THE BIG SHIFT GLOBAL

Investing in Climate Disaster: World Bank Group Finance for Fossil Fuels

6 October, 2022

"It's really, really bad, under his (Malpass') leadership, he has directed continued funding of fossil fuels, which is ridiculous."

–

Al Gore
(Fortune, 2022)

Quote taken from: https://fortune.com/2022/09/29/al-fore-world-bank-president-david-malpass/

The Big Shift Global is a multi-stakeholder, global campaign coordinated by organisations from the Global North and South. Together, we aim to make the people's views on energy finance known to Multilateral Development Banks (MDBs), their Executive Directors, as well as the Heads of State and Finance Ministers of the member countries.

The Paris Climate Agreement commits countries to aim for global temperature rise below 1.5°C. This is essential for preventing run-away climate change. To do this, the world needs to urgently phase out the use of fossil fuels and shift to using sustainable, renewable energy.

Investing in renewable energy is also crucial for improving the lives of the one billion people around the world who don't have access to electricity. Investing in off-grid renewable energy is the best way to provide affordable and sustainable energy for the poorest communities, benefiting local businesses and households.

We are therefore calling on the world's biggest public banks to shift all their money out of dirty fossil fuels and into sustainable, renewable energy to benefit the most vulnerable and remote communities. This would improve the lives of people all around the world and set a gold standard for other banks to aspire to.

The following organisations are supporting this initiative: 11.11.11, 350.org, Abibiman Foundation, ACCESS Coalition, ACT Alliance, Africa Coalition for Sustainable Energy & Access (ACSEA), Africa Coal Network, African Climate Reality Project, Alternative Law Collective, Arab Watch Coalition Asia Climate Change Consortium (ACCC), Bank Information Centre, Both Ends, The Bretton Woods Project, CEDLA, Center for Earth Ethics, Centro Humboldt, Climate Action Network (CAN), Counter Balance, Christian Aid, Church World Service (CWS), E3G, Fossil Free South Africa, Gender Action, Global Catholic Climate Movement, Groundwork, Grupo de Financiamiento Climático para América Latina y el Caribe (GFLAC), GreenFaith, FEMAPO, Friends of the Earth US, Fundación Ambiente y Recursos Naturales, Inclusive Development International, Jeunes Volontaires pour l'Environnement (JVE), Maryknoll Office for Global Concerns (MOGC), Oil Change International, Oxfam South Africa, Overseas Development Institute (ODI), the Natural Resources Defense Council, NGO Forum on ADB, Pan African Climate Justice Alliance (PACJA), Philippine Movement for Climate Justice (PMCJ), Power Shift Africa, Recourse, Reclaim Power, Season of Creation, Sierra Club, Solutions for Our Climate, Stand.Earth, SustainUS, Swedish Society for Nature Conservation, Tearfund, The Energy Mix, Trend Asia, Vasudha Foundation, Urgewald and World Future Council.

Contents

Summary

This report puts a spotlight on the ten largest directly financed projects supported by the World Bank Group in the period 2018-21. It further looks at five additional case studies that Big Shift members and their partners have campaigned against.

The World Bank Group has spent US $14.8 billion supporting fossil fuel projects and policies since the Paris Agreement was made.

The report shows that even after the Paris Agreement, climate science and climate impacts should have been focusing minds at the WBG on the need for a transition to clean renewables sources of energy, the Group remained in a fossil-funding paradigm, harmful to people, countries and planet.

Introduction

The World Bank Group (WBG) is made up of five international organizations that provide loans and other support to developing countries with the stated twin aims of ending extreme poverty and building shared prosperity. The Group is made up of:

- **International Bank for Reconstruction and Development** (IBRD) – "provides loans, guarantees, risk management products, and advisory services to middle-income and creditworthy low-income countries"[1]
- **International Development Association** (IDA) – "offers concessional loans and grants to the world's poorest developing countries"[2]
- **International Finance Corporation** (IFC) – "offers investment, advisory, and asset-management services to encourage private-sector development in less developed countries"[3]
- **Multilateral Investment Guarantee Agency** (MIGA) - provides "political risk insurance and credit enhancement for cross-border private sector investors and lenders"[4].
- **International Centre for Settlement of Disputes** (ICSID) – "Provides facilities for conciliation and arbitration of international investment disputes"[5].

