily backed Mozambique LNG ($4.6 billion), and it is considering funding Novatek-led Arctic LNG-2 in Siberia.

ECAs and COVID-19: Like most public finance institutions, ECAs have expanded their role in providing financial stimulus in response to COVID-19. Concerns continue to grow that ECA COVID-19 response will provide unwarranted bailouts to the fossil fuel industry in ways that fail to help project-affected communities or workers. Indeed, in some cases ECA-backed projects have done quite the opposite, such as Mozambique LNG, which has displaced local communities, contributed few jobs for local people, and became the epicenter of the COVID-19 outbreak in Mozambique.[71]

Policy Progress: In November 2015, most OECD-member ECAs agreed to a *Sector Understanding on Export Credits for Coal-Fired Electricity Generation Projects*. The Coal Sector Understanding, which omits restrictions on coal mining and transport, "is meant to encourage both exporters and buyers of coal-fired power plants to move away from low-efficiency towards high-efficiency technologies ...."[72] Hence, rather than ending ECA financing for coal, the Sector Understanding aims to support the next generation of coal power plants. This, and the Sector Understanding's multiple loopholes, contributed to an increase in ECA financing for coal (primarily from the ECAs of Japan and Korea) between 2016 and 2018. Meanwhile, the Sector Understanding contains no restrictions on other fossil fuels, despite that between 2016 and 2018 G20 ECA financing for oil and gas eclipsed that of coal, representing 63.4% and 14.7%, respectively, of total energy financing. The Sector Agreement is scheduled for revision in January 2021, "with the objective of further strengthening its terms and conditions."

A few ECAs have made some progress, but have not gone far enough. France has banned export support for coal exploration, mining and the production of energy from coal; unconventional oil and gas; extra heavy oil; and operations linked to routine flaring. France has also proposed additional restrictions on conventional oil and gas support in order to end support for exploration and development of new oil reserves by 2025; for exploration and development of new gas reserves by 2035. One of Sweden's ECAs has forbidden support for financing oil and gas exploration and extraction. Other governments, such as the United Kingdom, are considering restrictions on export support for oil and gas.

Recommendation: ECAs should end all forms of support for transactions that support fossil fuels, including those that support extraction, transport, processing, refining, combustion or use of fossil fuel products.

Multilateral Development Banks

Author: Urgewald, Heike Mainhardt

The Importance of Multilateral Development Banks to the Expansion of Fossil Fuels

The development of fossil fuels, whether for exploration, production, power generation, or transport, requires significant funding over a relatively long period of time stretching between 10 to 20 years and beyond. Such long-term finance is not readily available from commercial banks and investors, which have to limit their exposure to the risks inherent in fossil fuel projects in developing and emerging market countries. Risks to a project's profitability and ability to pay back loans, include, *inter alia*: high financing costs; low demand for fuel or power; breach of contract (e.g., non-payment for fuel or power); market price volatility; political or social unrest; policy changes (e.g., tax rates); and delays in obtaining government permits.

The presence of such risks is why very few large fossil fuel projects can go forward in developing and emerging market countries without some form of public assistance. The **multilateral development banks** (MDBs) play a significant role in addressing all of these types of risks through providing billions in direct project finance (loans and equity) and guarantees (insurance); technical assistance and policy lending aimed at governance to protect investors and provide investment incentives (e.g., tax breaks); and government budget support. All of these types of MDB public assistance make possible other forms of public and private finance critical for the expansion of fossil fuels.

The MDBs include the World Bank Group (WBG) and regional development banks, including *inter alia*: African Development Bank (AfDB), Asian Development Bank (ADB), Inter-American Development Bank (IDB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB) and Asian Infrastructure Investment Bank (AIIB).[73] Among the MDBs, the World Bank Group (WBG) has the largest influence in terms of geographical reach (i.e. across every region of the world) and the scope of its operations. While the regional development banks also fund policy operations and technical assistance, it is almost always in partnership with the WBG.

The WBG has provided over $12 billion to fossil fuels since the Paris Agreement. Most of the MDBs, including the WBG, have pledged to assist countries to meet the goals of the Paris Climate Agreement. Since the Paris Agreement, Urgewald reports the **WBG has provided over $12.1 billion in public assistance for fossil fuel operations in at least 38 countries** (see Table 1).[74] This includes: $10.5 billion in new direct project finance (new loans, guarantees, equity); and $200 million of technical assistance in 11 countries aiming to push specific large fossil fuel projects forward and/or to increase future fossil fuel investments.

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International Finance Corporation

In addition to new direct finance and technical assistance, the WBG maintains $1.4 billion in fossil fuel equity investments that were made prior to the Paris Agreement. Until divested, these WBG equity investments continue to provide financial benefits to fossil fuel operations, such as lowering the cost of loans for expansions or development of new oil fields (note: $700 million of equity is in upstream operations in 11 countries). In addition, the WBG continues to get dividends and capital gains (or losses) from its equity in these fossil fuel operations.

The WBG's assistance to fossil fuels continues to be expansive across new frontier countries and in some of the world's largest oil and gas producers (see Table 1). The data show $4 billion or 35% of WBG fossil fuel assistance went to eight G20 countries; $1.4 billion went to expand upstream oil and gas operations in at least 17 countries, including the large oil producers of Brazil, Mexico, and Nigeria; $2.3 billion went for oil and gas exports; and $650 million went to six oil refineries.

Most large fossil fuel projects are financed by a mix of public and commercial finance. MDBs provide project financing and guarantees at longer tenors/maturities (e.g. from 15 to 35 years) than are typically available commercially (e.g. 5 to 10 years). Due to longer maturities, **MDBs bring down the costs of financing by around**

Box 1. Conflict of Interest: The World Bank in Mozambique & Guyana

The World Bank is providing $80 million in Mozambique and $20 million in Guyana for ongoing technical assistance aimed at developing vast oil and gas fields in both countries. Consultants funded by the World Bank in these two countries demonstrate a textbook case of conflict of interest.[75]

In 2012, World Bank technical assistance funded the law firm SNR Denton to advise the government of Mozambique on LNG agreement negotiations. The law firm also advised multiple oil companies involved in Mozambique LNG Area 1, including Total, ONGC Videsh Limited (OVL), and Bharat PetroResources.[76]

In 2016, ExxonMobil purchased a 25% interest in Mozambique LNG Area 4. In 2018, World Bank technical assistance funded the law firm Hunton Andrews Kurth "for LNG Transaction Assistance for Area 1 and Area 4." The law firm has represented ExxonMobil for some 40 years. From 2016 through 2018, ExxonMobil paid the law firm $500,000 to lobby the US government.[77]

ExxonMobil is developing the vast Stabroek oil block off the coast of Guyana. In 2019, World Bank technical assistance funded oil consultant Michael Warner to finalize Guyana's Local Content Policy. Mr. Warner previously ran ExxonMobil's Local Content Centre for Development in Guyana. Mr. Warner reduced transparency and accountability in the new draft policy by adding measures to keep oil company reporting details confidential.[78]

In February 2020, the World Bank funded a $1.2 million contract for ExxonMobil's favored law firm, Hunton Andrews Kurth, to advise Guyana's government on new petroleum laws.[79]

25%, even when blended with shorter-term commercial loans.[80] A further significant benefit is that MDBs often offer grace periods for the repayment of loans during the construction phase when risks are high and revenues are low.

Technical Assistance Paving the Way for Fossil Fuels: In July 2020, it was announced that French oil major, Total, and partners had signed financing agreements worth US$15 billion for the massive $24 billion Area 1 LNG project in Mozambique. The deal was hailed as the largest project financing ever in Africa. The finance package involves a $400 million loan from the African Development Bank with an 18-year tenor and a 4.5-year grace period for construction; billions from 8 export credit agencies (ECAs); and finance from 19 commercial banks (see the Mozambique case study).

The WBG's years of technical and policy assistance made this unprecedented investment possible. For example, since 2011, the World Bank has provided $80 million in on-going technical assistance aimed at LNG Areas 1 & 4, which funded industry consultants to advise the government of Mozambique on laying the legal groundwork and negotiating the agreements to secure the $15 billion finance package.[81] The WBG-funded consultants raise serious conflict of interest issues, as they working both for the government and with many of the oil companies involved in Mozambique LNG Areas 1 & 4 (see Box 1).

A new law covering LNG Areas 1 and 4 was adopted in December 2014, during the period when the World Bank-funded lawyers were advising the Mozambican government. Among many concessions, this law includes that **no preference needs to be given to Mozambican suppliers for goods and services paid for with financing from ECAs**.[82] This concession was key to securing ECA finance as it greatly increased opportunities for companies from the countries with participating ECAs at the expense of Mozambican firms. For example, the Export Import Bank of the United States (US EXIM) announced its $5 billion loan to Area 1 LNG involves 68 American suppliers and an estimated 16,400 American jobs.[83]

The WBG has on-going technical assistance and development policy operations aimed at fossil fuel infrastructure in over 40 countries.[84]

In addition, there are billions of dollars more going through WBG mixed operations funding both fossil fuels and renewable energy (more than $3 billion since the Paris Agreement); and investments made through financial intermediaries (e.g. commercial banks). The WBG also provides $8 to over $20 billion annually in budget support. There is a list of Excluded Expenditures for which WBG budget support loans cannot be used, including goods associated with nuclear power and military purposes. However, goods associated with fossil fuels are not included in the Bank's Excluded Expenditures. This means that World Bank budget support can be used for any type of fossil fuel infrastructure or coal/

oil/gas fuel purchase, including the building of coal power plants and upstream oil and gas operations — which the WBG has pledged not to finance.

For example, countries with significant on-going coal development (e.g. power, mining, export) that have received large WBG budget support over the last 5 years, include *inter alia*: India, Indonesia, Mozambique, Egypt, Turkey and Poland. In the case of Indonesia, from April 2016 until May 2020 the country has received at least $4.15 billion in budget support from the World Bank. For at least three of these loans worth $1.7 billion, the World Bank required, as a Prior Action for disbursement of these funds, that the central government's budget increase the amount of funding provided for new infrastructure investments. In January 2019, Indonesia's state-owned electricity company, PLN, reported that 3,963 MW of new installed power capacity would be completed within a year, of which 2,350 MW or 60% would be from new coal power plants (Java 7 (1,000 MW), Java 8 (1,000 MW) and Lontar (350 MW)).[85]

Even though the WBG has pledged not to provide direct finance to coal power plants since 2014 and to upstream oil and gas beginning in 2020, the WBG's public assistance through technical assistance, budget support, financial intermediaries and equity investments, makes these pledges highly ineffective at reducing the WBG's support for coal and upstream oil and gas.

Table 1. World Bank Group Fossil Fuel Finance since the Paris Climate Agreement[86]

Type of Operation	**Loans & Guarantees** (million US$)	**Equity** (million US$)	**Technical Assistance** (million US$)	**Total** (million US$)	**Countries**
Upstream Oil and Gas[87] (exploration, production)	$534	$697	$131	**$1,362**	Afghanistan, **Argentina**, **Brazil**, Colombia, Guyana, Egypt, Ghana, **India**, Kenya, **Mexico**, Mauritania, Mozambique, Nigeria, Paraguay, **Russia**, Senegal, Tanzania, & other undisclosed Sub-Saharan Africa
Oil Refineries	$530	$120		**$650**	**Argentina**, Egypt, Nigeria, **Turkey**
Oil & Gas Exports (pipelines; port facilities)	$1,963	$245	$50	**$2,258**	Azerbaijan (gas), **Turkey** (gas), Nigeria (oil), Colombia (oil), Kazakhstan (oil & gas), Kenya (transaction advisor, oil pipeline)
Oil & Gas fuel purchases (imports)	$540			**$540**	Mauritania (oil), Ukraine (gas)
Oil Power Generation (HFO & dual oil/gas)	$1,162	$230		**$1,392**	Bangladesh (dual-fuel), Iraq (dual-fuel), Jordan (dual-fuel), Kenya (HFO), Senegal (HFO), Sierra Leone, The Gambia (HFO), & Latin America
Liquefied Petroleum Gas (LPG)	$75			**$75**	Bangladesh, Pakistan, Ukraine
Liquefied Natural Gas (LNG) Processing & LNG-to-Power	$764	$226	$2	**$992**	Bangladesh, **Brazil**, **China**, El Salvador, **India**, Pakistan, Panama, Senegal, Sierra Leone
Gas Power and Heat Generation	$3,550	$358	$22	**$3,931**	Afghanistan, Armenia, Bangladesh, Côte D'Ivoire, Ghana, **Indonesia**, Jordan, **Mexico**, Mozambique, Myanmar, Nigeria, **Russia**, **Turkey**, Uzbekistan
Gas Processing of oil field-associated gas	$158			**$158**	Iraq
Gas Storage or Distribution (domestic)	$600	$30		**$630**	**India**, **Turkey**
Coal (power and mining)	$45	$54	$53[88]	$152	Afghanistan (TA), Kenya (captive coal plant), Mozambique (TA), Myanmar (captive coal plant)
Total	**$9,920**	**$1,960**	**$205**	**$12,085**	

Note: G20 countries are in bold.

Box 2. Fossil Fuels Not a Solution for Energy Access

When Reuters questioned the World Bank Group (WBG) on providing over $12 billion for fossil fuels since the Paris Climate Agreement, the WBG responded that the report ignores the WBG's "mandate to help around 789 million people living without access to electricity, mostly in rural Africa and Asia."[89] However, what the WBG ignores are the facts that show its support for fossil fuels does not address the energy access mandate:

- None of the fossil fuel projects included in the $12.1 billion (see Table 1) provide new electricity connections to people living without access ($2.3 billion went to oil and gas exports). The WBG projects that do provide new connections are transmission projects and distributed renewable energy projects.
- The vast majority of households living without energy access are located in rural communities which electricity grids do not reach. This means the best solution for energy access is distributed renewable energy, specifically not large fossil fuel power plants.
- Of the WBG finance that went for fossil fuel power plants, 42% or $2.7 billion went to countries that already have 100% electrification rates (e.g., Brazil, Mexico, Turkey, El Salvador) (see Table 1).
- A recent study on energy access and WBG finance in Nigeria, Mozambique and Myanmar by Recourse, Swedish Society for Nature Conservation (SSNC) and the African Coalition for Sustainable Energy and Access (ACSEA)[90] found:
- The WBG's focus on significantly expanding gas operations in all three countries neglected climate risks and problems of affordability, especially for the poor.
- The WBG prioritized finance for fossil fuels in all three countries, while significant renewable energy solutions remained under-developed and under-funded (e.g., in Mozambique fossil fuels received 16 times more funding than renewable energy).
- In Mozambique, most WBG project finance went to the 400 MW Temane gas power plant – $420 million and $100 million pending. The project involves only high voltage power lines connecting to Maputo and Tete (coal mining center); regional power exports; and no plans for new household connections or a low voltage network necessary for household connections.

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The Europan Central Bank

Central Banks

Author: Re:Common, Alessandro Runci

The European Central Bank: big polluters' last resort

The European Central Bank **(ECB)** is the central bank of the 19 European Union **(EU)** countries that have adopted the euro. It is responsible for monetary policy and financial regulation, with the ultimate goal of ensuring financial stability and contributing to the achievement of the EU objectives.

In March 2020, in response to the economic crisis precipitated by COVID-19, the ECB launched its Pandemic Emergency Purchase Programme **(PEPP)**, a €1.35 trillion asset purchase programme targeting both public and corporate bonds.[91]

The ECB has been purchasing corporate bonds since 2016, through the Corporate Sector Purchase Programme[92] **(CSPP)**, as a means of injecting liquidity into the market and managing inflation levels, an approach known as Quantitative Easing **(QE)**.

The extensive use of **QE** over the past years has contributed towards making the ECB one of the world's biggest bond purchasers; by October 2020, its corporate bond holdings amounted to €260 billion.[93]

The scale of these purchases gives the ECB power to heavily influence capital allocation across industries, and thus the capacity to realign the financial sector with the climate crisis.

Instead, Europe's central bank direct interventions into the market show a structural bias toward carbon-intensive sectors, resulting from its so-called *"market-neutrality"* approach, which makes them completely inconsistent with climate objectives.[94]

Analysis by Reclaim Finance has shown that the ECB assets purchase programmes are financing at least 38 fossil fuel corporations, including companies leading the projects presented in this report, such as Eni, Shell and Total.[95] Thus, while it claims to be acting for "every citizen of the euro area", the ECB is actually supporting the very corporations that are driving ecological breakdown.

The opacity around the ECB bond purchase programmes makes it hard to establish the exact volume of capital that is going to fossil fuel industries. However, a study by Greenpeace CEE has estimated that, between March and May 2020, the banks have injected €7 billion into five oil & gas majors and two coal-heavy utilities.[96] This figure, which covers only two months, provides a striking indication of the amount of money that fossil fuel corporations are set to receive over the coming months through these relief packages, unless the ECB finally starts taking climate considerations into account.

The carbon bias built into the ECB monetary intervention has profound negative implications.
First of all, the ECB is significantly lowering the cost of borrowing for fossil fuel companies, and facilitating their access to finance. In doing so, the bank is acting as a barrier to decarbonisation, going against a fundamental goal of EU policy.

Also, by encouraging additional debt issuance from carbon-intensive sectors, the ECB is exposing the financial system to higher transition risks, in direct contradiction with its mandate to ensure financial stability. Accumulating in its portfolio assets that are at high risk of becoming stranded, the ECB is exposing itself to a substantial amount of risks, potentially compromising its ability to act in future crises.[97]

Moreover, by buying up fossil fuel companies' debt, the banks are creating a dangerous risk-sharing relationship with these industries,[98] and a potential conflict of interest, as their ability to repay the bonds will ultimately depend on their financial performances, which in turn are affected by EU climate policies.

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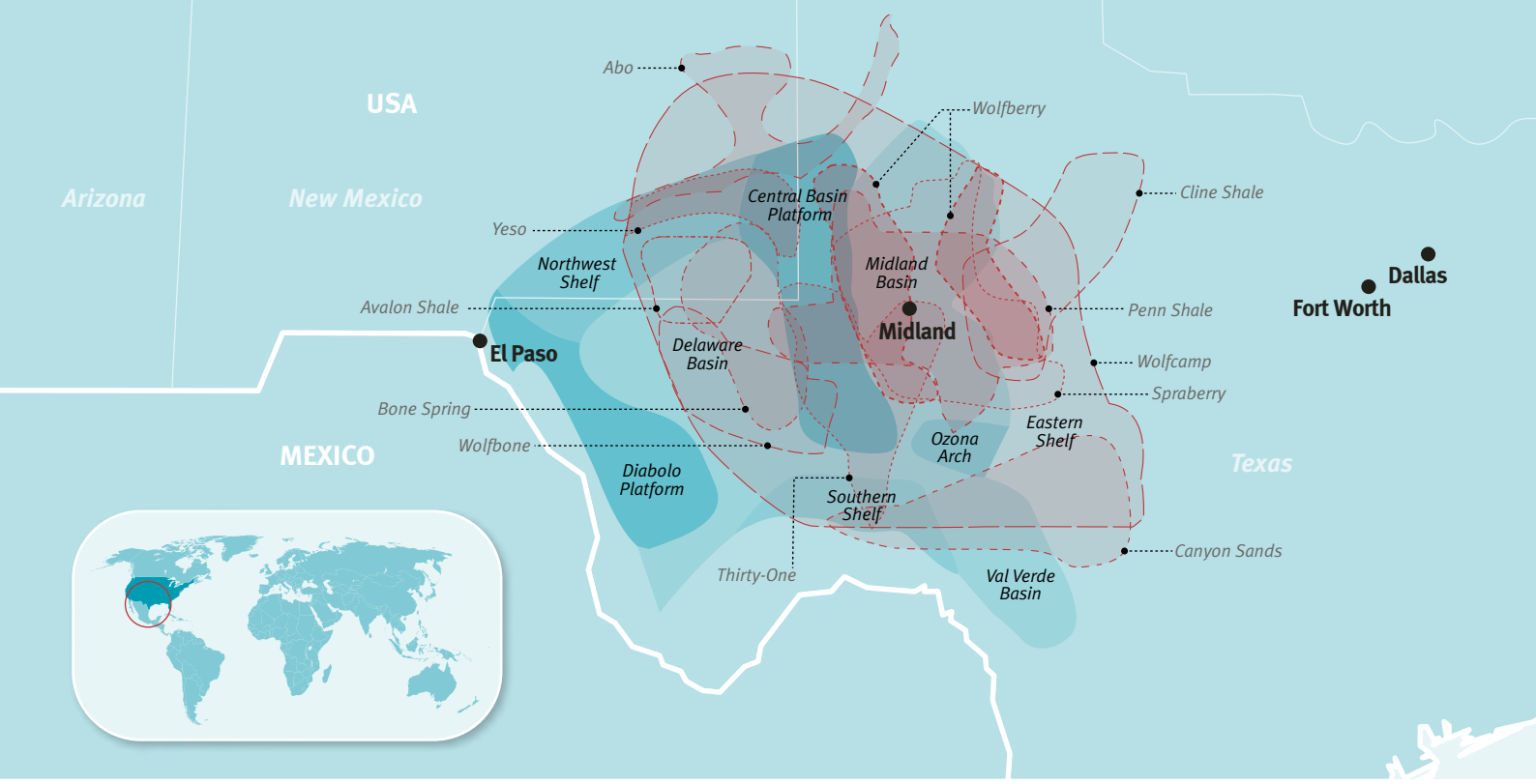
The World Bank Group

Furthermore, the indiscriminate purchase of fossil corporate debt by the ECB clearly undermines financial regulators' call for private investors to better integrate climate-related risks in their operations.