While the two branches of the group, the IBRD and IDA, together known as the World Bank, garner some publicity for their climate misdeeds, their role and that of MIGA in supporting fossil fuel investments through guarantees gets less attention[6]. This report looks at both direct project finance and the value of guarantees to protect investors against non-commercial risks such as political risks in fossil fuel-related projects. The finance these guarantees can mobilize is significant. The World Bank has boasted that "as of FY2018[a], 48 guarantee transactions using $7.4 billion in IBRD/IDA commitments supported mobilization of $30.2 billion of commercial financing plus $20 billion of public financing."[7] Of course, these are total figures and not solely related to fossil-supporting projects.

Data from Oil Change International's Public Finance for Energy Database indicates that the World Bank Group has financed US$14.8 billion supporting fossil fuel projects and policies since the Paris Agreement was made.[b]

This report throws light on the top ten financially largest direct loans or supports by the WBG in the period of fiscal years 2018-2021, using the latest

[a] The World Bank's fiscal year is from July 1 - June 30. For example, a fiscal year of 1996 corresponds to July 1, 1995 - June 30, 1996.

[b] Oil Change International, "Public Finance for Energy Database," 2022, energyfinance.org

data evaluated in Oil Change International's Public Finance for Energy Database: it covers physical infrastructure projects as well as WBG policy advice. The report also digs more deeply into 5 particularly harmful fossil fuel projects the WBG has supported to show the full range of impacts WBG support can have, even when smaller dollar amounts are involved. These are projects that Big Shift members are actively campaigning with local partners to stop. By far the largest WBG fossil-fuel loan presented, the only one approved over a decade ago, is for South Africa's Medupi coal plant, because of the magnitude of its ongoing harms.

The period covered by the 'top ten' falls several years after the 2015 Paris Agreement[8], in which world leaders committed to "pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".

It is also since 2018, when the Intergovernmental Panel on Climate Change (IPCC) published its Special Report "Global Warming of 1.5 ºC"[a]. This important scientific report highlighted the drastic climate impact implications of not limiting global average heating to 1.5ºC. It also made clear the massive reductions in fossil fuel use are required to keep that temperature limit in reach. In its scenario without unrealistic reliance on unproven, and also climatically risky, negative carbon technologies, the report found that by 2030, 78% reductions in coal use, 37% in oil and 25% in gas are needed on 2010 levels. However, the scenarios used only had a 50% probability of not exceeding the 1.5ºC goal, and so a more precautionary/ less climatically dangerous approach would therefore require greater cuts in fossil fuel use. A more recent IPCC report[a] does not contradict the need for urgent action, and indeed a recent study emphasized the risk of triggering climate tipping points[a] if the 1.5ºC goal is exceeded[a].

The MDBs and the International Development Finance Club (IDFC) had already pledged in December 2017 to align financial flows with the objectives of the Paris Agreement[9]. It was also after the WBG with nine other Multilateral Development Banks (MDBs) pledged, on 3rd December 2018, to aim "at the alignment of the MDBs' activities with the goals of the Paris Agreement"[10] including the temperature goal and "Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."[11] This, of course, includes "pursuing efforts" to achieving the 1.5ºC goal.

It also covers a period of time in which climate impacts became increasingly attributable to "dangerous anthropogenic interference with the climate system"[12] – the very thing the government signatories to the UN Framework Convention on Climate Change agreed to avoid. Some of these government signatories are also WBG shareholders with a clear voice on how their

taxpayer's finances are spent. Yet clear and extant climate impacts did not prevent further fossil investments.

In 2019, Cyclone Idai killed 1300 people in Southern Africa, while floods in north India killed a further 1900 people[a]. 2020 saw 4.9 million people displaced by Cyclone Amphan which also killed 128 people and East Africa experienced US$8.5 billion in insured losses through locust swarms[a]. In 2021, Cyclone Taukete devastated India, Sri Lanka and Bangladesh and displaced more than 200,000 people, while a winter storm in Texas caused more than US$23 billion in insured losses[a]. This year, Pakistan has suffered devastating floods that have killed over 1500 people and directly impacted 33 million people[a].