Thanks to the strong pressure coming from civil society and the climate justice movement, the ECB and its president, Christine Lagarde, conceded in July 2020 the need to integrate environmental and ethical criteria into the bank asset purchase programmes.[99] While this is certainly a welcome opening, the ECB needs to translate this promise into concrete action now, and not wait until completion of its strategy review that will likely end not before mid-2021.[100]

The havoc wreaked by the pandemic has shown the entire world how vulnerable our economies are to catastrophic shocks. The ECB should act immediately to minimise the risks posed by the climate crisis and exclude corporations whose practices are incompatible with the Paris Agreement from its asset purchases, starting with companies that develop new fossil fuel projects such those presented in this report.



PERMIAN BASIN & THE GULF COAST:
Everything is bigger in the USA

Authors: Oil Change International, Lorne Stockman, Rebecca Concepcion Apostol, Rachel Goldstein, Bronwen Tucker

In the past decade, the Permian Basin emerged as the world's highest producing oil and gas field.[101] Located in west Texas and southeast New Mexico, the basin was producing as much oil in early 2020 as Iraq, close to five million barrels per day (bpd).[102]

In the decade ahead, as the world grapples with tackling the climate crisis, the Permian Basin is projected to double production to become one of the world's biggest sources of greenhouse gas emissions. As oil production grows, so does the production of fossil gas (methane) and gas liquids (ethane, propane, butane, isobutane, and pentane), the toxic and climate-potent byproducts of the basin's oil boom. The oil and gas is mostly shipped via pipelines to the Gulf Coast where it is refined and extracted, causing health hazards like "Cancer Alley" in St. James Parish, Louisiana,[103] and shrinking the coastal wetlands.[104] The scale of the basin's potential to produce this wide range of hydrocarbons not only marks the basin as a carbon hotspot, but also as a major source of plastics, the world's other 21st century environmental catastrophe.

Oil production in the Permian Basin

Unregulated Growth and Overwhelming Production

Nearly all production in the Permian Basin is exploited using horizontal drilling and hydraulic fracturing (fracking), a method that requires intensive drilling and massive quantities of water, sand, and toxic chemicals. The basin is spread over a mostly remote area roughly the size of Kansas or Great Britain and drilling in the area is subject to minimal regulation. The drilling frenzy has led to waste on a massive scale. Methane has been vented and flared at a rate higher than ever recorded in the US.[105] This has multiplied the climate impact of the basin's production, and created a toxic legacy where people live, and across a vast desert landscape with extraordinary biodiversity.

Pipeline construction

The Permian Basin's scale and unregulated growth has overwhelmed U.S. markets for its products. Most of its oil and gas is exported to global markets. As one LNG company executive put it in 2019, "(e)*very incremental hydrocarbon produced [in the Permian Basin] from this day forward — whether it's oil, liquids or gas, needs to be exported.*"[106] To facilitate its growth, a massive build-out of gas processing plants, pipelines, export terminals and petrochemical complexes has emerged creating a network of industrial pollution from one end of Texas to the other. On the Gulf Coast, this has intensified existing environmental racism, which threatens to spread to communities yet to experience it.

Oil reserves:
82,411 *mboe*

NGL reserves[107]:
31,191 *bcm*

Gas reserves:
6,324 *bcm*

Total potential emissions:
64.1 *Gigatons of CO_2 equivalent*

Despite the COVID-19 downturn and failing oil demand,[108] the production of hydrocarbons in the Permian Basin is still **projected to grow 85% by 2030**,[109] which will likely exacerbate market gluts.[110] Meanwhile, oil extraction must decline sharply this decade to ensure the world stays within 1.5°C of warming.

Burning all the oil, gas, and gas liquids projected to be produced in the Permian Basin between 2020 and 2050 could emit 46 billion metric tons (Gt) of CO_2.[111] This does not include emissions from methane releases - meaning the actual climate impact is likely magnitudes higher. Even so, 46 Gt of CO_2 is nearly **10% of the remaining global carbon budget for a 50% chance of staying under 1.5°C.** In a scenario where coal emissions are reduced on a highly ambitious timeline, dropping 75% by 2030, the Permian Basin alone would account for **24%** of the remaining global budget for oil and gas emissions.[112]

Becoming the Biggest

The Permian Basin has produced oil and gas since 1925, but saw massive production growth after crude oil export restrictions were lifted by Congress in late 2015. The projected production and emissions from now until 2050 could be **65% greater** than all that produced in the 95 years to 2019. **81 percent, or 38 Gt of CO_2**, would come from burning the liquids and gas produced from new wells that were not in production at the end of 2020. This means the **vast majority of emissions could be prevented by simply ceasing to drill new wells**.[113]

Top 25 Companies operating in the Permian Basin	
O&G Exploration & Production	Chevron
	Occidental Petroleum
	ExxonMobil
	Pioneer Natural Resources
	Concho Resources
	EOG Resources
	Royal Dutch Shell
Pipelines	Plains All American Pipeline LP
	MPLX LP
	Delek US
	Lotus Midstream, LLC
	Rattler Midstream LP
	Kinder Morgan
	WhiteWater Midstream (JV between Stonepeak Infrastructure Partners and West Texas Gas Inc.)
LNG Terminals	Exelon Corporation
	Alder Midstream, Samsung Engineering
	NextDecade, LLC
	Sempra
Refineries/Terminals	Bluewater Texas Terminals LLC/ Phillips 66
	Buckeye Texas Processing LLC
Petrochemical Plants	Corpus Christi Polymers, Inc. (formerly M&G Resins)
	Bayport Polymers LLC (formerly TOTAL Petrochemicals & Refining USA Inc./ Borealis/Nova)
	Chevron Phillips Chemical Company LP
	Gulf Coast Growth Ventures (GCGV) Asset Holding (ExxonMobil & SABIC)
	Motiva Enterprises, LLC

But simply lifting the oil export ban was not enough on its own to trigger the twin booms of both production and exports from Texas and New Mexico. A vast network of new pipelines, processing plants, storage tank farms, and export terminals had to be built, which are now underutilized and at risk of becoming stranded assets. Despite this, the industry still plans to build out even more terminals, plants, and pipelines.[114] These projects are not only planned in the expectation of future production growth from the Permian, but also because producers, traders, and buyers want options. Therefore there is likely to be a significant overbuild of infrastructure from the Permian Basin to the Gulf Coast, burdening communities with health and safety hazards for generations to come.

Stopping Carbon Lock-In

Reinstating the oil export ban could lead to reductions in global carbon emissions of as much as 73 to 165 million metric tons of CO_2-equivalent each year – compara-

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
Bank of America	54,613
Citigroup	47,591
JPMorgan Chase	41,253
Barclays	33,117
Wells Fargo	26,145
Morgan Stanley	19,106
Royal Bank of Canada	18,989
HSBC	17,156
Mitsubishi UFJ Financial	16,475
BNP Paribas	14,249
SMBC Group	14,057
Mizuho Financial	13,146
Goldman Sachs	12,115
Société Générale	11,665
Scotiabank	9,392
Truist Financial	7,494
Deutsche Bank	7,368
Credit Suisse	7,330
Toronto-Dominion Bank	7,124
US Bancorp	6,045
PNC Financial Services	5,484
Santander	4,327
UBS	4,187
Standard Chartered	4,006
Banco Bilbao Vizcaya Argentaria (BBVA)	3,704
CIBC	3,273
BMO Financial Group	2,946
Crédit Agricole	2,896
Northern Trust	2,549
Bank of China	2,494
Total	**420,297**

Top 30 Investors as of August 2020

Investor Parent	Total Bonds & Shares (in mln US$)
Vanguard	65,257
BlackRock	51,139
State Street	38,634
Capital Group	29,261
Norwegian Government Pension Fund	12,273
T. Rowe Price	10,499
Geode Capital Holdings	9,692
Wellington Management	9,582
Fidelity Investments	9,375
Northern Trust	8,555
Bank of New York Mellon	8,028
JPMorgan Chase	7,851
Bank of America	7,469
TIAA	6,468
UBS	6,192
Legal & General	6,085
State Farm	5,879
Franklin Resources	5,629
Invesco	5,617
Dimensional Fund Advisors	5,352
Morgan Stanley	4,971
Allianz	4,958
Charles Schwab	4,712
Goldman Sachs	4,509
Wells Fargo	4,362
Dodge & Cox	4,285
Ameriprise Financial	4,215
Credit Suisse	4,053
Cathay Financial	3,763
Equitable Holdings	3,679
Total	**352,344**

Pipeline construction

Aerial view of oil rigs in Midland, West Texas

ble to closing 19 to 42 coal plants.[115] Without the ban in place, Permian exports have been growing exponentially. The percentage of U.S. oil exported averaged 24% in 2019, and hit a record 29% in February 2020, with over 90% of production exported from the Gulf Coast.[116] U.S. refineries are unable to handle the volume of light crude oil produced from the Permian, so most of it is exported. However, even export markets are overwhelmed by the flood of these products, leading to the record-high rates of gas being flared and vented as waste products.[117]

In conjunction with fighting for policy shifts to stop carbon lock-in, there are also fights led by community activists working to prevent continued build-out on the ground. Rise St. James, a grassroots, faith-based organization that formed to protect St. James and "Cancer Alley" from new production of oil and gas, as well as the construction of petrochemical facilities in the region, are leading the fight against Formosa Plastics' ironically named Sunshine Project.[118] If this $9.4 billion facility is built, it will emit 6 million tons of carbon pollution every year and be the single largest emitter of greenhouse gases in the United States. This "super polluter" would be in St. James Parish, which already has a higher cancer risk than over 90% of other Louisiana parishes.[119]

We Need A Managed Phase-out and Just Transition

As the world grapples with the COVID-19 crisis, it faces an even bigger challenge to build a fairer, healthier, and more sustainable and resilient economy. The Permian Basin and the Gulf Coast has only one pathway to ensure a safe climate future and prevent further environmental health impacts. There must be a managed phase-out of hydrocarbon production and processing that supports and centers the needs of workers and communities through this necessary transition. If not, the Permian Basin and Gulf Coast, and the millions of people who live in the area, will face continued pollution, environmental injustice and boom-bust cycles until fracking's inevitable collapse.

Petrochemicals

Authors: CIEL, Carroll Muffett, Steven Feit

Waste and pollution washing on the shores of the beach in Colon, Panama

Petrochemicals: The Plastic Pollution Crisis

The plastic pollution crisis that overwhelms our oceans is also a significant and growing threat to the Earth's climate. At current levels, greenhouse gas emissions from the plastic lifecycle threaten the ability of the global community to keep global temperature rise below 1.5°C. With the petrochemical and plastic industries planning a massive expansion in production, the problem is on track to get much worse.

If plastic production and use grow as currently planned, by 2030 these emissions could reach 1.34 Gt per year—equivalent to the emissions released by more than 295 new 500 MW coal-fired power plants. By 2050, the cumulation of these greenhouse gas emissions from plastic could reach over 56 Gt—10–13% of the entire remaining carbon budget.

Nearly every piece of plastic begins as a fossil fuel, and greenhouse gases are emitted at each of each stage of the plastic lifecycle:

1) fossil fuel extraction and transport
2) plastic refining and manufacture
3) managing plastic waste
4) plastic's ongoing impact once it reaches our oceans, waterways, and landscape.

The Impact of the COVID Pandemic on the oil, Gas & Petrochemicals Industry

Amidst the global scramble to protect lives, livelihoods, and economies in the face of the COVID pandemic, the crisis is also spurring unprecedented lobbying by some of the world's largest corporations. The pandemic has caused massive declines in demand for oil and gas, from the precipitous curtailing of commercial air travel, to stay-at-home orders that have dramatically reduced personal transport, to slowdowns and work stoppages that have slashed energy demand in many industries. As a result, major oil companies have seen their stock prices plummet to the lowest levels in decades, and they are taking dramatic action. They are cutting back on large-scale investments, and many independent producers, particularly in the already struggling fracking sector, are on the verge of bankruptcy.

The oil, gas, and petrochemical industry is now exploiting the catastrophic global pandemic to aggressively push its preexisting corporate agenda, including regulatory rollbacks, suspension of environmental law enforcement, criminalization of environmental protest, and direct government bailouts in a growing number of countries. The oil and gas industry is among the most active in these lobbying efforts worldwide, a fact highlighted in a report from Friends of the Earth which found at least 11 oil and gas companies or trade associations reported lobbying on tax issues related to the Coronavirus Aid, Relief, and Economic Security (CARES) Act passed in March.[120] Soon after, in early April, 9 oil industry executives met with the US President in an effort to secure additional government intervention on the industry's behalf. While some of these lobbying efforts seek legitimate government support to help companies, workers, and communities confront an economic and social emergency, others seek to exploit the crisis to advance preexisting corporate agendas.

The underlying risks facing the industry, however, remain unchanged. The imminent systemic decline of the oil and gas sector should serve as a stark warning to public officials and private investors alike as they consider allocating limited and vital resources to these companies.

Recommendations

- Public Officials taking policy action to respond to COVID-19 and the economic collapse should not waste limited response and recovery resources on bailouts, debt relief, or similar supports for oil, gas, and petrochemical companies.
- Institutional Investors and Asset Managers should recognize the overwhelming evidence that the risks of continued investment in fossil fuels now substantially outweigh the benefits, and they should rebalance their portfolios to eliminate their exposure to volatile and declining oil and gas assets.
- Frontier Countries considering whether to open their lands, waters, and democracies to new oil and gas extraction should urgently reassess their prospects in light of the collapse in oil prices and demand, the demonstrated severe risks of economic dependence on volatile oil markets, the ongoing long-term decline of the sector, and its fundamental incompatibility with climate action.
- Local Communities and Decisionmakers should reject demands from the oil, gas, and petrochemical sectors for public subsidies, tax abatements, lax environmental enforcement, or other special concessions. They should interrogate industry promises of long-term sustainable employment actively and skeptically, and they should require evidence that goes beyond simplistic assumptions of market growth to support those claims. In the rare circumstances where these burdens are met, affected communities should require project proponents to irreversibly commit the funds required to restore communities and the environment when the project reaches the end of its economic life

Urgent, Ambitious Action is Necessary to Stop the Climate Impacts of Plastic

Complementary interventions may reduce plastic-related greenhouse gas emissions and reduce environmental and/or health-related impacts from plastic, but fall short of the emissions reductions needed to meet climate targets. For example, using renewable energy sources can reduce the energy emissions associated with plastic but will not address the significant process emissions from plastic production, nor will it stop the emissions from plastic waste and pollution. Worse, low-ambition strategies and false solutions (such as bio-based and biodegradable plastic) fail to address, or potentially worsen, the lifecycle greenhouse gas impacts of plastic and may exacerbate other environmental and health impacts.

There are high-priority actions that would meaningfully reduce greenhouse gas emissions from the plastic lifecycle and also have positive benefits for social or environmental goals.

These include:

- ending the production and use of single-use, disposable plastic;
- stopping development of new oil, gas, and petrochemical infrastructure;
- fostering the transition to zero-waste communities;
- implementing extended producer responsibility as a critical component of circular economies; and
- adopting and enforcing ambitious targets to reduce greenhouse gas emissions from all sectors, including plastic production.

Offshore oil and gas central processing platform

Ultimately, any solution that reduces plastic production and use is a strong strategy for addressing the climate impacts of the plastic lifecycle. These solutions require urgent support by policymakers and philanthropic funders and action by global grassroots movements. Nothing short of stopping the expansion of petrochemical and plastic production and keeping fossil fuels in the ground will create the surest and most effective reductions in the climate impacts from the plastic lifecycle.

Further details:

https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-Executive-Summary-2019.pdf
https://www.ciel.org/wp-content/uploads/2020/04/Pandemic-Crisis-Systemic-Decline-April-2020.pdf

VACA MUERTA

Authors: FARN, María Marta di Paola, with additional support from EJES

Vaca Muerta: A bomb about to explode in the Global South

Vaca Muerta, the unconventional hydrocarbon reservoir shared by Neuquén, Río Negro, Mendoza and La Pampa provinces, is presented as a solution to Argentina's economic problems, supposedly providing both cheap energy and dollars. According to the Argentinian investment agency (AAICI) , only 4% of the Vaca Muerta basin is under development so far.[121] Some of the companies extracting oil and gas in this basin are Pan American Energy (BP and CNOOC), Total, Shell, Petronas, Wintershall, Equinor, ConocoPhillips, Chevron, YPF, Tecpetrol, and Vista Oil & Gas.

In total, there are almost 40 companies extracting oil and gas in Vaca Muerta. **Globally**, these companies receive support and underwriting services from numerous institutions. The top 10 between 2016 and 2020 are: JPMorgan Chase (United States), Citigroup (United States), Bank of America (United States), HSBC (United Kingdom), BNP Paribas (France), China Development Bank (China), Morgan Stanley (United States), Santander (Spain), Barclays (United Kingdom) and Mitsubishi UFJ Financial (Japan).

According to AAICI, hydrocarbon investment in Argentina needs to reach $15-20 billion annually up to 2030.

Vaca Muerta for Export

According to the previous administration's National Energy Plan, published in 2019, export revenues from Vaca Muerta alone could most likely outweigh agricultural exports, with a total of $34 billion by 2027.[122] For that to happen, extraction would have to double in the next five years in order to reach 260 million cubic meters per day (mcm/day) to export 100 mcm/day of gas, and 1 million barrels/day to export 500,000 barrels/day of oil. This means that 50% of oil extraction and 38% of gas extraction are intended to be exported to the international market.

With energy self-sufficiency being the first priority, why is it so urgent to export? The hope is that exports will help to repay external debt, which represented 90.2% of GDP in 2019.[123] In fact, in the face of the impacts of the 2018 droughton the agricultural sector - and, thus,

Aerial view of oil and gas installation

on national exports - the IMF showed particular interest in Vaca Muerta and highlighted its potential to improve the trade balance[124].

Top Fossil Fuel Companies Operating in the Vaca Muerta Basin
Americas Petrogas Argentina S.A.
Apache
APCO Oil and Gas International INC (SUCURSAL Argentina)
Argentina Energía S.A.
Bridas
CAPEX S.A.
Chevron Argentina S.R.L.
Compañía de Hidrocarburo No Convencional S.R.L. ("CHNC")
Compañía General de Combustibles S.A.
ConocoPhillips
Dow
Energicon S.A.
Equinor
ExxonMobil Exploration Argentina S.R.L.
Gas y Petróleo de Neuquén (GyP)
Grecoil y Cia. S.R.L.
Kilwer S.A.
Lomas S.A.
Madalena Energy Argentina SRL
Magdalena Austral
Medanito S.A.
O&G Developments LTD S.A.
Oilstone Energía S.A.
Pampa Energía S.A.
Pan American Energy (Sucursal Argentina) LLC
Petrobras
Petrolera el Trebol S.A.
Petrolera entre Lomas
Petronas
Pluspetrol S.A.
Roch
Royal Dutch Shell
San Jorge Petroleum
Schlumberger
Tecpetrol S.A.
Total Austral S.A.
Vista Oil & Gas Argentina SA
Wintershall Energía S.A.
YPF S.A.