In short, these projects represent support for fossil fuel projects at a time when politically, scientifically and in the real world, the case to divest from fossil fuels and invest in clean renewables should have been obvious. Even as conservative an organization as the IEA produced a 1.5ºC compatible scenario in 2021 that concluded "there is no need for investment in new fossil fuel supply in our net zero pathway". And yet WBG finance and support for fossil projects still flowed.

The 'top ten' represent the largest examples of WBG direct financial support for fossil fuel projects, both through policy and project lending or guarantees during FYs 2018-2021.

Although the World Bank pledged in 2018 to end financing for upstream oil and gas[13], and this direct financing has been declining[14], this climate step forward failed to include indirect financing. The WBG has other ways of supporting developing countries that indirectly lead to support for fossil fuel expansion and otherwise reduced accountability to the Bank, its government shareholders and ultimately the public who provides the tax revenue to fund it.

One such way is by lending to a so-called 'financial intermediary' (FI), a bank or financial institution, which then lends these funds to their clients, who may be private equity funds or commercial banks, in the form of loans, bonds, guarantees and equity shares. This puts the WBG at one step removed from the projects themselves and these investments are not subject to the same

scrutiny or safeguards as under the Bank's own implementing policies. This remains a major loophole in WBG climate policy: The IFC alone has FI investments in over more than half of its portfolio[15] ($31.5 billion in total commitment around the world in 2021[16]).

Another such way is through Development Policy Finance (DPF), by which the WBG supports countries through non-earmarked general budget finance that is conditional on the country having fulfilled stated reforms, known as "Prior Actions", specific policies or institutional reforms the country agrees to implement as a condition of receiving the finance. Depending on the policies, they may have direct or indirect impacts on the country's attractiveness for fossil fuel investments and may also have other perverse impacts that favor the fossil companies over the people the government is supposed to serve. Two other substantial projects, in Sudan and Angola, that otherwise could have made the top ten are not included in this report, as they were examples of DPF, which is considered indirect finance, because it is non-earmarked finance to governments that is dependent on Prior Actions.

In addition to the 'top ten', this report highlights a further 5 case studies demonstrating policy and indirect finance interventions that Big Shift Members have actively engaged on, and which show other ways in which the WBG is still more of a fossil institution than it would like the headlines to read. A case study of WBG financing new coal power plants in Indonesia that will lock the country into further coal consumption, rather than help it leapfrog to a clean energy future. One is in Pakistan where a draft WBG Country Climate and Development Report (in development) fails to understand that many of the problems it seeks to solve are a result of the Bank's past policy advice. Ghana has become locked into expensive fossil fuel contracts that have led to oversupply and money therefore spent for no useful outcome to Ghana. Guyana similarly has had advice that is locking it into bad contracts (for it, not the fossil industry) as a result of the WBG stuck pro-fossil mindset. And the Medupi power plant project case study spotlights disastrous impacts on women and girls and serves as a reminder that these impacts live on far, far longer than the tenure of decisionmakers who should be accountable.

'Top Ten' summary table[17]

	Project name	Country	Financial year	WBG agency	Financing mechanism	Amount/ USD	Project type
1	Trans-Anatolian Pipeline	Azerbaijan	2018	MIGA	Guarantee	$1,110,000,000	Gas: transportation
2	Gas Storage Expansion Project	Turkiye	2018	IBRD	Loan	$600,000,000	Gas: storage
3	Ghorasal Polash Urea Fertilizer Project	Bangladesh	2020	MIGA	Guarantee	$357,000,000	Gas: petrochemical
4	Power System Efficiency and Resilience Project	Myanmar	2020	IDA	Loan	$350,000,000	Gas: unclear or mixed
5	Gas Natural Açu	Brazil	2019	IFC	Loan	$288,000,000	Gas: electricity production
6	CELSE	Brazil	2018	IFC	Loan	$200,000,000	Gas: electricity production
7	ACWA Power Sirdarya	Uzbekistan	2021	MIGA	Guarantee	$200,000,000	Gas: electricity production
8	Sembcorp Myingyan Power Company Ltd	Myanmar	2019	MIGA	Guarantee	$170,300,000[c]	Gas: electricity production
9	Basrah Gas Company	Iraq	2020	IFC	Loan	$157,760,000	Gas processing facility
10	Pan American Energy	Argentina	2019	IFC	Loan	$150,000,000	Expansion and upgrade of oil refinery