Surfing the Crisis

However, the plans are facing several intertwined crises. The national government is working to alleviate the hit the fossil fuels sector has taken from plummeting oil prices and the global economic crash. Some of the

© Martín Álvarez Mullally

Industrial site in the Vaca Muerta region, Argentina

measures have been to unfreeze the fuel tax, to establish a fixed price for "Barril Criollo" (Creole barrel) oil, and to increase taxes on oil exports. Argentinian politicians and unions are keen to subsidize Vaca Muerta as a way of stimulating the economy. The subsidies to hydrocarbon companies in 2019 amount to $576 million, which represent 0.2% of GDP or 15 million units of universal childcare. They also represent 4% of the expenses to fight COVID-19.[125] In some cases, the subsidies represent at least one third of the company's sales revenues and in other cases, they covered up to 50% of their investments, such as Wintershall.[126] In fact, after some years of significant foreign direct investment, more dollars have left the country than arrived, due to capital outflow. In 2019, for example, the net outflow of foreign currency was US$1.55 billion.[127]

The economic crisis will lead to attempts to maximize use of existing infrastructure to try and maintain employment and consumption. There may also be new attempts to encourage investment, which would require a significant weakening of current environmental regulations. Environmental impacts of fossil fuel operations are widely spread and known, for example air pollution caused by volatile organic compounds, water and soil pollution (mainly due to spills), poor management of highly toxic waste, excessive water use in fracking, and induced earthquakes. The list is long.

Oil reserves:
8944 *mboe*

Gas reserves:
1492 *bcm*

Total potential emissions:
8.7 *Gigatons of CO_2 equivalent*

Extraction of oil and gas in Vaca Muerta would produce significant direct and indirect greenhouse gas (GHG) emissions. The extracted fossil fuels will in turn produce significant additional emissions when burned. It is estimated that exploiting Vaca Muerta to its maximum potential would generate an increase in emissions of 205-240 $MtCO_2e$.[128] These would represent 56-66% of the national emissions for 2016 and 4-50% for projected emissions in 2030. These GHG emission values are not consistent with Argentina's commitments under the Paris Agreement. It is estimated that in 2019 alone, subsidies increased emissions by 26 $MtCO_2e$, which represent 7% of the country's total GHG emissions.[129]

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
JPMorgan Chase	38,885
Citigroup	36,282
Bank of America	33,258
HSBC	23,314
Barclays	21,894
Morgan Stanley	16,388
BNP Paribas	14,100
Société Générale	11,620
Santander	10,497
Deutsche Bank	10,252
China Development Bank	10,000
Goldman Sachs	9,529
Mizuho Financial	8,444
Crédit Agricole	8,395
Mitsubishi UFJ Financial	8,206
Credit Suisse	6,881
SMBC Group	6,785
Wells Fargo	6,201
Royal Bank of Canada	5,126
Banco do Brasil	5,079
Itaú Unibanco	4,505
Bradesco	4,138
Standard Chartered	4,004
Northern Trust	3,110
Scotiabank	2,794
Toronto-Dominion Bank	2,790
ING Group	2,490
BPCE Group	2,473
UBS	2,338
UniCredit	2,192
Total	**321,972**

Top 30 Investors as of August 2020

Investor	Total Bonds & Shares (in mln US$)
Vanguard	49,517
BlackRock	45,507
State Street	28,093
Capital Group	23,133
Norwegian Government Pension Fund	13,799
Geode Capital Holdings	7,511
Fidelity Investments	7,382
Northern Trust	6,712
State Farm	6,358
UBS	5,721
Bank of New York Mellon	5,713
Dimensional Fund Advisors	5,450
T. Rowe Price	5,009
Bank of America	4,916
Legal & General	4,764
Franklin Resources	4,590
JPMorgan Chase	4,451
BNDES	4,446
Invesco	4,211
Wellington Management	4,144
TIAA	4,127
Dodge & Cox	3,967
Charles Schwab	3,877
Credit Suisse	3,867
Morgan Stanley	3,742
Crédit Agricole	3,545
Deutsche Bank	3,106
State Administration for Foreign Exchange	3,075
Ameriprise Financial	2,832
Wells Fargo	2,660
Total	**276,226**

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Smoke clouds over an oil and gas installation site

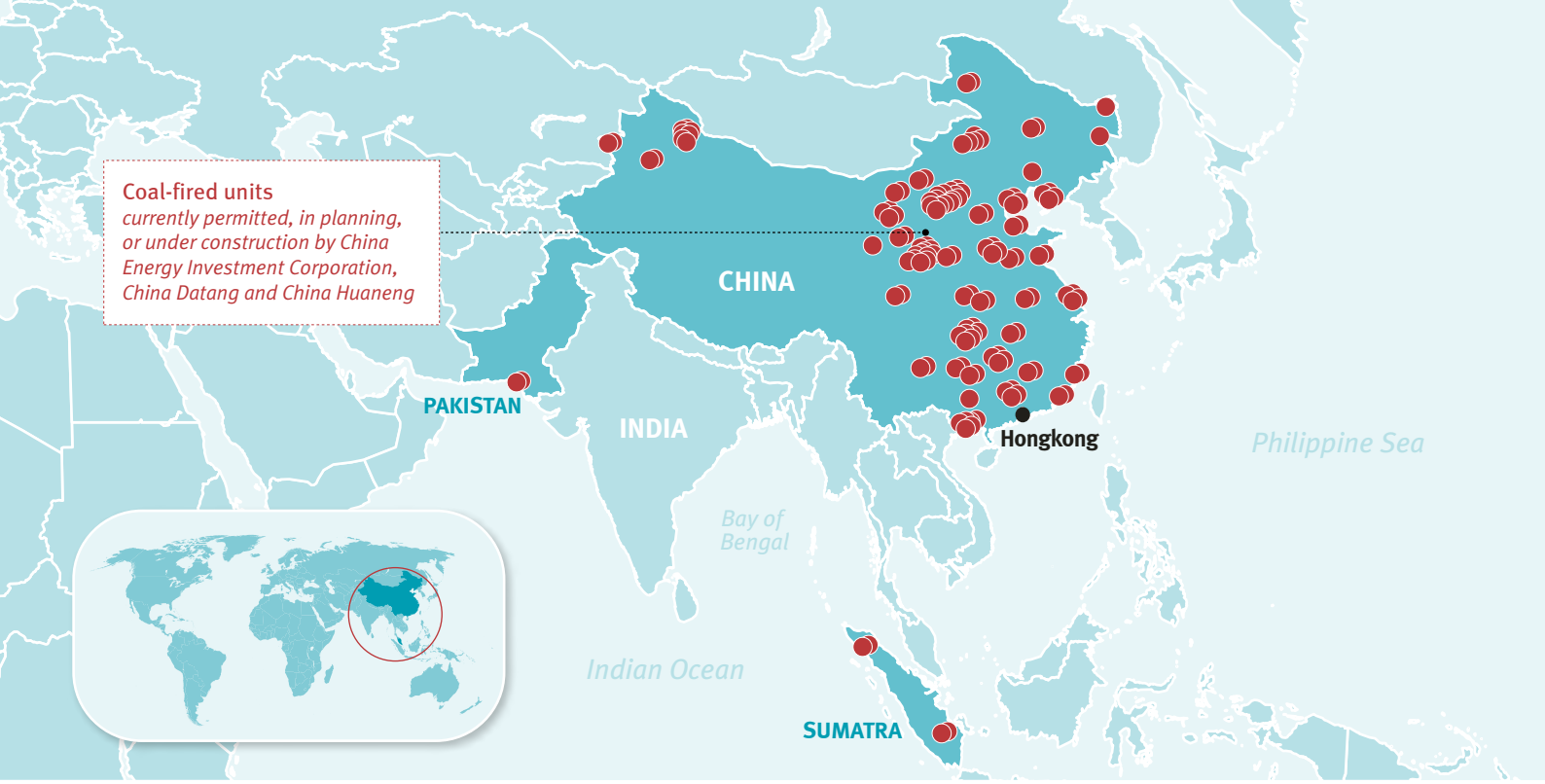
Due to these problems, the United Nations Committee on Economic, Social, and Cultural Rights[130] urged Argentina to reconsider its fracking operations in particular in Vaca Muerta in 2018. The focus was to limit emissions and protect nearby communities from many of the hazards associated with fracking, such as contaminated drinking water, toxic air pollution and chronic health problems. In addition to increasing emissions, this type of exploitation destroys spaces that function as carbon sinks, since the drilling advances into fruit production areas.[131]

Another key issue of this project is the violation of the rights of Indigenous Peoples, in particular the Mapuche communities, due to the lack of their free, prior, and informed consent (FPIC), as required under the ILO 169 Convention, which has been ratified by Argentina.

Looking ahead

Sustaining the current model dependent on fossil fuels, led by Vaca Muerta, may seem part of a quick economic fix. However, the social and environmental costs of sustaining the model of extraction and consumption that led to this unprecedented health and economic crisis, are part of the problem.

Acknowledging the multiple crises could be an opportunity for Argentina to discuss and build a just, clean, and inclusive energy and economic transition. Also, as part of the Global South, it could organize and structure responses related to their own realities and global responsibilities.



CHINA's Coal pipeline

Author: Global Energy Monitor, Christine Shearer

Introduction

Coal is the most carbon-intensive of fossil fuels, with coal plants accounting for an estimated 30% of global CO_2 emissions.[132] Due to its high emissions and the availability of cheaper and cleaner alternatives, the IPCC's Special Report on 1.5°C[133] has global coal power use falling[134] 75% by 2030 to keep warming below 1.5°C, and phased out by 2040.

Despite the steep cuts needed in coal power to stay on track for the Paris climate agreement, Chinese power companies continue to plan more. Many more. As of July 2020, the country's big three power companies – China Energy Investment Corporation, China Huaneng, and China Datang – are together planning for 69.9 GW of new coal power capacity, with an estimated lifetime CO_2 emissions of 9.8 Gt.

China's Top Coal Companies:
China Energy Investment Corporation
China Datang
China Huaneng
State Grid Corporation of China (SGCC)

Table 1: Development refers to coal power capacity that is either under construction or in planning. Capacity is prorated to ownership share. CO_2 emission estimates are based on the planned coal plant and coal type, and assume a 51% capacity factor and 40-year lifetime (2019 global averages). Source: Global Energy Monitor, Global Coal Plant Tracker,[135] July 2020.

The 10.7 Gt of emissions are equivalent[136] to the lifetime CO_2 emissions of the entire coal fleet of Southeast Asia. Since the planned coal plants are in various stages of development, many of them – if built – will not begin operating until well into the 2020s, when coal power use should be radically phased down.

China and coal

For the past two decades, China has been rapidly expanding its coal fleet, commissioning over 930 GW of coal power from 2000 to 2019, well over twice as much as the rest of the world combined (415 GW).[137] High reliance on coal for power generation plays an important part in the country's air pollution problem, with coal plant emissions responsible for an estimated 86,500 deaths in 2013.[138]

China is now home to half of all operating coal power capacity in the world (1023 GW of 2047 GW).[139] And more is planned: as of the first half of 2020, China has 252 GW of coal power under development, nearly half[140] (48%) of the global total (522 GW). Chinese public banks are also negotiating the financing of 56.1 GW of coal power capacity outside their borders.[141]

Top 30 Investors as of August 2020	
Investor	**Total Bonds & Shares (in mln US$)**
Tianjin Jinneng Investment	456
Fidelity Investments	172
Prudential Financial (US)	125
Northwestern Mutual	105
Wellington Management	99
Fidelity International	80
Principal Financial Group	66
Franklin Resources	65
MetLife	64
American International Group (AIG)	55
China Merchants Group	48
T. Rowe Price	43
CITIC	40
American Equity Investment Life Holding	40
Lord, Abbett & Co	39
Liberty Mutual Insurance	39
BlackRock	38
Sun Life Financial	38
HuaAn Fund Management	37
Allianz	37
Vanguard	36
TIAA	35
Galaxy Asset Management	33
China Great Wall Asset Management Corporation	32
Voya Financial	30
Western & Southern Financial	29
China Southern Fund Management	23
Pacific Asset Management	20
China Southern Asset Management (CSAM)	19
Bank of China	18
Total	**1,961**

Top 30 Banks January 2016 - August 2020	
Banks	**Total Loans & Underwriting (in mln US$)**
Industrial and Commercial Bank of China	14,331
Bank of China	12,490
Agricultural Bank of China	8,530
Ping An Insurance Group	7,030
Shanghai Pudong Development Bank	6,687
China Merchants Group	6,640
China Construction Bank	5,775
China Everbright Group	5,588
CSC Financial	5,579
China Minsheng Banking	5,554
CITIC	5,315
Bank of Communications	4,227
China Development Bank	4,138
Bank of Ningbo	4,020
Industrial Bank Company	3,789
HSBC	3,290
Bank of Beijing	2,121
Shenwan Hongyuan Group	1,866
Goldman Sachs	1,743
Donghai Securities	1,728
Mizuho Financial	1,698
First Capital Securities	1,648
China Zheshang Bank	1,509
Hua Xia Bank	1,401
China Great Wall Asset Management Corporation	1,359
Postal Savings Bank of China	1,359
Haitong Securities	1,350
Citigroup	1,309
Guotai Junan Securities	1,266
China Bohai Bank	1,227
Total	**124,568**

The big three

China Energy Investment Corporation, China Huaneng, and China Datang are the top three top coal plant developers in the world, and are also on the Forbes 500 list of the largest companies in the world.[142] They are all state-owned entities (SOEs) administered by the Chinese government.

The three companies or their predecessors gained most of their power assets when the State Power Corporation of China, which had monopoly control over both power generation and supply, was dissolved into five state-owned independent power generation companies, including China Huaneng, China Datang, and China Guodian.

China Guodian was absorbed by China coal mining giant Shenhua Group in 2017, and renamed China Energy Investment Corporation (CEIC). CEIC is now the largest coal plant owner and developer in the world.

As of the first half of 2020, the three companies are planning 69.9 GW of new coal power capacity, with estimated CO_2 emissions of 9.8 billion tonnes. These projects are mainly located in China, as well as in Indonesia and Pakistan.

China Energy Investment Corporation:

25.4 *Under development (GW)*

3.6 *Gigatons of CO_2*

China Huaneng:

23.3 *Under development (GW)*

3.3 *Gigatons of CO_2*

China Datang:

21.2 *Under development (GW)*

3.0 *Gigatons of CO_2*

Total potential lifetime CO_2 emissions:

69.9 *Under development (GW)*

9.8 *Gigatons of CO_2*

Shifting economics of coal

While coal is often regarded as the least-cost power option, that picture is rapidly changing. Think tank CarbonTracker estimates new coal plants already cost more than new wind and solar power in both China and Southeast Asia, where the three power companies are planning new coal plants.[143]

Recent analysis found that China already has 400 GW of excess coal power capacity compared with the amount of capacity needed to ensure adequate supply.[144] The excess capacity means operating hours are spread out among a large number of plants, reducing their average utilization rates and thus revenues. To make at least some revenue from their brand new coal boilers, the powerful state-owned utilities will have a vested interest in maintaining space for coal on the power market for far longer than is compatible with China's Paris goals.

Outside China, the build-up of large, costly coal plants in Pakistan and Indonesia has led to financial problems and growing public opposition, raising questions around the viability of continuing to make coal a central part of the countries' power plans.

Pakistan has been building a number of new coal plants and coal ports under the China-Pakistan Economic Corridor (CPEC). Facing mounting debts – in part from the coal projects and coal imports – Pakistani Prime Minister Imran Khan has tried to scale back the CPEC, saying the country cannot afford it. Pakistan has been struggling to pay off two recently commissioned coal plants, including China Huaneng for the Sahiwal power station.[145] Since 2019, two proposed coal plants in Pakistan sponsored by China Huaneng and China Datang have been shelved due to financial problems.

In Indonesia, the covid pandemic has led to delays at seven coal plants, including three under construction coal plants sponsored by China Datang and China Energy Investment Corporation.[146] Meanwhile, the use of capacity payments by national utility PLN means the country has been paying for power that it is not using due to declining demand from the pandemic.[147]

Conclusion

Plans for new coal plants by the big three Chinese power companies are incompatible with the Paris climate agreement, which requires a radical reduction in coal power use by 2030 and a phase-out by 2040.

To help keep the Paris agreement viable, public pressure – including by the United Nations – has been growing on the Chinese government to stop the construction of new coal plants in favor of clean energy alternatives.[148] In September 2020 Chinese leader Xi Jinping announced[149] the country would aim to become "carbon neutral" by 2060, but preliminary policy recommendations suggest most carbon reductions will take place after 2030.

In short, there remain large uncertainties around how many more coal plants China will build. The country's 14th Five Year Plan (FYP), to be decided in 2021, will determine the maximum amount of coal power in the country's future energy plans to 2025. It is no exaggeration to say that the 14th FYP could help make or break global climate goals.

Workers dismantle the abandoned chimney of a Huaneng power plant

INDIAN coal mines

Author: Climate Risk Horizons, Ashish Fernandes

Few populations are as badly affected by climate change as India's 1.3 billion people. As carbon dioxide concentrations in the atmosphere increase, the impacts on India will worsen. India has done little to deserve this, accounting for a tiny proportion of historical greenhouse gases that have accumulated in the atmosphere. Yet, with the world's second-largest population, low per capita energy consumption and a strong need to increase energy access, the pattern of India's future development will play a key role in the success or failure of global efforts to keep average global temperature increase below 2°C.

India is the third largest emitter of greenhouse gases in the world, accounting for about 7% of global CO_2 emissions. Over 30% of India's CO_2 emissions are from the power sector, in which coal accounts for over 70% of electricity generation.[150] Over the last decade, India's CO_2 emissions growth has been largely driven by a doubling of coal-fired power capacity, with over 110 GW being commissioned between 2012 and 2019.[151]

Some of India's Top Coal Companies:
Coal India Limited (CIL)
National Thermal Power Corporation (NTPC)
Power Finance Corp (PFC)

India has some of the most ambitious renewable energy goals in the world, and plentiful solar power resources that are now cheaper than coal. Yet, the country is still seeing attempts to expand coal extraction and burning for electricity generation. This is extracting a heavy toll in terms of air and water pollution, forest loss for mining and displacement of communities, usually those dependent on subsistence farming and forest produce. This has led to opposition on human rights and biodiversity concerns from communities across the coal belt, but particularly in the mining hotspots of Singrauli, Talcher, Korba, Chandrapur and Hazaribagh. In urban areas, the contribution of coal power plants to dangerous levels of air pollution has led to citizen protests and a Supreme Court-monitored push to install emission control equipment, as well as calls to shut down old, polluting power plants.

Opencast coal mine in India

As India grows economically and improves its social indicators, energy access and per capita energy consumption will grow. This growth needs to be based on clean energy rather than fossil fuels, for sustainability, biodiversity, climate and human health reasons. Bending India's CO_2 emissions trajectory necessitates addressing the role of coal fired power generation above all else.

CIL, NTPC and PFC are all government-controlled entities, yet none have made serious efforts at an energy transition to bring them in line with the Indian government's own aims of boosting renewable energy and reducing reliance on coal power generation. If their planned coal expansion continues, it will delay India's energy transition and result in a significant increase in India's carbon emissions – a true carbon bomb that will harm India the most.

Coal India Limited

Coal India is already the world's largest coal miner. It supplies approximately 80% of India's coal and reported total "extractable reserves" of 21.75 billion tonnes

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
ICICI Bank	9,841
State Bank of India	6,242
Axis Bank	5,793
Trust Group	5,204
HDFC Bank	5,080
A.K. Group	4,159
Yes Bank	3,471
Mitsubishi UFJ Financial	3,420
Tip Sons	2,951
Kotak Mahindra Bank	2,905
Barclays	2,372
Edelweiss Financial Services	2,299
Standard Chartered	2,122
Punjab National Bank	1,994
Mizuho Financial	1,361
LKP Group	1,074
Canara Bank	998
HSBC	922
Citigroup	911
Viel & Cie	741
SMBC Group	615
Jefferies Financial Group	605
IDFC	558
Bank of India	530
Darashaw	486
SPA Group	460
DBS	393
JM Financial	379
Deutsche Bank	322
United Bank of India	287
Total	**68,494**

Top 30 Investors as of August 2020

Investor	Total Bonds & Shares (in mln US$)
HDFC Bank	2,456
ICICI Bank	1,807
Nippon Life Insurance	1,511
Life Insurance Corporation of India	1,438
LIC Mutual Fund Asset Management	1,376
Aditya Birla Group	1,224
State Bank of India	860
Reliance Group	737
Kotak Mahindra Bank	708
IDFC	421
Axis Bank	392
BlackRock	294
T. Rowe Price	283
Vanguard	252
DSP Group	251
Prudential (UK)	234
Mirae Asset Financial Group	221
The WindAcre Partnership	206
Unit Trust of India	197
UBS	163
Franklin Resources	147
Invesco	119
GIC	113
HSBC	87
Sun Life Financial	84
L&T Finance Holdings	71
Dimensional Fund Advisors	70
Tata Group	70
Standard Life Aberdeen	66
Morgan Stanley	62
Total	**15,921**

in 2010, out of a total Proven Reserve of 52.5 billion tonnes.[152] It supplies approximately 80% of India's coal. The Government of India owns a controlling 66% stake in the company, and has pushed it to set large expansion plans which if realized will have significant implications for India's environment and the global climate. In November 2019, India's Minister for Coal set the company a target of 1 billion tonnes of annual production by March 2024, up from 602 million tonnes for the year ending March 2020 – a 60% increase.[153]

About 95% of CIL's production comes from the highly destructive open-cast strip-mine method, either at the expense of forests, farmland or village commons.[154] In just the last two years, CIL has sought to clear nearly 5,000 hectares of forest land for new mining activity.