[c] In 2015 the IFC gave a USD$75,000 loan to this project the USD$170,300,000 figure is the MIGA guarantee amount. Further information can be found here: https://www.re-course.org/news/in-the-dark-secrecy-and-the-myingyan-public-private-partnership-gas-power-plant

The five additional case studies: Policy and indirect finance interventions that have locked in fossil fuels

	Activity	Country	Type of support given	Year	Major issues
1	Java 9 and 10 coal power plants	Indonesia	$65,000,000 equity investment to Hana Bank, Indonesia	2019	Indirect funding of coal, despite WBG claims to have ended coal support[18]
2	Country Climate Report Pakistan	Pakistan	Policy: Draft Country Climate and Development Report (CCDR)	2022	Danger of bad analysis through a WBG business-as-usual paradigm
3	Ghana	Ghana			Locked the country into expensive fossil contracts
4	Guyana	Guyana	$55,000,000	2018 & 2019	Smoothing the path for the oil majors Exxon, Hess and CNOOC
5	Medupi coal plant	South Africa	$3,750,000,000	2010	On-going social and environmental impacts

The 'Top Ten'

1. Trans-Anatolian Pipeline (TANAP)

The Trans-Anatolian fossil gas pipeline aims to carry fossil gas from Azerbaijan to Turk and through to the rest of Europe. An impact of the pipeline will be to triple Azerbaijan's exports of gas and to extend this to new markets. MIGA, the WBG investment guarantor weighed in to protect non-shareholder loans from investors[d] in the Azerbaijan share of the pipeline with up to 15-year guarantees "against the risk of non-honoring of a sovereign financial obligation."[19] It serves to perpetuate on-going use of fossil gas in Europe.

While this may increase gas export revenues for the country, global gas price volatility (US$51.15 in July 2022, up from US$12.52 a year earlier with significant fluctuations in between[20]) makes it an unreliable source of finance on which to build a stable economy and society and risks locking Azerbaijan into a development pathway that doesn't have a future in a decarbonizing world.

MIGA itself, in its Environmental and Social Review Summary stated:

> *"The Project is expected to have potentially significant adverse social and environmental impacts that are diverse, irreversible, or unprecedented. The construction of the pipeline and associated infrastructure could potentially result in diverse negative environmental and social impacts related to: landscape, water quality, air quality, noise levels, waste water, solid waste, hazardous waste, biodiversity, worker health and safety and communities' health and safety during construction and operation and physical and economic resettlement."*[a]

Despite this, the project was given the "green" light by ***MIGA.***

In terms of greenhouse gas emissions, MIGA sought to assess the emissions from the fossil gas-fired compressor stations – the pumps that move the gas through the pipeline – and emissions in the construction and sue of the pipeline itself. Depressingly for the climate, the emissions resulting from the burning of the Azerbaijani gas were completely disregarded by MIGA in the assessment of whether to proceed. The green light given to projects such as this one result from short-term decisions that do not acknowledge that to move away from fossil fuels (and the current energy security crisis) and into renewables long-term planning for renewable (and decentralized) energy alternatives must be built in.

[d] AKA Ausfuhrkredit-Gesellschaft mbH, Banco Santander, S.A., Citibank N.A., Crédit Agricole Corporate and Investment Bank, ING Bank, a branch of ING-DIBA AG, Landesbank Baden-Württemberg, Société Générale

2. Gas Storage Expansion Project - Turkiye

This is another project that buys into the narrative that gas is a 'clean fuel' and so diverts possible funding for clean renewable energy into giving yet another lifeline to the fossil fuel industry. The loan from the IBRD aims to support the Turkish government's aim of quintupling the storage capacity of an existing underground gas storage facility within a salt formation in central Turkey. The project aims to increase gas security of supply and enhance Turkiye's ability to trade gas[21].