Much of this expansion is planned in the states of Odisha and Chhattisgarh, where some of CIL's largest mines are located. These same mines, such as Gevra in Chhattisgarh, have a long track record of human rights violations amid opposition from impacted communities.[155] Official project documents suggest that over 28,000 families are at risk of displacement from Coal India mines that have already been approved or are being considered for approval by the Indian government since 2018.

Since Coal India's operations are almost exclusively open cast, the carbon implications are not limited to emissions from burning the coal produced. In many areas, standing natural forests have to first be cleared prior to mining, leading to additional carbon emissions.

NTPC

NTPC is India's largest coal power plant operator, with over 50 GW of operational coal plants. The government of India holds a controlling 51% stake in NTPC.

With 19 GW under construction or in permitting, the company also has by far the largest coal power expansion plans in India, and one of the largest in the world, as well as plans to vertically integrate through expanding its own mining operations.[156] Those plans, such as the Pakri Barwadih mine in Jharkhand in eastern India, have generated their own controversy due to staunch opposition from local farmers who either do not want to give up their land and livelihood or are unhappy with the compensation they are being offered. In 2016, police forces fired on villagers protesting their displacement for the mine, killing five.[157] This was in fact just the latest in a series of police shootings on villagers in the area opposed to coal operations. In 2019, the mine started commercial production – it is one of India's largest with a peak production level of 18 million tonnes and a total extractable reserve of 642 million tonnes.[158] In September 2020, villagers stalled work at the mine as part of ongoing protests.[159]

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Coal mine in Jharkhand

New coal plants 2019 financed by PFC:
9.6 *GW*

Lifetime CO_2 emissions:
1,5 *Gigatons CO_2*

NTPC new coal plants under construction/permitting:
19 *GW*

Potential lifetime CO_2 emissions:
3.0 *Gigatons CO_2*

CIL Extractable coal reserves:
21.75 *Gigatons*

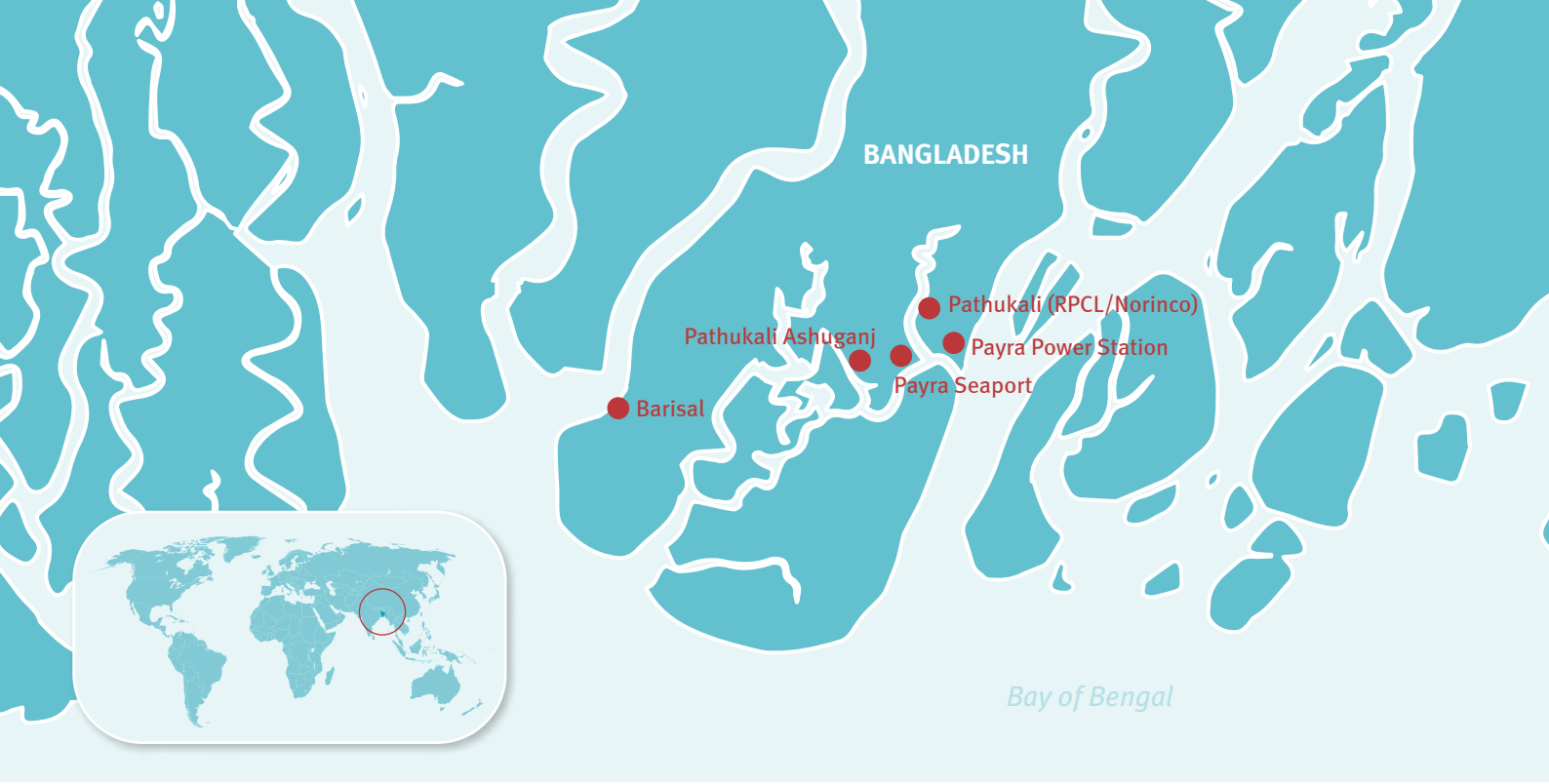
Potential CO_2 emissions:
50.8 *Gigatons CO_2*

Power Finance Corporation

The government-owned PFC is India's largest 'non-banking' finance company. As private sector banks have all but ceased lending to the coal sector, PFC has emerged as a lender of last resort and the largest financier of new coal projects in India. Four new coal power plants with a total capacity of 9.6 GW began construction in India in 2019, and all have received funding from PFC.

PFC has approximately 54% of its total loan book exposed to thermal power – amounting to US $49 billion. Of this, $6.8 billion was classified as Non-Performing Assets by December 2019, though analysts consider PFC's stranded asset risk to be significantly higher given the ongoing crisis facing India's coal sector, exacerbated by the Covid-19 induced economic downturn.[160]

While PFC has increased its lending to the renewables sector, this still represents less than 10% of its lending to coal. As of December 2019, PFC had lent $4.8 billion to renewable energy projects.



BANGLADESH's Payra Hub

Authors: Coastal Livelihood and Environmental Action Network, Hasan Mehedi, Sajjad Hossain Tuhin and Farjana Aktar

Background

Even though Bangladesh is one of the countries that are most vulnerable to the impacts of climate change, its government is continuing to push coal power projects. The Power System Master Plan passed in 2010 deregulated controls over private investment and gave legal immunity to power-related projects. As a result, a number of overseas companies started developing fossil fuel-based power plants.[161] At least 46 coal-fired power plants (CFP) with a capacity of 47,199 MW[162] were planned since 2010. 34 of these were projects from the Government of Bangladesh and 12 from private companies.[163] [164] Of those projects 35,894 MW are still planned after 15 coal-fired power plants with a capacity of 11,305 MW were shelved.

The Payra Hub and Barisal-Patuakhali

The Barisal-Patuakhali CFP, located near the coast, has a planned capacity of 700 MW. It is scheduled to go online in 2022. It is projected to burn 1.2-1.5 million tonnes of imported coal a year, or 34 million tonnes over the 25-year lifetime of the plant. The Hong Kong-based company Sinohydro, a subsidiary of PowerChina, has a 92% stake in this project, which also has Chinese EPC contractors and equipment supplied from China.

Boatmen rowing on local river in the Barishal division

Top 30 Banks January 2016 - August 2020	
Banks	**Total Loans & Underwriting (in mln US$)**
China Eximbank	6,770
BNP Paribas	5,100
CITIC	3,912
JPMorgan Chase	3,771
CSC Financial	3,676
Citigroup	3,038
Morgan Stanley	3,014
HSBC	2,799
Bank of America	2,405
Mizuho Financial	2,363
Goldman Sachs	2,260
Deutsche Bank	2,108
Guotai Junan Securities	2,093
Commerzbank	2,083
ING Group	2,049
Barclays	2,044
China Construction Bank	1,968
Santander	1,923
Standard Chartered	1,623
Export-Import Bank of India	1,600
Société Générale	1,566
Bank of China	1,553
Agricultural Bank of China	1,399
Industrial and Commercial Bank of China	1,337
China International Capital Corporation	1,259
China Merchants Group	1,253
GF Securities	1,197
NatWest	1,123
Banco Bilbao Vizcaya Argentaria (BBVA)	1,102
UniCredit	1,098
Total	**69,486**

Top 30 Investors as of August 2020	
Investor	**Total Bonds & Shares (in mln US$)**
BlackRock	9,968
Anbang Insurance Group	3,850
Vanguard	3,231
Norwegian Government Pension Fund	2,596
Deutsche Bank	1,889
Primecap Management	1,856
Fidelity Investments	901
Crédit Agricole	898
Deka Group	889
Fisher Investments	850
Franklin Resources	763
TIAA	763
T. Rowe Price	582
BNP Paribas	580
UBS	548
Allianz	534
State Street	512
DZ Bank	463
GIC	462
Invesco	442
Fidelity International	408
Pictet	392
JPMorgan Chase	370
Geode Capital Holdings	351
Société Générale	339
Prudential Financial (US)	316
New York Life Insurance	294
China Chengtong Holdings Group	294
State Farm	275
China Merchants Group	271
Total	**35,889**

Around 50 km from the planned Barisal-Patuakhali plant is the so-called Payra Hub. With a large proposed list and one operating coal power plant, the Payra Power Hub is one of the prime areas under Barisal-Patuakhali Zone. According to the plan, the Hub will generate 13,690 MW electricity consisting 9,940 MW (72.6%) from coal, 3,600 MW (26.3%) from Liquified Natural Gas (LNG) and 150 MW (1.1%) from Heavy Fuel Oil (HFO). Among nine coal-fired power plants in the Payra Hub, eight of those with capacity of 8,620 MW are to be installed by Chinese companies under the Belt and Road Initiative (BRI).[165]

International Involvement

The Government of Bangladesh is working with a number of international companies to produce these new coal-fired power plants. Much of this cooperation is happening with Chinese companies as part of the Belt

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Day laborers in Dhaka are emptying a coal vesse

and Road Initiative. The Chinese companies Sinohydro, China National Machinery Import & Export Corporation, Norinco International Cooperation Limited and the China Energy Engineering Corporation Limited are involved in coal-fired power stations that will generate a total of 9,940 MW of power. Additionally, German company Siemens AG[166] is also set to install a 3,600 MW LNG-based power plant in partnership with North-West Power Generation Company Limited (NWPGCL) and United Group is to install a 150 MW HFO based power plant in a partnership with Khulna Power Company Limited (KPCL).

Between the Devil and the Deep Sea

Building more coal-fired power plants is not just environmentally disastrous, it is also economically unsound for the country of Bangladesh. Bangladesh currently has an installed capacity of 20,638 MW, while its maximum utilised capacity in history was only 12,539 MW (on 21 May 2019).[167] After the COVID-19 outbreak, the demand has come down to 6,000-7,500 MW and around 54% of the installed power plants remain idle, which the government must also pay for. Over the last 10 years, they have had to pay BDT 596.12 billion ($7.27 billion) in capacity charges to idle rental and independent power producers. In just this coming fiscal year until 2021, the Government has already allocated BDT 267.58 billion ($3.19 billion) for the power sector in the National Budget. This is more than the total budget allocated for Education, Food, Agriculture, Environment and Social Welfare sectors.[168]

When the Payra CFP (Phase-I) is shut, the Government of Bangladesh has to pay BDT 1.60 billion ($18.82 million) per month as a capacity payment.[169] On the other hand, if Payra runs at full capacity, 11 power plants in the Southern Zone will have to be shut down. In that case, the government will have to pay at least $304.48 million for the idle power plants.[170] Now, in any scenario, the retail price of electricity will rise and the burden will rest on the shoulders of the common people who are already in a tough situation.[171]

Coal plant capacity Payra Hub:
9.9 *GW*

LNG plant capacity Payra Hub:
3.6 *GW*

Total Lifetime CO_2 Emissions Payra Hub:
1.5 *Gigatons CO_2*

Social and Environmental Damage in the Coastal Zone

The Payra Hub will cause a huge and unwanted contribution to global carbon emissions. Using 31 million tonnes a year of sub-bituminous coal, 11.24 million m³ of imported LNG, and 0.71 million tonnes of HFO to generate 13,690 MW of electricity, the Payra Hub will emit at least 60 million tonnes of CO_2 annually and 1.5 Gigatons of CO_2 over the lifetime of the plants.

It will also have a devastating impact on surrounding communities due to the increase in air pollution. It is estimated that the power plants will cause between 18,000 and 35,000 air pollution-related excess deaths, 71,000 asthma emergency room visits, 15,000 new cases of asthma in children, 39,000 premature births,

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Guava forest in Barishal

26 million days of work-absence (sick-leave) and 57,000 years lived with disability related to chronic obstructive pulmonary disease, diabetes and stroke.[172]

These plants will also lead to land grabs and displacement of local communities. The total area of Chalitabunia, Debpur, Dhankhali, Londa, Nishanbaria and Pachjunia Mouza (revenue village) under the Kalapara Upazila (Sub-District) of Patuakhali District comprises 19,476 acres of land. 29% of that area is covered by settlements and the other 71% is cultivable lands.[173] The planned power plants and seaport require 12,705 acres of this land,[174] much of which has already been taken or is in the process of acquisition. These lands are mostly triple-cropped and considered some of the most fertile areas of Bangladesh. The farmers, who comprise around 47% of the labour force of Kalapara Upazila, have lost their traditional jobs due to acquisition of their lands and are at risk of losing farm production due to pollution from the coal power plants.

A total of 11,317 people of 2,270 families have already been displaced solely for the Payra Sea Port, the Patuakhali RNPL CFP and the Payra BCPCL CFP. The number of displaced persons will reach around 20,000 if all the planned power plants are installed.

The Project has serious negative impacts on the Hilsa fish (Tenualosa ilisha), which is the national fish of Bangladesh. The adjacent Andharmanik and Tentulia rivers are two of the five hilsa sanctuaries of Bangladesh. The local fishermen reported that availability of hilsa in the Rabanabad channel has already declined at an alarming level. A study conducted by the Centre for Environmental and Geographic Information Services (CEGIS) revealed that the power plants will highly impact the water quality of the Rabanabad, the Andharmanik and the Tiakhali Rivers.[175]

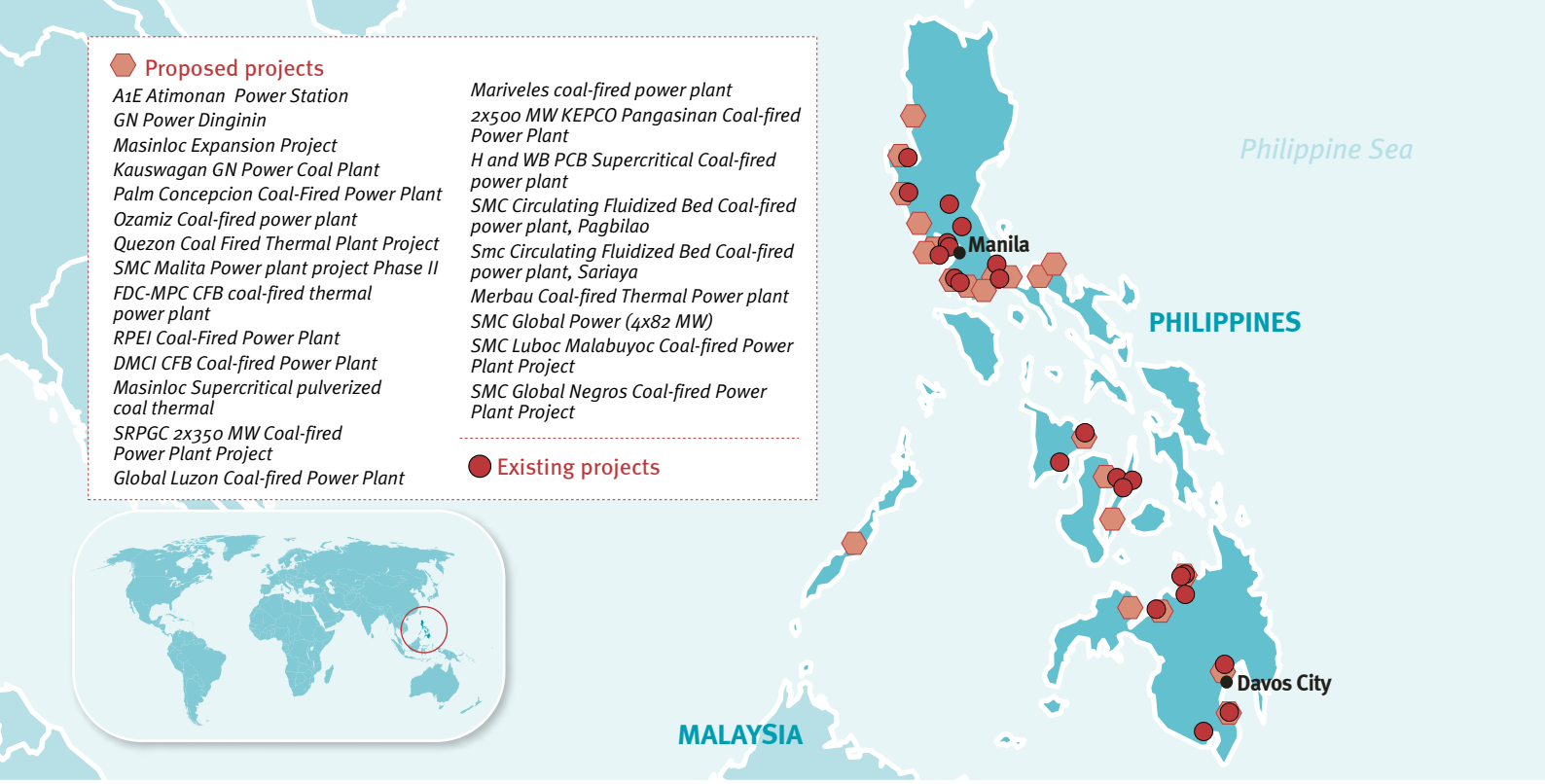
Recommendations

The government and project proponents have shelved or cancelled 15 power plants as of May 2020. The Power Division has also prepared a proposal on 25 August 2020 to cancel a further 13 to 16 proposed coal-fired power plants.[176] The government now seems to be interested in installing LNG power plants instead of coal.[177] We hail the Government's decision to reduce the dependence on coal, but at the same time, we strongly believe that Bangladesh has enough resources to shift to renewables, not LNG.

Top Fossil Fuel Companies Involved in Bangladesh's Payra Hub:
Ashuganj Power Station Company Limited (APSCL)
Bangladesh Power Development Board
Bangladesh-China Power Company Limited (BCPCL)
China Energy Engineering Group Co., Ltd.
China Harbour Engineering Company
China National Machinery Import and Export Corp (CMC)
China State Construction Engineering
Dovey Group
Siemens AG
Jan de Nul
NORINCO
North-West Power Generation Company (NWPGCL)
Oldendorff
Payra Port Authority
PowerChina
Rural Power Company Limited (RPCL)
Taylor Power Environmental Company Ltd (TPEL)

The Government has decided to cut Value Added Tax (VAT) for importing materials for power plants from 15 to 5 percent until June 2025.[178] This initiative will only increase the trend of installing more and more fossil fuel based power plants. We strongly condemn the decision and demand the cancellation of all types of tax rebates from fossil fuel-based power plants and allocate the same amount to renewables.

We also demand adequate compensation and rehabilitation of the communities who are already displaced due to power plants. Where power plants will be cancelled, the acquired lands have to be returned to the farmers, so that the local inhabitants can maintain their traditional livelihoods.



PHILIPPINES Carbon Bomb at a Crossroads

Authors: Center for Energy, Ecology, and Development, Gerry Arances and Aryanne De Ocampo

Last October 27, 2020, the Philippine Department of Energy sent tremors across Asia, when it announced a moratorium on issuing permits to new coal-fired power plant projects in the country. As one of the leading coal expansionists in the region and globally, and also the first developing country to do so, the Philippines signaled a major shift towards renewable energy. This major development in Asia is a product of years of accumulated work of CSOs and resisting communities, as well as the development of the renewable energy industry in the country.

Roughly 500 miles off the coast of mainland Asia lies the Philippines, an archipelago of 7,641 islands known for its diverse geographic features, historic towns, and rich biodiversity. But with its location in the tropics, proximity to seas, and situation in the seismically active area of the Pacific labeled the Ring of Fire, the country is unfortunately also known for its extreme weather episodes and natural calamities, the intensity of which have been worsening as global temperatures rise.[179] In the years leading to and succeeding the ratification of the Paris Agreement, the Philippines has repeatedly made its way into international headlines due to the devastation caused by an average of 20 tropical cyclones that visit it every year.[180]

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Construction of a coal fired power plant

As a country vulnerable to the impacts of climate change, the Philippines must take the lead in demanding a swift and just global transition away from fossil fuels, beginning with the phaseout of coal. Having been one of the first countries in Southeast Asia to enact a Renewable Energy Law,[181] and with its abundant renew-

Top Coal Companies in the Philippines:
Manila Electric Co (MERALCO)
Top Frontier Investment holdings San Miguel Corporation SMC Global Power Holdings
FDC Utilities Inc (FDCUI)

Estimated CREZ opportunity capacity				
Solar PV	Wind	Geo-thermal	Hydro-power	Biomass
58.11	93.98	0.36	655.03	0.37
Total (GW): 807.87				

Top 30 Banks January 2016 - August 2020	
Banks	**Total Loans & Underwriting (in mln US$)**
Standard Chartered	1,613
DBS	1,086
Mizuho Financial	975
SMBC Group	911
BDO Unibank	877
Bank of Philippine Islands	816
UBS	762
China Banking Corporation	704
Mitsubishi UFJ Financial	551
Philippine National Bank	485
Security Bank	462
Credit Suisse	443
Bank of America	430
Rizal Commercial Banking	365
Bank of China	308
ANZ	306
ING Group	260
Deutsche Bank	226
Industrial and Commercial Bank of China	208
JPMorgan Chase	183
Cathay Financial	180
Taiwan Financial Holding	170
Metropolitan Bank & Trust	161
CTBC Financial Holding	149
KDB Financial Group	140
First Abu Dhabi Bank	100
First Financial Holding	100
Hua Nan Financial	100
United Coconut Planters Bank	86
Mega Financial	85
Total	**13,241**

Top 30 Investors as of August 2020	
Investor	**Total Bonds & Shares (in mln US$)**
Athene Holding	101
Vanguard	71
Dimensional Fund Advisors	44
BlackRock	38
Jih Sun Holding	29
Crédit Agricole	23
UBS	14
Prudential (UK)	14
Pictet	9
California Public Employees' Retirement System (CalPERS)	7
PGGM	6
Fuh Hwa Securities Investment Trust	6
Morgan Stanley	6
Geode Capital Holdings	6
Affiliated Managers Group	5
Grantham Mayo Van Otterloo & Co	5
Toronto-Dominion Bank	5
Northern Trust	5
CPP Investment Board	4
State Street	4
Eaton Vance	4
Zürcher Kantonalbank	4
Lombard Odier	4
Bank of New York Mellon	4
Evli Bank	3
Skandinaviska Enskilda Banken	3
Caisse de dépôt et placement du Québec	3
Charles Schwab	3
JPMorgan Chase	3
BrightSphere Investment Group	3
Total	**434**

able energy potential, the Philippines is also well-positioned to encourage fellow developing countries to sustainably power their economies by the example of its own advancement of renewables.

A recently released study by the National Renewable Energy Laboratory (NREL)[182] and the Department of Energy (DOE) identifies at least 25 geographic areas "with high concentrations of cost-effective RE and strong developer interest," known as Competitive Renewable Energy Zones (CREZ). The 25 CREZ across the Philippines have an estimated gross total capacity of 807.87 GW. Along with yet unaccounted capacity from microgrid development opportunities, even a fraction of potential renewable energy sources in the Philippines would be more than enough to cover national demand for power, which in 2019 peaked at 15.581 GW.[183]

This, however, has not been the case before the moratorium on new coal plant projects. A review of its energy

landscape in the past decade saw how the Philippines deepened its dependence on fossil fuels, significantly increasing coal and oil imports and undermining its energy self-sufficiency while allowing renewables to lag behind. In the power sector, the Philippines greatly expanded its coal fleet with 16 new coal-fired power plants and a new unit of an existing plant entering commercial operation since 2010.[184] Installed coal capacity has more than doubled from 4.8 GW in 2010 to 9.88 GW in 2020.[185]

Climate scientists have repeatedly warned of even more catastrophic impacts resulting from failure to limit global temperature rise to the 1.5°C goal of the Paris Agreement through net-zero carbon emissions by 2050.[186] The Philippines is already awash with local experiences of deaths and devastation caused by slow onset climate impacts and extreme weather events. Despite these, the country is unwisely set on intensifying its further dependence on fossil fuels, especially coal, in the next two decades.[187] Climate-vulnerable communities and ecosystems in and beyond the Philippines are bound to pay the price.

Atimonan Power Station

Over a hundred kilometers southeast of its capital Manila, Atimonan is situated in the province of Quezon. Atimonan is a town that has been the arena of a heated coal fight for over half a decade.

Atimonan is the site of a 1.2 GW ultra-supercritical coal-fired power plant proposed by Atimonan One Energy, Inc. (A1E) a subsidiary of the Manila Electric Company (Meralco), an energy giant that serves as sole distributor of electricity in the National Capital Region. The project has faced much controversy, beginning with its misleading representation as a liquefied natural gas facility when it was first proposed, according to local residents. Since learning of its conversion into a coal project without public consultation, community members led by the local church have vehemently expressed their opposition to its implementation. Even after an Environmental Compliance Certificate was issued by the Department of Environment and Natural Resources in 2015, the Atimonan Power Station has been met with backlash over displacement of farmers and fisherfolk, environmental violations, and noncompliance to public information requirements, among other issues.[188]

Philippines Installed Generating Capacity by Source in MW, 2010 - 2018

	Coal	Oil-Based	Natural Gas	Renewable Energy
2010	4867	3193	2861	5437
2012	5568	3074	2862	5521
2014	5708	3476	2862	5898
2016	7419	3616	3431	6958
2018	8844	4292	3453	7227

Bank	Loan (in mln $US)	Underwriting (in mln $US	Total financing
Bank of the Philippine Islands	2,797.18	487.39	3,284.57
BDO Unibank	1,892.49	366.98	2,259.47
PNB	1,389.25	193.20	1582.45
RCBC	755.26	196.93	952.19
Metrobank	901.20	36.34	937.54
Others	2383.34	591.91	2975.25
			Total (million USD): 11,991.44

Site of the Atimonan Power Station

Project proponent Atimonan One Energy, Inc. (A1E) has started pre-construction activities at the coal plant site. The project is located within the vicinity of Lamon Bay, which serves as the primary source of livelihood for fisherfolk families. Already reeling from pollution from existing coal power plants in the area, residents fear that the A1E project, once operational, would trigger a collapse of the marine ecosystem housed by the Bay and surrounding bodies of water.

Planned coal plants in the Philippines:
13.8 *GW*

Potential lifetime CO_2 emissions:
2.4 *Gigatons CO_2*

Known funders of the Atimonan Power Station include ESB International, the World Bank through local bank RCBC, Bank of the Philippine Islands, and Philippine National Bank.

Coal plant by the ocean

© CEED

Manila leg of the National Day of Action Against Coal in 2019

Local residents are no strangers to the deadly, dirty, and costly impacts of coal, since Quezon province is already home to three existing coal-fired power plants with an installed capacity of 2.2 GW. With 3.6 GW more in the pipeline,[189] residents lament that the province is quickly becoming the country's coal capital, despite it also being at the forefront of climate catastrophes.

The Atimonan Power Station and three other proposed coal projects in Quezon are but the tip of the iceberg in coal and fossil fuel expansion in the Philippines. Today, the country is topping not only climate vulnerability rankings, but also the list of countries undertaking the biggest coal expansion endeavors globally. At 12 GW in September 2019, the Philippines was found to be the country with the 9th biggest coal pipeline in the world, ranking third in Southeast Asia.[190] By August 2020, this has increased to 13.81 GW, now 7th in the world.[191]

Local banks are fanning the flames of climate change

From 2009 to 2019, 15 Philippine banks were identified to have directly channeled at least 11.99 billion USD to coal-fired power plants and coal developers.[192] Over 50% of this amount comes from two banks alone: the Bank of the Philippine Islands and Banco De Oro Unibank, which are also the country's two biggest banks in terms of market capitalization.

The Philippines government is also seeking to expand the country's fossil gas sector. With a total of 9.1 GW new fossil gas plants in the pipeline, the existing 3.54 GW gas plant fleet would have a massive 289% increase if all these are built.

Ending the age of coal in the Philippines

As of 2020, A1E has yet to secure a power supply agreement, which is needed to make the Atimonan project bankable. The delay of over five years in the project's implementation is translating into losses on the part of its financiers and developers. The struggle experienced by the Atimonan coal proponent is also shared by other developers. Since 2018, no new coal-fired power plant has begun construction in the country – thanks to the resistance of coal-affected communities and electricity consumers across the Philippines and the support of civil society organizations (CSOs).

In 2014, the Power for People Coalition (P4P) – a broad coalition of coal-affected communities, electricity consumers, faith groups, and environmental and climate advocates – was convened to push for the transformation of the power sector amid high electricity prices, deficient national electrification, and proliferation of destructive energy from coal and other fossil fuels. Since then, P4P has been instrumental in the pursuit of access to clean and affordable energy from renewables for all Filipinos in both local and national avenues.

Thus, while CSOs and coal-affected communities have welcomed the recent coal moratorium, the battle to finally put a stop to the 13.81 GW coal pipeline projects will determine how fast the transition to renewable energy-dominated power system in the country will be. But one thing is certain at this juncture: the age of coal in the Philippines is nearing its end.

LNG is not a bridge fuel

Author: Urgewald, Regine Richter

Construction of an LNG plant in Yamal, Russia

Gas is part of the problem, not part of the solution

In July 2020, the Australian advertising regulator ruled a billboard advertisement run by Australian Gas Networks to be misleading. The false impression given by the advertisement was that gas was 'cleaner and greener' than other energy sources.[193] Similar complaints have been made and upheld in many countries. The background is obvious: the fossil gas industry is busy presenting itself as the clean alternative to coal and part of the solution for climate change, indispensable partner for renewables and a bridge to the renewable future.

However, this is, as are the ads: misleading. It is a myth nourished by oil and gas companies in order to delay the transition away from fossil fuels and to still allow the development of new projects.[194] Which is impossible to reconcile with the Paris climate goals. As shown by Oil Change International in its report "The Sky's Limit", the economically recoverable oil, gas and coal reserves currently producing and under development would take the world far beyond the 2°C limit and even just the operating oil and gas fields would take the world beyond 1.5°C.[195] Thus, there is no room for the development of any additional oil and gas projects in the remaining carbon budget.

This doesn't stop the industry from, as shown in this report, trying to develop new oil and gas fields and associated infrastructure like pipelines and LNG export and import terminals. Since oil and gas have a geopolitical dimension, new gas infrastructure is often highly politically charged, as shown by the discussions around the Nord Stream 2 pipeline transporting gas directly from Russia to Germany, bypassing traditional transit countries and creating anger in EU countries like the Baltic States and Poland. The push for alternative pipelines like the Southern Gas Corridor, bringing gas from Azerbaijan to Italy, or LNG import terminals in Europe is justified by energy security arguments, since this infrastructure would make Europe less dependent upon Russian gas – ignoring the fact that Russia, too, is busy exporting LNG to Europe. In February 2019, it became the biggest supplier of LNG to Europe, surpassing traditional suppliers like Qatar, Nigeria and Algeria, let alone the U.S.[196]

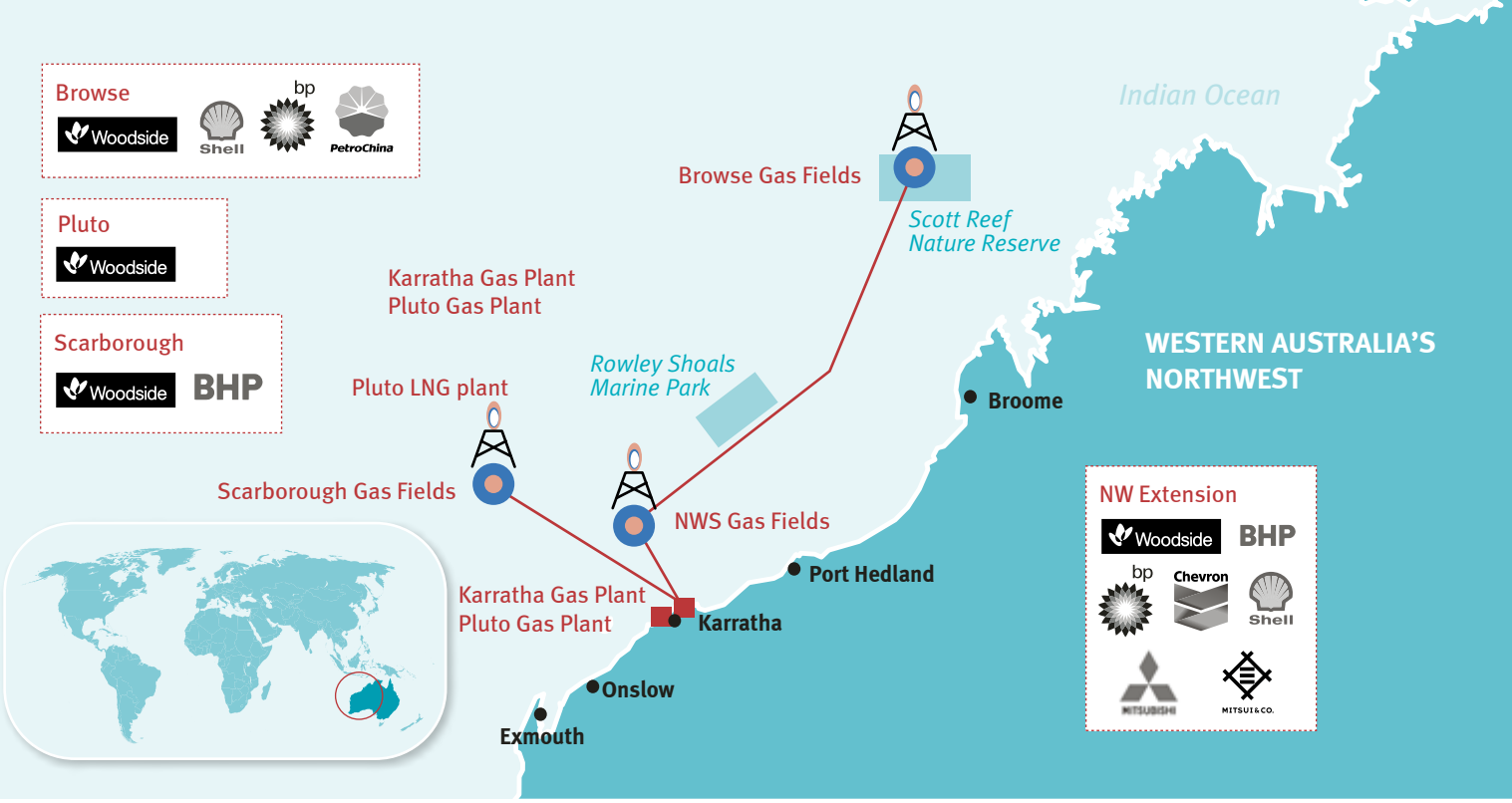
Going back to the question of climate superiority of gas over coal: this discussion traditionally leaves out the question of methane leakage. Methane, of which fossil gas mainly consists, has a much higher warming potential than carbon dioxide; over a 20 year period it has up to 80 times the warming potential of carbon dioxide. It leaks during production, transport and use. A recent briefing by CAN Europe, CEE Bankwatch, E3G and WWF European Policy Office, quotes recent ESA satellite data showing that fossil fuel activities like gas production and distribution are responsible for half of the world's major methane leaks.[197] Methane leakage is a worldwide problem, which has been studied a lot in the U.S., where the most comprehensive study to date estimates the overall leakage to be 2.3%, while a recent satellite study found the rate to be even higher in the Permian basin, at 3.7%.[198] These high methane leakage rates seriously undermine claims that gas-fired power has a lower climate impact than coal power because of its lower CO_2 emissions.

The supposed climate benefit of fossil gas is even less credible when the gas has first been liquefied for seaborne transport. Global Energy Monitor reports that typically 10-20% of the gas used in a liquefaction plant is burned to power the process. More emissions result from the energy needed to transport the LNG.

Efforts to push the myth of gas being the climate-friendliest fossil fuel increasingly include the argument that gas infrastructure built now, can in the future be retrofitted to use "green hydrogen" produced via renewable energy. However, in no realistic scenario can "renewable" gases simply replace today's fossil gas use. There will be much lower amounts of "renewable" gases available, which will require making clear choices of where they should be used. The theme of "build fossil gas infrastructure now to retrofit and green it later" is therefore mainly an excuse for continuing business as usual and extending our dependence on fossil fuels

With the costs of renewables now being cheaper in many cases than electricity from fossil gas — and continuing to fall — it would be much wiser to focus on solar and wind power, coupled where necessary with batteries, the cost of which is also falling, rather than build new fossil gas projects that risk ending up as stranded assets.

Construction of an LNG pipeline from the terminal at Swinoujscie



BURRUP HUB:

Australia's most polluting fossil fuel project

Author: CCWA, Chantal Caruso

The Burrup Hub is a $50 billion LNG mega-project led by Woodside Energy, involving the development of two new giant offshore gas-fields and onshore fracking fields. The project involves the development of the Browse and Scarborough offshore fields and other onshore and offshore gas resources in Western Australia's Northwest. Gas from the remote offshore fields would be piped up to 900 kilometers to two existing LNG production facilities, Pluto and North West Shelf, located on the Burrup Peninsula in the Pilbara region of Western Australia. These facilities would be expanded and linked to create a very large LNG processing and export hub. The project as a whole is reported to involve $AU50 billion in capital investment for the development of the gas fields, connector pipes, upgraded processing facilities and other infrastructure.

Refinery close to World Heritage Aboriginal rock art

Total Potential Emissions Burrup Hub:[199]

6.1 *Gigatons CO_2e*

Australian company Woodside Energy is the lead proponent of the Burrup Hub project with Shell, BP, BHP, Chevron and others as joint venture partners

Australia's most polluting project

If it were to become operational, the Burrup Hub project would be Australia's largest pollution source, producing some of the most carbon-intensive LNG in the world. Over its proposed 50-year lifetime, the Burrup Hub project would release over 6 billion tons of carbon dioxide pollution, equivalent to 11 times Australia's current annual emissions.

CO_2 emissions

Each year the Burrup Hub project would result in 139 million tonnes of carbon dioxide pollution (including scope 3 emissions), equivalent to:

- over 4 times the emissions of the proposed Adani Carmichael coal mine
- 35 of the largest, dirtiest coal-fired power stations in Australia
- the entire national emissions of New Zealand, Ireland, Norway and Bolivia
- over a quarter of Australia's entire national emissions

Breaking Australia's climate commitments

The Burrup Hub is inconsistent with Australia's international commitments on climate change, undermining goals in the Paris Agreement. The project is also inconsistent with public commitments on climate change made by the companies involved.