While the project stated an intention to maximize local employment in the project, presumably in part to help offset the disruptions to affected agricultural lands (of which is there is a schedule for impacts to be compensated for), of the 1001 workers in the existing project, 591 were Turkish and 413 were Chinese, suggesting that providing employment opportunities for locals might be a goal not universally achieved[22].

The main environmental hazards identified were dust emissions from vehicular movements, waste production, wastewater accumulation and noise impacts[23]. IBRD documents did not address the broader greenhouse gas emissions implicit in the expansion of gas system capacity.

3. Ghorasal Polash Urea Fertilizer Project - Bangladesh

This fertilizer production project is a reminder that the fossil fuel industry is not just an energy industry, but one that uses fossil chemicals to produce agrochemicals, here urea.

The project will replace 2 decommissioned facilities and intends to make triple the fertilizer while using the same amount of fossil gas. CO_2 emissions will be addressed through capture technology that aims to capture 240 tons of CO_2 per day and use it as a chemical input into the urea production[24]. MIGA is providing guarantees for up to 15 years against the risk of non-honoring of a sovereign financial obligation[25]. Despite this, the project is seen as posing "potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented. It is expected that most of the Project-specific risks and impacts can be addressed..."[26] Climate change itself is acknowledged as a risk in this low-lying country with climate impacts seen as having the potential to lead to higher operational and maintenance costs, including risks to the structural integrity of buildings and riverbank erosion from increased flooding[27].

Bangladesh subsidizes fertilizer use to help it to be able to grow enough food for its 164 million people and to enable small-scale farmers to have adequate

livelihoods. This project also highlights the need for a rapid transition to resilient and regenerative models that enhance food and energy sovereignty and protect human rights.

4. Power System Efficiency and Resilience Project - Myanmar

Supporting the then-democratic government of Myanmar's aim to increase access to energy, the WBG supported the upgrading of the gas and steam turbines of an existing gas power plant to more efficient combined cycle gas turbines, at 83% the value of the loan. While this should have the effect of reducing emission per unit energy, it still ***locks Myanmar into a fossil-fueled future and maintains its exposure to fluctuating world gas prices.*** With only 50% of Myanmar's households connected to the public grid, this could have been an opportunity to continue to finance the renewables component of Myanmar's National Electrification Project, which, as of 2020, had extended the grid to 5,000 rural villages, but far more sustainably, delivered solar home systems and renewable energy mini-grids in 7200 villages[28].

A second component of the project, the other 17%, aims to reduce system constraints and to strengthen the resilience and preparedness of the power network against climate change and disasters[29]. Ironically, the gas power plant component contributes to that vulnerability.

5. Gas Natural Açu - Brazil

The project involves the development, construction, operation and maintenance of a gas combined cycle power plant run on LNG and an LNG import terminal in Açu Port in Brazil. The IFC notes that Brazil is already highly powered by renewable energy[e], it does not see this as a great start to the needed renewable energy transition to build out from. Instead, it sees it as a problematically variable energy supply that needs complementing with fossil gas to provide "higher reliability of supply" and – with no trace of irony – "improving sustainable natural resource management and climate resilience"[30] The plant is expected to produce 1.3 million tCO_2/year.

As well as its obvious climate impacts, the project is potentially the first of four gas-fired power plants at Porto Açu, which could cause cumulative biodiversity loss: the port is located within the Brazilian Atlantic coastal forest, an ecosystem of which 93% has already been lost and which has high species endemism[31], and which is now is highly fragmented[32]. The IFC notes

[e] 46.22% of primary energy is from renewables[e], although the amount of big hydro in the mix is environmentally and socially problematic

that "Although the project is located in a highly industrialized area, remnant [forest] patches are present and therefore will be considered Critical Habitat"

6. CELSE - Brazil

The CELSE project is ***another*** Brazilian gas power plant project, and as for the Porto Açu project, there are plans for mission creep from one gas plant to several on the site, ultimately aiming for a total of 3000MW installed fossil gas power, as well as associated infrastructure including a 34.2km transmission line, a floating storage and regasification unit with gas storage of 170,000 m^3 that will be located 6.5km offshore. The project relies on imported liquified natural gas (LNG), which will expose Brazil to the vagaries of the international markets, and worryingly, is seen as a precedent for wider LNG expansion[33].