Top Fossil Fuel Companies involved in West Australia's Burrup Hub:
Browse Basin:
BP
Mitsubishi
Mitsui
PetroChina
Royal Dutch Shell
Woodside
Scarborough gas field:
BHP
Woodside
North West Shelf facility extension:
BHP
BP
Chevron
Mitsubishi
Mitsui
Royal Dutch Shell
Woodside

Impact on Scott Reef, a globally significant marine biodiversity hotspot

The Browse Basin gas field is the largest of the two offshore gas fields comprising the Burrup Hub. It is located directly underneath the largest offshore coral reef in Western Australia, Scott Reef. This pristine marine area off the Kimberley coast supports some of Australia's most iconic and endangered species, including several species of whales and nesting sea turtles, plus large pods of dolphins, dugongs and migratory seabirds. The Burrup Hub proposal involves plans to drill over 50 wells in the Scott Reef area, and to build a 900 kilometer subsea pipeline to pump the Browse Basin gas for processing. Woodside's own modelling has shown that a mixed gas/oil spill in the area could last 77 days and spread over 800 kilometers, causing significant damage to large areas of the West Australian and Indonesian coast.

© CCWA

World Heritage Aboriginal rock art

Industrial pollution would impact the health of local communities and workers

The project has the potential to open up Western Australia to a large-scale fracking and onshore gas industry which would put groundwater, public health and agriculture at risk. In 2016-17, the LNG plants Woodside proposes to be utilised for the Burrup Hub project were among the largest industrial sources of air pollutants in Western Australia, releasing 8,000 tonnes of nitrogen dioxide, 97 tonnes of sulphur dioxide and 16,000 tonnes of volatile organic compounds (VOC's), as well as PM2.5, ozone, mercury, and other heavy metals. Air pollutants of this type can cause serious health impacts, including heart disease, stroke, lung cancer, asthma and diabetes, even at low levels of exposure.

Permanent damage to World Heritage Aboriginal rock art

The Burrup Hub project would also impact a globally significant cultural heritage site that has recently been placed on the 'tentative' list for World Heritage listing by UNESCO. The North West Shelf and Pluto LNG facilities earmarked to process the new gas are located within one of the world's oldest and most extensive areas of Aboriginal rock art - Murujuga. Murujuga contains an estimated one million examples of rock carvings dating back at least 50,000 years, including the first recorded

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James Price Point in Kimberley, West Australia

image of a human face. The impacts of acid-gas emissions from LNG processing on this rock art is a cause of ongoing concern for Traditional Owners and international rock art experts. This has led to an Australian Parliamentary Inquiry and triggered a study involving West Australian regulators which has not yet concluded.

In July of 2020, reports were published on the discovery of underwater heritage off the coast of the Burrup Peninsula. These Aboriginal artefacts and cultural landscapes on the continental shelf result from Aboriginal occupation of the area at a time of lower sea levels. A process has commenced to include this underwater heritage in the application for World Heritage listing alongside the onshore Murujuga Rock Art. However, both land and sea heritage risk destruction from installation of infrastructure and the processing of LNG before the UNESCO process can be completed.

Few benefits, high costs for West Australians

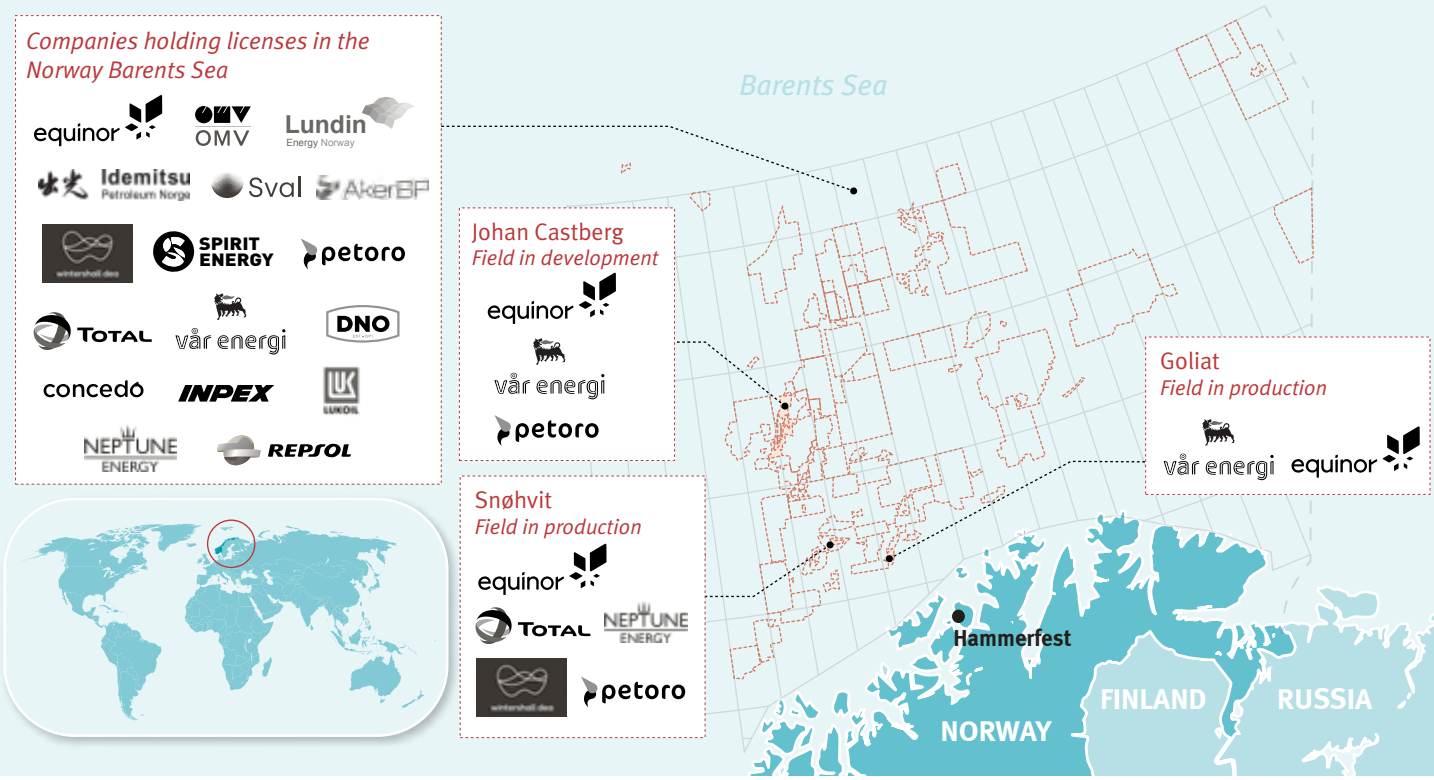
While the Burrup Hub would result in very high environmental and economic costs, the benefits delivered by the project are few. In addition to air pollution, the GHG emissions from the planned Burrup joint venture will contribute significantly to further global heating and increase the frequency of extreme weather events and bushfires such as those currently being experienced in Australia. The health impacts, both physical and psychological, from such events are profound and long-lasting.

Overall, the Burrup Hub project and its components present risks to the environment and climate that cannot be adequately addressed. However, the Burrup Hub developments are not a done deal. Environmental approvals are yet to be granted, decisions to sanction the project are yet to be made, and capital must be raised before the projects can proceed. Joint venture partners and investors can divest or exit the projects. Leading Australian experts and environment groups argue that environmental approvals should not be issued for the project, and investors and banks should avoid exposure to the Burrup Hub proposals including Scarborough and Browse Basin gas field developments.

Top 30 Banks January 2016 - August 2020	
Banks	**Total Loans & Under-writing (in mln US$)**
Citigroup	15,612
Bank of America	15,278
Mitsubishi UFJ Financial	14,949
Morgan Stanley	14,540
Barclays	14,265
BNP Paribas	13,159
Goldman Sachs	11,987
JPMorgan Chase	11,172
Mizuho Financial	9,617
SMBC Group	9,109
HSBC	8,770
UBS	6,893
Deutsche Bank	6,702
Crédit Agricole	6,236
Santander	5,809
Société Générale	4,784
Norinchukin Bank	4,175
Sumitomo Mitsui Trust	4,052
Lloyds Banking Group	3,547
Credit Suisse	3,305
Wells Fargo	3,117
Agricultural Bank of China	2,876
Industrial and Commercial Bank of China	2,845
Royal Bank of Canada	2,710
Bank of China	2,678
China Minsheng Banking	2,623
Commerzbank	2,328
CITIC	2,253
NatWest	2,089
Standard Chartered	1,850
Total	**209,330**

Top 30 Investors as of August 2020	
Investor	**Total Bonds & Shares (in mln US$)**
BlackRock	36,367
Vanguard	31,667
State Street	16,263
Capital Group	15,309
Norwegian Government Pension Fund	10,637
Standard Life Aberdeen	5,204
Legal & General	4,967
State Farm	4,646
Sumitomo Mitsui Trust	4,103
Geode Capital Holdings	4,096
JPMorgan Chase	4,033
Northern Trust	3,803
Franklin Resources	3,759
UBS	3,620
Dimensional Fund Advisors	3,476
State Administration for Foreign Exchange	3,258
Credit Suisse	3,253
Bank of America	3,222
Yuanta Financial	3,018
Wells Fargo	3,002
Ameriprise Financial	2,972
Fidelity Investments	2,944
Bank of New York Mellon	2,864
Wellington Management	2,823
TIAA	2,810
Schroders	2,537
Mitsubishi UFJ Financial	2,537
Invesco	2,501
Deutsche Bank	2,407
Morgan Stanley	2,312
Total	**194,411**

Further details:
https://d3n8a8pro7vhmx.cloudfront.net/ccwa/pages/11680/attachments/original/1586154175/CCWA_Clean-State_Burrup-Hub_Report_WEB-READER.pdf?1586154175



NORWAY Barents Sea

Author: Framtiden i våre hender/Future in our hands, Sigurd Jorde, with contribution from Arnstein Vestre, Greenpeace Norway

Oil and ice – pushing oil exploration into the Arctic

In the middle of a global pandemic with collapsing oil prices, the Norwegian government announced a planned bid for 136 new oil blocks on the continental shelf. 125 of the licences are located in the Barents Sea, the Arctic sea stretching between Norway and the North Pole.

Oil reserves:
4,766 *million barrels*
Gas reserves:
830 *bcm*
Total emissions potential:
4.5 *Gigatons CO_2e*

The expansion of oil and gas extraction into the Arctic can be seen as a necessary continuation of official energy policy, going back decades, but also as a means of continuing activity on the Norwegian shelf in the face of peaking production in mature areas. Oil production in the North Sea reached its peak in 2007 and is expected to fall gradually over the next few decades. In 2013, the Norwegian government adopted the first expansion for oil drilling on the shelf in 20 years, opening up new areas in the southern Barents Sea. This area has been the main focus for future expansion, including three licencing rounds after 2013. While the northern parts of the Barents Sea are still not open for oil exploration, seismic surveys are being undertaken by the government in order to ascertain the prospects for future expansion. Exploration in the Barents Sea is expected to provide the resources needed to slow the decline and provide activity on the continental shelf for decades.

The Norwegian paradox

The story of Norwegian oil production can be summarised in two contradictory story lines

On the one hand, Norway is one of a few countries which have been successful in exploiting the windfall of

© Christian Åslund/Greenpeace

Ingrid Skjoldvær, Nature and Youth, and Halvard Raavand, Greenpeace, protesting in front of oil platform Goliat

abundant natural resources in an economically sustainable manner. With the Norwegian Government Pension Fund, politicians have established an "oil fund" to safeguard revenues for future generations (now one of the largest sovereign wealth funds in the world) and have fostered a number of domestic oil companies and a supply industry able to compete with the international giants. The oil extraction is considered by the industry itself as low in local carbon emissions, which it uses as an argument for continued oil and gas production, even in the face of future falls in global demand.[200]

On the other hand, while this description has some merits, it does not show the full picture. For the last decade, the broad environment movement has gradually shifted the narrative. As Norwegian oil and gas are just as carbon-based as any other, continued production is in fact prolonging the age of fossil fuels. Since 1990, the expansion of the oil and gas industry has been a driving force behind Norway's 25% increase in CO_2 emissions since 1990, as well as contributing to international emissions by the extraction and export of oil and gas to other countries.[201] Expanding into the Arctic would increase risks for the fragile environment, in particular with relation to the harsh weather conditions, and the insufficient knowledge of how to handle oil spills in areas covered in sea ice. For years, the main political conflict around oil and gas exploration has stood outside the islands of Lofoten, Vesterålen and Senja, where exploration has been halted, for the time being, through effective campaigning by environmental organizations. The Norwegian paradox looms large: if Norway, with its wealth and green credentials, refuses to phase out oil and gas production, how can any country be expected to leave fossil fuels in the ground in the face of climate change?

Top Oil Companies Involved in Production and Exploration in the Barents Sea:
Aker BP
Capricorn
Concedo
DNO
Equinor
Lundin Petroleum
Lukoil
Neptune Energy
Petoro
Repsol
Spirit Energy
Total E&P
Vår Energi (Eni)
Wintershall Dea

© Mitja Kobal/Greenpeace

Activists documenting drilling operations in the Arctic Ocean near Bear Island

A cold front line

The Barents Sea is on the front lines of international oil expansion. With a melting Arctic sea ice cover, the willingness to exploit the region's resources has increased, and while the global average temperatures have increased by more than 1°C, the Arctic is taking an outside share of this warming. Temperatures on Svalbard are now more than 5°C warmer than in 1961.[202]

With the sea ice receding, several countries are competing for resources in the Arctic: Canada, Denmark (in control of Greenland), Russia and USA have all to some extent opened up their northern frontier for oil and gas exploration. Still, Norway is among the more persistent countries when it comes to pushing for further expansion. While the Obama-Trudeau 2016 ban on Arctic oil drilling put a temporary halt to expansion in the North American sphere, and Russia's oil and gas ambitions have been halted by the 2014 sanctions induced by the annexation of Crimea, Norway is expanding its oil activity in the North, even after the Paris Agreement came into force.

The Barents Sea was first opened for oil and gas activities in 1980 but has so far only seen two fields enter into production. Meanwhile, 157 exploration wells have been drilled, with discoveries in 60 of these. The expansion should be seen in light of the 2010 maritime delimitation agreement, settling a longstanding borderline dispute with Russia. The agreement underlines "the importance of efficient and responsible management of … hydrocarbon resources".[203] In recent years, several adaptations

have been made to national environmental regulations in order to accommodate further exploration, one such being the recent revision of which areas are to be considered within the "sea ice zone", and hence under special restrictions as regards oil activities. Since the sea ice is in constant seasonal and annual movement, the limit for how far north licences may be granted will be defined based on research – and politics.

The sea ice delimitation brings to the fore the contradiction between the scientific debate on ice and ocean movement and the commercial interests of oil and gas companies. In reality, the interests of oil and gas were pitted against environment and climate considerations. While the new definition was a compromise, the previously contentious definition was moved outside of any conflict with existing and potential future licences, barring a further expansion into the northern Barents Sea. Soon after the new definition was settled, a record amount of new acreage was announced in the Arctic waters of the Barents Sea.

High expectations

The Norwegian Petroleum Directorate expects 63% of remaining undiscovered fossil resources to be located in the Barents Sea. Since the first exploration in 1981, a total of 157 wells have been drilled, with the highest activity being concentrated in the last 10 years. Despite 40 years of exploration, the results have been meagre. Only 2 fields are in production, and 1 field in development with planned operation from 2022. Most discoveries are small and not likely to be developed and extracted. In comparison, the fields in the North Sea are large, with simpler geology and are situated closer to existing infrastructure. In addition to hostile seas, ice and temperatures, any new field in the Barents Sea will be far away from existing pipeline infrastructure and therefore more expensive than it would be further south.

There is also a debate whether the oil field in production – Goliat – is in fact profitable. With extensive tax refunds having been granted to the operator (Eni), the money would probably be more profitable invested elsewhere, according to independent analysts.[204] In late 2020, it was uncovered how the Ministry of Oil and Energy had withheld information from the Parliament which calculated Barents Sea southeast would not be profitable.[205]

If you add climate change concerns to difficult geology, remoteness and meagre discoveries, increasing activity in the north looks like a gamble.

Oil and gas production platform

Despite, or maybe because of meagre results, the Ministry of Petroleum and Energy has recently stepped up activity in the Barents Sea. Since 2015, the ministry has awarded production or exploration rights every year to around 20 different companies. Equinor, the partly state-owned oil company, is the dominant actor. While there was some initial interest in the area, the big international oil companies currently seem to have declining interest in the Norwegian Arctic. Italian Eni is the other large operator in the Barents Sea, through its Norwegian subsidiary Vår Energy. ConocoPhillips and Chevron applied for licensees in 2017, but have since pulled out. On the exploration side, the most active companies are Swedish Lundin Energy and Aker BP, a Norwegian listed company, as well as smaller actors such as Spirit Energy, Wintershall DEA, DNO, Neptune Energy and Concedo.

Looking at the financial side, there is no visible evidence of oil exploration in the Barents Sea being treated any differently from oil further south. Oil companies, such as Equinor and oil service companies, dominate most of the market capital of the Norwegian Stock Exchange and are part of most index and saving funds. Norwegian banks have been on the forefront of excluding coal companies and tar sands from their portfolios but have not excluded companies due to activities in the arctic. None of the larger banks have any policy on loans to companies drilling in the Arctic, according to a policy study by Ethical Bank Guide.

The research for this report shows that major international oil companies such as Equinor and Vår Energy (a subsidiary of Italian Eni), are owned by awide range of international investors. Meanwhile smaller local companies, such as Aker BP and Lundin, receive most of their finance from the Nordic countries.

Expanding beyond the Paris Agreement

Expanding oil into the Arctic does not stand well with Norway's signature on the Paris climate agreement, where all nations agree to keep global warming well below 2°C. Every year since 2015, the Ministry of Petroleum and Energy has awarded new rights to explore for more oil and gas, despite the urgent need to reduce fossil fuel consumption.

In 2016, two environmental organisations – Greenpeace and the Norwegian youth organization Nature and Youth – took the government to court, arguing that the 23rd licensing round, the most recent since the

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
JPMorgan Chase	7,940
Barclays	7,840
Citigroup	7,023
BNP Paribas	6,491
UniCredit	5,365
Bank of America	5,321
Crédit Agricole	4,604
Morgan Stanley	4,567
Deutsche Bank	4,523
Goldman Sachs	4,271
Société Générale	3,927
Skandinaviska Enskilda Banken	3,896
ING Group	3,536
HSBC	3,528
Nordea	3,401
DNB	3,374
Danske Bank	2,878
Mitsubishi UFJ Financial	2,762
Mizuho Financial	2,503
Intesa Sanpaolo	2,238
ABN Amro	1,808
BMO Financial Group	1,697
Credit Suisse	1,596
Swedbank	1,548
Wells Fargo	1,510
BPCE Group	1,491
SMBC Group	1,382
Royal Bank of Canada	1,349
Commonwealth Bank of Australia	1,344
Banco Bilbao Vizcaya Argentaria (BBVA)	1,242
Total	**104,958**

Top 30 Investors as of August 2020

Investor	Total Bonds & Shares (in mln US$)
BlackRock	11,343
Vanguard	7,032
Norwegian Government Pension Fund	5,185
Crédit Agricole	2,536
Wellington Management	1,843
T. Rowe Price	1,695
Fidelity Investments	1,656
Deutsche Bank	1,552
Folketrygdfondet	1,516
UBS	1,400
Invesco	1,391
Dodge & Cox	1,372
State Street	1,261
JPMorgan Chase	1,231
Capital Group	1,217
Société Générale	1,215
BNP Paribas	1,167
APG Group	1,041
Caisse de dépôt et placement du Québec	1,030
Dimensional Fund Advisors	1,018
Franklin Resources	897
California Public Employees' Retirement System (CalPERS)	894
Schroders	866
TIAA	777
Lazard	771
BPCE Group	717
Affiliated Managers Group	709
DZ Bank	642
Allianz	640
Geode Capital Holdings	631
Total	**55,245**

2013 expansion, was in violation of the constitutionally granted right to a healthy environment for current and future generations. A central piece of the case, which is still ongoing, is the allegation that new oil fields in the Arctic undermine the climate targets. The court will be heard in Supreme Court in the fall of 2020, after having not won through in the lower courts.

One of the main political arguments for oil in Arctic waters has always been potential job creation in Northern Norway. Gas from the Equinor operated Snøhvit field, is converted to LNG at Melkeøya close to the North Cape. The construction and operation of this plant has been important for employment in the region. However, there are no new projects with similar prospects for job creation at scale, which may explain a shift in public opinion on further Arctic oil adventures. Change is also affecting the partly state-owned Equinor itself, with increasing commitments to renewable energy such as offshore wind parks, and a fresh commitment to becoming carbon neutral by 2050.[206]

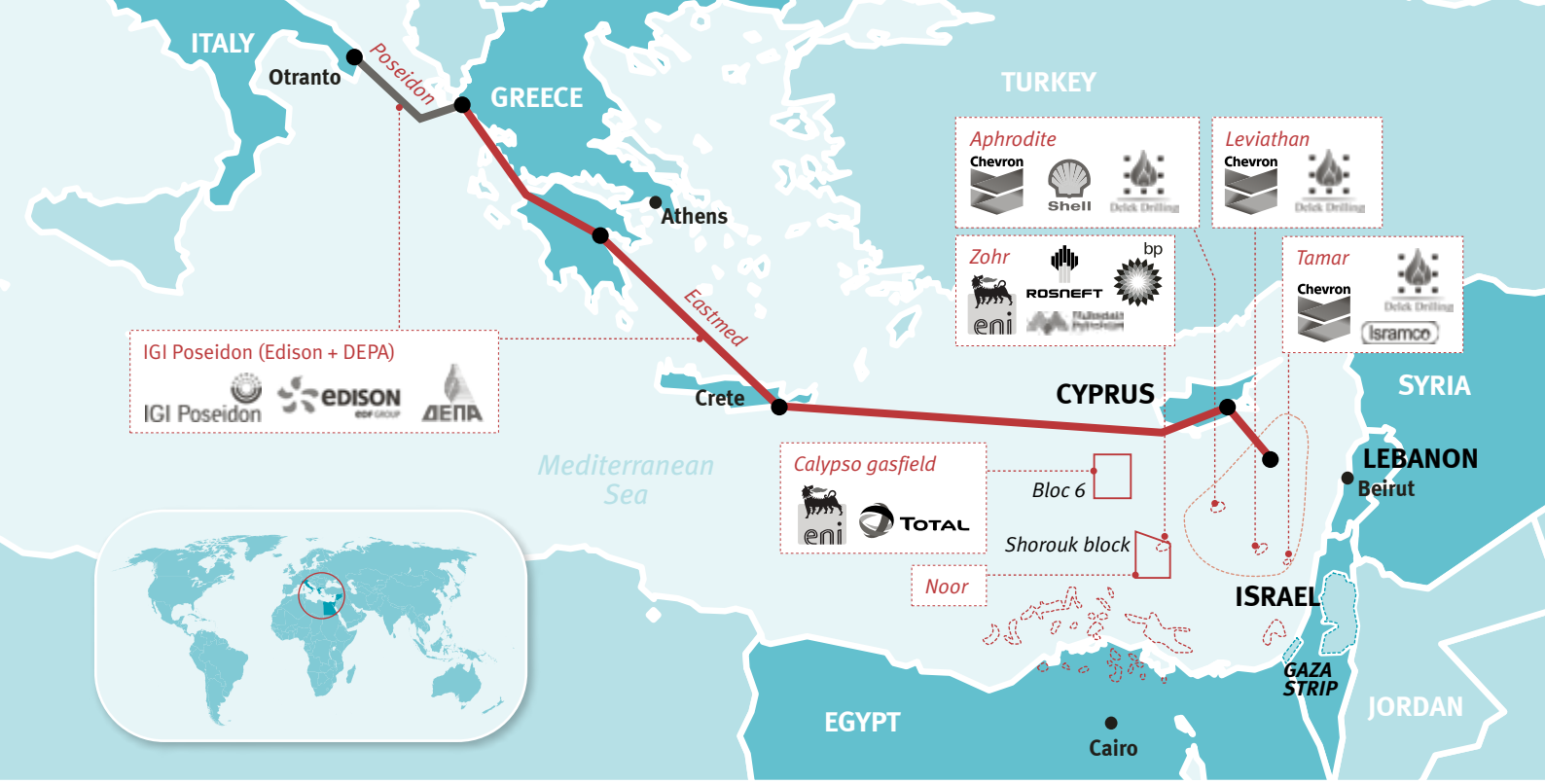
Only a decade ago, the Norwegian oil industry was seen as a steady source of income, employment, and national pride. With accelerating climate change, the industry is meeting increasing resistance. The industry is continuously arguing for its future existence,but shifting public opinion – and indeed the shifting climate itself – may soon make Arctic oil less attractive.

The oil industry, especially smaller companies eager for adventure and risk, have shown a strong interest to expand their activities into the North. The new round of licences planned for 2021 will raise crucial questions for both companies and banks. Are the larger companies willing to risk reputation and revenue on the Arctic Frontier? And equally important; are the banks willing to finance the expansion into the far North?

When temperatures are rising rapidly around the North Pole and the sea ice receding, vast new areas are opening up for exploration. Any company or investor that intends to take climate change seriously, should avoid the glaring paradox inherent in exploiting climate change to increase oil production.

© Nick Cobbing/Greenpeace

Climate activists oppose the Norwegian government's oil drilling



EAST MEDITERRANEAN Oil & Gas

Authors: Re:Common, Elena Gerebizza, Alessandro Runci

EastMed: the pipeline that could trigger a new carbon bomb

The Eastern Mediterranean is home to one of the world's largest, partially unexploited, deep-water hydrocarbon reserves. According to energy consulting firm Wood Mackenzie, the region may hold 3.5 trillion cubic meters (TCM) of gas reserves,[207] almost equal to Europe's total gas reserves (3.9 TCM).[208]

Five giant fields (see map) alone account for about half of these reserves, and in some cases production has just started or yet to begin.

These hydrocarbon reserves have remained unexplored and unexploited for decades due to a mix of technological, economic, financial, and geopolitical challenges that, until now, prevented the fossil fuel industry from expanding in the region.

In the context of the COVID-19 crisis, low oil and gas prices may slow down the development of some of the most challenging offshore fields. However the real game changer is a proposed, mega infrastructure project called the EastMed gas pipeline. The pipeline is yet to be built, but has already been flagged by the European Commission as "strategic" for Europe.[209]

If completed, the gas pipeline would be 1,900 kilometres long, of which 1,300 kilometres are offshore, and it would cost about €5 billion. It is an immensely challenging long distance project, aimed at transporting 10 billion cubic meters of gas each year into the European market.[210]

The main gas sources would be the Leviathan field in Israel and the Aphrodite field in Cyprus. The project proponent is an Italian-Greek consortium named IGI Poseidon SA, a Joint Venture between the Italian energy company Edison SpA - owned by French utility EDF - and the Greek energy company DEPA.

According to the project description endorsed by the European Commission, EastMed will involve the construction of:

- 900 km offshore gas pipeline starting at the Leviathan offshore field in Israel and connecting the Aphrodite field in Cyprus;
- 100 MW compressor station in Cyprus;
- an offshore pipeline to Crete, with 120 MW compressor station;
- 400 km offshore pipeline to the South Peloponnese;
- 600 km onshore pipeline to West Greece, which should then connect to another gas pipeline project named IGI Poseidon[211]

The pipeline will have to be anchored at a maximum sea depth of 3,544 metres in the Aegean Sea[212], which makes it a highly risky and technically challenging project.

Clearly, EastMed and its associated infrastructure will require significant political support and investment, both public and private. But in whose interest?

Who are the companies involved?

Driving the project are some of the world's largest oil & gas corporations. Eni, Total, ExxonMobil, and Royal Dutch Shell are only some of the dozens of companies licensed for exploration and production in the Eastern Mediterranean. Recently, US giant Chevron has also expanded into the region, by taking over Noble Energy's stakes in Leviathan and Tamar giant fields.[213]

These projects will undoubtedly need to attract a huge amount of private capital, but that is not enough. EastMed is also set to receive European and multilateral financial support, including through export credit agencies and national development banks. Public support, financial and political, is crucial for de-risking the project, therefore making it more attractive to investors and banks. In other words: the public takes up the risk, to enable a climate-wrecking project to go ahead, in the interest of big oil and gas corporations.

The European Commission has politically endorsed the pipeline, and added it to the list of so-called Projects of Common Interest[214]. EastMed is thus a candidate for receiving financial support from the Commission and from European public banks such as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD). The project has already benefited from a €36.5 million grant from the European Commission.[215]

Leading oil & gas companies	**Subsidiaries**
Eni (Italy)	Eni Cyprus Limited; IEOC Production BV
Chevron Corporation (US)	
ExxonMobil (US)	ExxonMobil E&P Cyprus
Total (France)	Total E&P Cyprus BV
Additional oil & gas companies	
Qatar Petroleum (Qatar)	
Royal Dutch Shell (The Netherlands)	
BP (UK)	
Rosneft (Russia)	
Mubadala Petroleum (UAE)	
Delek Group (Israel)	Delek Drilling
Ratio Oil (Israel)	
Isramco (Israel)	
Tamar Petroleum (Israel)	
Dor Energy (Israel)	
Kogas (South Korea)	Kogas Cyprus Limited
Leading gas infrastructure companies	**Project**
IGI Poseidon (JV) Edison SpA (Italy); DEPA (Greece)	EastMed pipeline Poseidon pipeline IGB pipeline
Gastrade (JV) Gaslog (Greece); DEPA (Greece); Bulgartransgaz (Bulgaria); Romgaz (Romania)	Alexandroupolis INGS
Bulgarian Energy Holding	IGB pipeline

Oil & gas offshore exploration platform near the coast in Cyprus

Last August, JP Morgan and HSBC facilitated the issuance of a $2.25 billion project bond by Israeli-based Delek Drilling, aimed at financing the development of the Leviathan gas field[216]. Banks such as BNP Paribas, Goldman Sachs and ABN AMRO are among the participants in the financial package.

Building the pipeline would open up the entire Eastern Mediterranean region to oil and gas production, by connecting these fields with the European market. The exploitation of these vast resources would dramatically push us closer to climate breakdown, lock Europe into decades of gas imports, and block the energy transition we need.

EastMed final capacity:

20 *bcm per year*

Total potential emissions:

3.3 *Gigatons CO_2e*

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
Bank of America	33,055
JPMorgan Chase	32,460
Citigroup	30,347
Barclays	29,864
HSBC	21,681
BNP Paribas	20,683
Morgan Stanley	19,823
Goldman Sachs	14,844
Société Générale	13,967
Crédit Agricole	10,838
VTB Group	10,454
Deutsche Bank	10,394
Wells Fargo	8,808
Mizuho Financial	8,212
SMBC Group	7,354
Santander	7,138
Mitsubishi UFJ Financial	6,732
Russian Regional Development Bank	6,416
Royal Bank of Canada	5,440
Credit Suisse	5,354
BPCE Group	4,596
Lloyds Banking Group	4,448
Intesa Sanpaolo	4,213
Standard Chartered	4,106
UniCredit	3,828
UBS	3,487
NatWest	3,105
ING Group	2,996
Commerzbank	2,814
Sberbank	2,077
Total	**339,535**

Top 30 Investors as of August 2020

Investor	Total Bonds & Shares (in mln US$)
Vanguard	51,709
BlackRock	51,117
State Street	27,779
Capital Group	19,465
Norwegian Government Pension Fund	14,563
Geode Capital Holdings	7,329
Fidelity Investments	7,038
Northern Trust	6,491
State Farm	5,775
Legal & General	5,556
Bank of New York Mellon	5,512
Franklin Resources	5,426
Wellington Management	5,351
JPMorgan Chase	5,142
Dimensional Fund Advisors	5,141
T. Rowe Price	5,140
UBS	5,124
Bank of America	4,927
Invesco	4,267
TIAA	3,920
Charles Schwab	3,776
Credit Suisse	3,717
Morgan Stanley	3,517
Deutsche Bank	3,346
Standard Life Aberdeen	3,177
Crédit Agricole	3,131
Ameriprise Financial	3,074
State Administration for Foreign Exchange	2,818
Wells Fargo	2,710
Yuanta Financial	2,222
Total	**278,262**

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The Orot Rabin (formerly Maor David) power plant in Hadera, Israel

© Shutterstock/Andriy Markov

Oil & gas offshore exploration platform near the coast in Cyprus

Reinforcing repressive regimes

Fossil fuels extraction in Eastern Mediterranean, and the construction of the associated infrastructures, such as the EastMed pipeline and new LNG terminals in the making, risk to further exacerbate the human rights situation in the region.

The 2020 Human Rights Watch[217] report speaks the truth about the dramatic situation in Egypt, the country holding the production rights of some of the largest reserves in the Eastern Mediterranean.

While the industry is making billions exploiting the country's oil wealth, Egyptian people are deprived of the right to decide how to manage their natural resources, and whether oil should be extracted or kept in the ground. Freedom of expression and association is severely restricted by the Egyptian regime.

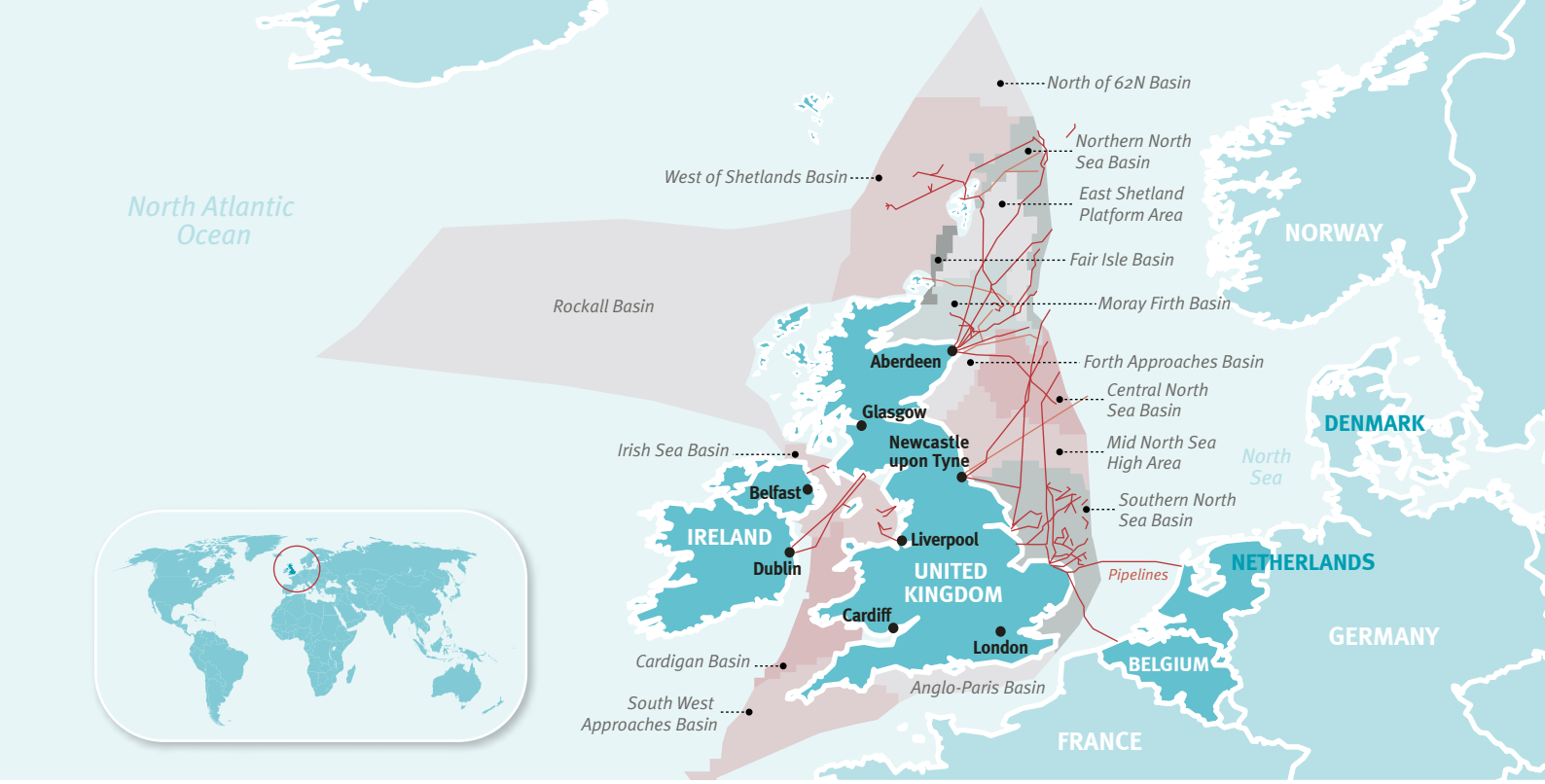
The revenues arising from these projects, as well as the trade contracts that regulate the construction of major infrastructure projects such as EastMed, are set to further strengthen and legitimise Egypt's regime.

The second largest holder of rights on offshore reserves is Cyprus, a country that has suffered from a long-lasting conflict started after the Turkish invasion of the northern part of the island. The exploration of the country's offshore reserves was licenced by the Cypriot authorities, however Turkey has conducted incursions[218] in areas that Cyprus claims to be part of its Exclusive Economic Zones, like Block 7 (operated by Italian Eni and French Total) and Block 12 (operated by US Chevron), increasing the tension in the entire region.

A 2019 congressional bill calls for a stronger US military presence presence[219] in Cyprus and the Eastern Mediterranean, including the sale of weapons and strengthened partnership between the USA and Greece, Cyprus and Israel. This worrying dynamic is increasing concerns for a potential escalation in the area[220], and is likely to further shrink the political space to oppose these projects, particularly in already highly militarised countries like Israel, Palestine and Cyprus.

Banks participating in Leviathan project finance

Investor	$ million
JP Morgan	421
HSBC	421
BNP Paribas	421
Goldman Sachs	421
ABN AMRO	187
Barak Capital	187
Value Base	187



UK Oil & Gas

Author: Global Gas and Oil Network

The UK's dirty climate secret: offshore oil and gas expansion.

The UK government has received praise for both its pioneering Climate Change Act, to reduce greenhouse gas emissions within the UK to net zero by 2050, and its plans to phase-out coal power. However, the government's less well-known policy on oil and gas is in stark contrast to this. It aims to maximise oil and gas extraction as much as possible, which research shows is incompatible with the Paris Agreement.[221]

Oil reserves:
11.6 *billion barrels*
Gas reserves:
989 *billion cubic meters*
Total emissions potential:
8.2 *Gigatons CO_2e*

Five decades of UK extraction

The UK has been extracting offshore oil and gas for almost fifty years. It is the second largest producer in Europe after Norway. Many of the UK's largest offshore fields were developed in the 1970s, following the first discoveries in the 1960s. The majority of fields are in Scottish waters, and most extraction today comes from the North Sea, although about a fifth comes from the North Atlantic, west of Shetland.[222]

UK offshore extraction has peaked twice, in the mid-1980s and early 2000s, and it is now growing again.[223] This is a deliberate consequence of UK Government plans, which put the UK among the top ten countries globally with the biggest oil and gas expansion plans over the next five years.[224] There are over 5 billion barrels of oil equivalents in offshore oil and gas fields already in operation in the UK.[225] Emissions from this alone, when burnt, would exceed the UK's share in relation to Paris climate goals. Yet the oil and gas industry and government aim to find, develop and extract around 14 billion barrels (boe) more.[226]

Semi Submersible Oil Rig at Cromarty Firth in Invergordon, Scotland

Top Fossil Fuel Companies Operating or Holding Licenses in the UK North Sea:
Apache
BP
CalEnergy Resources
Chrysaor
CNOOC
Delek Group
Edison
EnQuest
Equinor
ExxonMobil
Hibiscus Petroleum
Hurricane Energy
i3 Energy
Independent Oil and Gas
Ineos Group
Jersey Oil and Gas
KNOC/Dana
Perenco
Premier Oil
Royal Dutch Shell
Siccar Point Energy
Spirit Energy
Suncor Energy
Total
Zennor Petroleum

Maximising Extraction

In 2015, a new policy on oil and gas extraction called "Maximising Economic Recovery" was passed into UK legislation through the Infrastructure Act. This aims for as much oil and gas to be extracted from UK territory as is economically possible. This legally required policy does not entail that the economic benefits of oil and gas extraction, such as government revenue, should be maximised, but instead that the overall amount of oil and gas extracted should be maximised, by ensuring that as much as possible can be extracted and sold at a profit by companies.

There are two ways the Government helps to deliver this policy: by issuing new licences for companies to explore for new oil and gas fields or to develop new parts of existing fields, and by providing subsidies to companies extracting oil and gas. In the last few years licences and permits have been issued through annual licensing rounds, and in some of these years through additional "supplementary" rounds. The results of the latest round were announced in September 2020, revealing that 113 licences had been granted for 65 companies to search for more oil and gas in the North Sea. Environmental organisations were outraged, with Friends of the Earth Scotland claiming this would take us " speeding towards climate catastrophe".[227]

The Government provides subsidies to oil and gas companies mainly in the form of tax breaks or reduced tax rates. In 1993, the overall tax rate for companies extracting oil and gas in the UK was 83%, but by 2015 had fallen to 62%, and after two further successive cuts has been reduced to 40% since 2016. One of the main tax breaks companies receive is relief for decommissioning wells, rigs and pipelines when a field is eventually shut down. Companies can claim up to 45% of these costs through tax relief, which are conservatively estimated to cost the UK Government at least £24 billion, mainly landing over the next two decades.[228]

The impact of these subsidies on government revenue has been significant. In 2015-16 and 2016-17 the Government actually paid out more in tax rebates than it received in tax revenue from these companies, despite many of them making significant profits.[229] In 2019, there was a public outcry when Shell announced it had paid no corporate income tax in the UK in 2018, but instead received rebates of over $100 million, despite making an annual pre-tax profit there of over $700m.[230]

The climate impact of these new licencing rounds and subsidies are enormous. Subsidies for oil and gas extraction provided since just 2015 will add twice as much carbon to the atmosphere as the UK's phase-out of coal power saves.[231] Opening up new oil and gas fields to the extent the industry and UK Government aims, to extract 10 - 20 billion barrels (boe) in total, would add over 8 Gigatons of CO_2 emissions based on the current data on what are economically recoverable resources since the price crash.[232]

If all countries took the same approach as the UK — of phasing out coal power while maximising oil and gas extraction — the resulting warming would significantly exceed 2°C, moving dangerously beyond the Paris goal.[233] As the world drastically needs to cut emissions to prevent a climate breakdown, the UK's legally enshrined policy of "maximising economic recovery" means that it is being the opposite of the climate leader that successive governments have boasted it is.

Bringing UK oil and gas policy in line with Paris

In order for its oil and gas extraction to be consistent with the Paris Agreement, the Government should introduce a managed phase-out of oil and gas extraction, through a Just Transition for workers and others who will be affected.

This does not require it to "turn the taps off" overnight, but instead phase-out oil and gas at a pace which allows both the energy and jobs gaps to be filled with alternatives, while staying safely within climate limits. Research has found that with the right plans, job creation in clean energy industries will exceed affected oil and gas jobs more than threefold.[234]

Top 30 Banks January 2016 - August 2020

Banks	Total Loans & Underwriting (in mln US$)
JPMorgan Chase	34,715
Bank of America	32,012
Citigroup	31,381
Barclays	31,252
HSBC	20,206
Morgan Stanley	19,300
BNP Paribas	18,347
Goldman Sachs	16,895
Deutsche Bank	10,884
Société Générale	10,809
Wells Fargo	8,833
Mizuho Financial	8,606
Crédit Agricole	8,476
Royal Bank of Canada	6,937
Santander	6,690
Lloyds Banking Group	6,293
Credit Suisse	6,183
Toronto-Dominion Bank	5,723
SMBC Group	5,466
Mitsubishi UFJ Financial	5,362
NatWest	4,987
UBS	4,020
CIBC	3,623
ING Group	2,951
BMO Financial Group	2,674
Commerzbank	2,499
Standard Chartered	2,437
Industrial and Commercial Bank of China	2,359
BPCE Group	2,353
Bank of China	2,102
Total	**324,372**

Top 30 Investors as of August 2020

Investor	Total Bonds & Shares (in mln US$)
BlackRock	39,731
Vanguard	38,488
State Street	17,247
Capital Group	14,587
Norwegian Government Pension Fund	12,808
Fidelity Investments	10,427
Geode Capital Holdings	4,909
Legal & General	4,613
Franklin Resources	4,542
T. Rowe Price	4,473
Wellington Management	4,351
Dimensional Fund Advisors	4,325
Invesco	4,281
Northern Trust	4,243
Bank of New York Mellon	4,140
Dodge & Cox	4,117
UBS	4,097
State Farm	4,028
Credit Suisse	3,480
Royal Bank of Canada	3,475
JPMorgan Chase	3,146
State Administration for Foreign Exchange	3,075
Deutsche Bank	2,837
TIAA	2,654
Charles Schwab	2,650
Crédit Agricole	2,631
Standard Life Aberdeen	2,539
Power Financial Corporation	2,471
Bank of America	2,369
Caisse de dépôt et placement du Québec	2,245
Total	**218,979**

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Large offshore oil rig drilling platforms off the coastline near Invergordon in Scotland

© Shutterstock/T.W. van Urk

Offshore terminal for North Sea oil in Firth of Forth near Edinburgh, Scotland

The Government should amend legislation so that the policy of Maximising Economic Recovery is replaced by one requiring the amount of extraction to be aligned with the 1.5°C temperature rise target. It should also introduce a moratorium or ban on future licencing, and quickly phase-out subsidies for oil and gas extraction. These should instead be directed to support a comprehensive Just Transition plan, in line with climate limits, for workers, communities and supply chain businesses currently dependent on the oil industry, involving those stakeholders in the design of these plans.

There have been some signs that the industry and Government is beginning to realise their approach needs to be changed, but there is still a long way to go. In May 2020, the Oil and Gas Authority (OGA) announced it was consulting on how to review the Maximising Economic Policy so that it is compatible with the UK's net zero by 2050 legislation.[235] However, based on the OGA's draft proposal the signs are that the final review (due to be published before the end of 2020) will be nowhere near adequate. The Government also announced that it will review future licensing rounds. This is an important development and it is vital the outcome of this is at least a suspension or moratorium on new licences, or better still an outright ban.

The role of companies

Over 50 companies have stakes in extracting UK offshore oil. Smaller companies own many of the newer fields and have bought out some of the declining, older fields. However, the oil majors still have a significant presence, with BP, Shell, Chevron and Total owning fields that make up around 40% of extraction from the existing fields in operation.[236]

Companies operating offshore in the UK should no longer bid for new licences to develop fields and search for new ones, and those financing them should insist the companies develop business plans which are fully aligned to the Paris Agreement target of keeping global temperature rises within 1.5°C.

CONCLUSION: Road to COP26 and our policy demands recapped

Author: Reclaim Finance, Lucie Pinson

We are fighting against time, but also against inaction. Despite knowing the inevitable impacts of climate disorder, financial institutions have played the role of loyal companions of fossil fuel companies in the development of highly destructive projects.

Between 2017 and September 2019 alone, banks also handed out over $745 billion in financing to companies developing new coal plants. According to Banking on *Climate Change 2020*, 35 global banks have provided $2.7 trillion in financing to fossil fuel companies since the Paris Agreement's adoption, with the annual amount increasing each year since 2016. The situation is also appalling for the insurance and asset management industries.

So far, not one global financial institution has adopted the policies needed to curb the development of fossil fuels. Their investments, financing, insurance underwriting, and other financial services keep the fossil fuel industry afloat, despite being outcompeted by low-cost renewables.

Unfortunately, while dreaming about a step-by-step transition process was once possible, there is now not enough time left to tackle one subsector of the fossil fuel industry at a time. For many years, financial institutions have gradually reduced their financing of coal, and the number of coal restriction policies has been steadily increasing. While there is still much more work to be done to stop coal finance, the way financial institutions approached and are still approaching the coal sector teaches us how they must also tackle the oil and gas industry.

The coal industry teaches financial institutions what (not) to do

As of December 1st, 2020, at least 232 global financial institutions have adopted coal restriction policies. However, according to the Coal Policy Tool developed by the NGO Reclaim Finance,[237] most of these policies are still lacking in ambition.

Five years after the adoption of the Paris Agreement, a huge amount remains to be done to ensure the closure of existing coal assets on time to align with climate science. Only an exceedingly small number of financial institutions have started adopting a strategy to zero out their exposure to the coal sector, at the latest by 2030 in Europe and the rest of the OECD, and by 2040 in other countries. The number of coal policies has been growing fast since 2015, but most coal policies worldwide remain too weak to prevent further growth of the coal sector.

Only 16 financial institutions, including top players such as AXA and UniCredit, have a robust coal phase-out policy, and only 30 financial groups exclude some coal companies on the grounds of their expansion plans. Out of 109 banks and insurers with a policy on coal, 52 only restrict financial services on the project level and can keep supporting coal companies without limitation.

For example, Citigroup, MUFG, and SMBC, who are among the top 10 financiers of the Indian company NTPC highlighted in this report, have no strict exclusion criteria for coal power companies.

When they do exist, most policies excluding finance for coal companies are far too weak and based only on the relative share of coal in their activities. As revealed by the Global Coal Exit List, a database maintained by the NGO Urgewald, this approach leads to policies that let some of the biggest coal producers and coal plant developers off the hook.

This is the case with the largest financier of coal in the Philippines, Standard Chartered, which in 2019 committed to ending finance for mining and power companies from 2021 onwards — but only if *all* of their revenues come from thermal coal. The bank plans to lower this threshold to 60% by 2025, 40% by 2027, and 10% by 2030. These thresholds are far too high and the timeline far too slow. They allow Standard Chartered to keep financing some of the biggest coal companies and even companies with coal expansion plans, such as NTPC, for many years.

Even worse: 210 top global financial institutions have no coal policy whatsoever, and most banks and insurers allow direct financing or insurance coverage for new coal projects.

To properly align with climate science, a coal policy needs to (a) cover the entire value chain from mining to power through intermediate infrastructure such as coal ports and trains; (b) tackle all financial services, including corporate and project financing, underwriting, and passive fund management, and (c) combine exclusion criteria and shareholder engagement to not only prevent the expansion of the coal sector but also to support its rapid phase-out.

One thing is obvious: it is increasingly urgent to address oil and gas and financial institutions need to now urgently progress to the level of the highest quality coal policies identified by the Coal Policy Tool. Hot-air policies, like that adopted in early January 2020 by the biggest coal investor BlackRock, should not be followed. Indeed, while there was a lot of hype surrounding BlackRock's coal policy announced in January 2020,[238] it excludes only a minor part of the coal sector - less than 17% of the 935 companies on Urgewald's Global Coal Exit List - from less than a third of BlackRock's assets under management.

Oil and gas policies are absurdly weak

Avoiding a climate catastrophe clearly requires a rapid exit from coal and strong measures in other sectors, starting with gas and oil. The science is clear: limiting global warming to 1.5°C by the end of the century means stopping the exploitation of any new oil and gas reserves and the development of new polluting infrastructure today.

Yet, at present, gas and oil policies are shamefully insufficient. At least 105 private financial institutions have adopted oil and gas exclusion policies. As identified through preliminary research by Reclaim Finance, most restrict finance only to tar sands and Arctic drilling. Moreover, similar to in the coal sector, most policies use a very high threshold to screen out companies active in these subsectors.

The policies on Arctic drilling are a perfect example. Out of the 29 banks having adopted a policy on Arctic activities, 23 of them only banned project financing to oil and/or gas drilling in the Arctic even though most, if not all, financing for these activities comes from corporate financing. Many financial institutions also have a narrow definition of the Arctic. Consequently, most US banks, including Citi, Goldman Sachs, JP Morgan Chase, and Morgan Stanley that have recently adopted some policies on the Arctic could still support development in the Barents Sea.

The French State financial arm CDC has gone much further than others by excluding companies throughout the entire value chain if their revenues from shale oil

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and gas, tar sands, and Arctic zone resources add up to 10% or more.[239] However, none of these players have drawn a line between companies active in oil and gas and those developing new projects and reserves, including in the riskiest sub-sectors such as shale oil and gas and in the Arctic.

Oil and gas policies have the same limitations as those related to the initial policies adopted in the coal sector, in that their criteria are based on the relative exposure of a company to a specific fossil sector at a specific moment in time, and not on an assessment of the future trajectory and investment plans of that company.

To take an example, Crédit Agricole and Natixis made a commitment in May 2020[240] to no longer finance companies specializing in shale oil and gas. Apart from focusing only on extraction and ignoring the rest of the value chain, their commitment will not cover diversified companies, even though they are among the biggest developers in the sector. These diversified companies include Chevron, ExxonMobil, and Shell, who are among the biggest current operators in the Permian Basin, as well as Total, whose interest in shale gas and oil has increased in recent months,[241] despite its stated climate commitments.

In the same vein, there is no guarantee that ING's[242] and Société Générale's[243] commitments to reduce their lending exposure to the upstream oil and gas sector (by 19% by 2040 in the case of ING, by 10% by 2025 in the case of Société Générale) will actually lead to a reduction of their financing to the sector. A study conducted by the Rainforest Action Network found that some major US banks increased their financing to the 50 largest coal producers after committing to reduce their exposure to the sector.[244] Société Générale's recent policy update won't necessarily curb the bank's financial support for LNG export projects such as those in Mozambique or the proposed Rio Grande fracked-LNG terminal in the United States,[245] since Société Générale's policy update does not cover fossil fuel infrastructure or transportation projects.

It has taken financial institutions 5-10 years to start developing robust coal policies. Let us avoid repeating the same mistakes in oil and gas, because time is running out. Financial actors must immediately adopt relevant metrics and criteria that prevent them contributing to the expansion of fossil fuels. Australian Suncorp's 2020 commitment not to insure any new oil and gas projects and to phase out coverage for all oil and gas companies by 2025 sets a precedent others need to follow.

Hypocrisy is everywhere

Some of the financial institutions with these weak policies argue they prefer to engage with companies rather than exclude them. A growing number of financial institutions have committed to making their financial services conditional upon companies' adoption of transition plans in line with the Paris Agreement. While this commitment may sound bold, none of these financial institutions have defined what a credible transition plan is.

Experience shows that investors' demands towards companies' supposed transition plans are often too weak, lacking in timelines, or with timelines that are too long to produce change at the needed pace. Moreover, the failure to comply with an investor's demand will remain painless for a company as long as financial institutions fail to combine their engagement strategies with exclusion policies and threaten to cut their financial services to companies failing to meet their demands.

A litmus test was the climate resolution voted on at Total's 2020 AGM, which required the oil and gas major to adopt carbon reductions targets to align its businesses with the Paris Agreement. Despite having committed to net-zero GHG emissions by 2050 from their investment portfolios as members of the Net-Zero Asset Owner Alliance, Allianz, AXA, Munich Re, SCOR, and Zurich all voted against the Total resolution.

Similarly the increasing number of pledges made by companies in the financial and energy sector to "align with the Paris Agreement" or with "net zero by 2050" can not be taken as anything other than greenwashing without meaningful immediate action to stop supporting fossil fuel expansion, as well as science-based medium-term targets, and a clear commitment to keeping warming under 1.5°C.[246]

What we really need

The more time we lose, the more important each step must become. The Principles for Paris-Aligned Financial Institutions are very clear: financiers must immediately halt support for any expansion of the fossil fuel industry. Money and financial services should be restricted to companies that have adopted transparent, asset-based phase-out plans that lead to an exit of the fossil industry no later than 2050. Furthermore, exiting the fossil fuel industry alone will not suffice to save the climate. Financial institutions should also adopt policies which banish deforestation and biodiversity-loss, and which ensure the protection of human rights through their businesses.

Partner NGOs

The **Conservation Council of WA (CCWA)** is Western Australia's foremost non-profit, non-government conservation and environment organisation. CCWA has been an outspoken advocate for conservation and a sustainable Western Australia for more than 50 years, working directly with the government, media, industry, community groups, and political parties to promote a more sustainable WA and to protect our natural environment.

The **Center for Energy, Ecology, and Development** is a think-do institution based in Quezon City, Philippines that conducts research and advocacy, and partners with communities in promoting an ecologically just, people-centered energy and development path.

The **Center for International Environmental Law** is a not-for-profit legal research and advocacy organization that uses the power of law to protect the environment, promote human rights, and ensure a just and sustainable society. Founded in 1989, CIEL works with partners around the world to confront the intersecting crises of climate change and plastic pollution by accelerating the transition away of from fossil fuels, stopping the expansion of plastic production, and supporting coordinated international action to confront climate change and reduce plastics worldwide.

Coastal Livelihood and Environmental Action Network (CLEAN) is a local, network-based organization working in the Coastal Zone of Bangladesh. CLEAN was established in 2010 with active participation of like-minded persons and groups of coastal areas. CLEAN works to ensure sustainable livelihoods of natural resource dependent coastal communities through protection of environmental, social and natural resources.

Climate Risk Horizons identifies and analyses the financial impact that the climate crisis is having on India, and how this will play out over longer time horizons. These impacts arise directly from climate change itself, and from the disruption that will accompany transition. Recent work includes quantifying the financial benefits from an accelerated phase out of old coal plants.

Enlace por la Justicia Energética y Socioambiental (EJES) [Socio-environmental and Energy Justice Alliance] is the collaboration of Argentine organizations Observatorio Petrolero Sur and Taller Ecologista. Through an interdisciplinary and federal approach, our work currently focuses on the megaproject Vaca Muerta. We take into account the policies involved, and the territories and population affected in the long term. The strategic focus is on the economic, financial, energy and socio-environmental aspects. Our objective is to expose the overlooked impacts and find a fair path to energy and economic transition.

FARN is a non-governmental, non-profit and non-partisan organization, founded in 1985. Its main objective is to promote sustainable development through politics, law and the institutional organization of society. Through political, institutional and social advocacy, FARN promotes access to public information, justice and democratic and participatory citizenship.

Framtiden i våre hender (Future in our hands) is Norway's largest environmental organization, and works for a fair distribution of the world's resources. We think that the sustainability of nature and the climate is more important than growing the consumption and economy of rich countries. We work to make government and business facilitate green and ethical choices. We are committed to the global environment and a globally fair distribution of wealth. We believe the two are inseparably linked, in a way that requires us to work on both subjects in an integrated way. The organization has more than 40.000 members.

Friends of the Earth U.S. defends the environment and champions a healthy and just world. Our current campaigns focus on clean energy and solutions to climate change, keeping toxic and risky technologies out of the food we eat and products we use, and protecting marine ecosystems and the people who live and work near them. We are part of the largest international federation of grassroots environmental groups, Friends of the Earth International, which has members in 76 countries.

The Global Gas and Oil Network (GGON) is a non-profit network of civil society organizations that support global efforts to stop oil and gas expansion and catalyze a just and equitable managed decline of existing extraction in line with limiting global warming to the ambitious goal of the Paris Agreement (1.5C).

Global Energy Monitor (GEM) develops and shares information on fossil fuel projects in support of the worldwide movement for clean energy. Current projects include the Global Coal Plant Tracker, the Global Fossil Infrastructure Tracker, the Europe Gas Tracker, the CoalWire newsletter, and the GEM wiki.

The Friends of the Earth France federation (LES AMIS DE LA TERRE FRANCE) is a non-profit environmental and human rights network, independent from any religious or political influence. Created in 1970, it helped build the French ecological movement and supported the founding of the world's largest grassroots environmental network, Friends of the Earth International, uniting 75 national groups with over 2 millions members and supporters. Friends of the Earth France forms a local network gathering 30 autonomous local and affiliated groups that support the national and international campaigns with a shared vision for social and environmental justice.

The **Leave it in the Ground Initiative (LINGO)** works on ending the fossil fuel age and transitioning to 100% clean energy by developing game-changing approaches and supporting frontline resistance against fossil fuel projects.

Oil Change International is a research, communications, and advocacy organization focused on exposing the true costs of fossil fuels and facilitating the ongoing transition to clean energy. Rooted in community solidarity and principled policy analysis, we work within larger movements to build a fossil free future.

Rainforest Action Network preserves forests, protects the climate and upholds human rights by challenging corporate power and systemic injustice through frontline partnerships and strategic campaigns.

Reclaim Finance is a France-based NGO founded in 2020. Our vision is a financial system that supports the transition to sustainable societies that preserve ecosystems and satisfy people's basic needs. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonisation of financial flows. We speak out against the negative impacts caused by certain financial institutions and push for changes by pressuring these institutions and requiring political decision-makers change existing laws and practices.

Re:Common carries out campaigns and investigations againsts corruption and environmental destruction caused by corporations and their financiers.

Urgewald is an Environmental and Human Rights Organization that exposes the financial institutions funding the global fossil fuel and weapons industries. Urgewald first released the Global Coal Exit List in 2017 and is currently working on a Global Oil and Gas Exit List.

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