Social and environmental impacts identified included:

> *"impacts to air quality due to stack emissions from the combustion of natural gas during combined cycle operation (mainly NOx emissions); seawater quality, effluent discharge; noise associated with the operation of the power plant; landscape and visual impact due to the addition of an industrial component in the area; generation of various types of non-hazardous and hazardous wastes from plant O&M activities; community health and safety mainly associated with the unlikely event of a natural gas leak; among others."*[a]

The NOx emissions themselves are a risk to community health and safety: there has been "consistent evidence from short-term epidemiological studies of effects on respiratory morbidity" sufficient that the US Environmental Protection Agency has concluded that this is a causal relationship[34].

Other impacts on local people identified included those on nearby small-scale subsistence, artisanal, and commercial fisheries, because of "increased shipping traffic, the enforcement of exclusion zones, and increased level of acoustic and vibration disturbance" (which also can't be great for the wider marine ecosystem). The mitigation approach in the IFC's review of the environmental and social impact statements seems rather reactive: impacts were deemed likely only during the construction phase, but monitoring would be conducted in both construction and operation phases, and only then after impacts had already been experienced (remember, some of these people are "small-scale subsistence" fisherfolk) then "CELSE will develop and implement a livelihood restoration plan"[35].

7. ACWA Power Sirdarya - Uzbekistan

Uzbekistan is energy self-sufficient, and being a major fossil gas producer 90.5% of total energy production is from this source. While the likes of USAID are collaborating to achieve "Uzbekistan's Leap Towards Renewable Energy" by

engaging on challenges such as grid infrastructure in need of upgrading, the number of people monitoring and managing the energy grid (5 in Uzbekistan to California's 15) and changes to supply sources not being made at a pace that allows for the variability of renewable sources[36], the WBG is instead not seeking a paradigm shift, but supporting a shiner version of the status quo.

The ACWA Power Sirdarya project is for the construction and operation of a 1,500 megawatt (MW) greenfield combined-cycle gas turbine (CCGT). It forms part of the Uzbekistan Government's plan to increase efficiency and capacity of its power production and this plant, with an operating efficiency of >60% would save almost twice the gas currently used for electricity production[37]. Renewable energy, of course, would reduce gas dependence far further if deployed at scale and avoid lock in to carbon-emitting technology and fuels. MIGA's role is to provide guarantees to the investments being made in the project by the likes of Standard Chartered Bank plc (United Kingdom), Bank of China Limited (China), Industrial and Commercial Bank of China Limited (China), China Construction Bank Corp. (China) and China Minsheng Banking Corp. The guarantees will "have a term of up to 20 years, providing coverage against the risks of transfer restriction, expropriation, war and civil disturbance and breach of contract[38]". Without such guarantees, such projects are far less attractive investments.

MIGA notes "The land is currently in use by local farmers for rice and vegetables cultivation, in addition to irrigation ditches and fruit trees"[39], or, **effectively 84 hectares of environment being destroyed to further destroy the environment.**

8. Sembcorp Myingyan Power Company Ltd - Myanmar

This is another MIGA supported project that this time provides guarantees for up to17 years, providing "coverage against the risks of currency inconvertibility and transfer restriction, expropriation, war and civil disturbance, and breach of contract."[40] Such a guarantee is important for investors in a country that has experienced unstable governance including long military rule with concomitant gross human rights abuses[41]. The IFC provided funding for the project via a 2015 $75 million loan to Sembcorp[42].

The project is yet another WBG support for a large (225MW) combined cycle gas turbine power plant. As in other projects above, environmental factors considered in the project's assessment included impacts on surface water, waste, noise, changes to visual character, contamination of soil and groundwater and health and safety concerns[43]. But not the climate impacts resulting from the project nor counterfactuals for other energy supply investment opportunities.

Myanmar is in energy poverty: per capita levels are one-fourth of India's, one-tenth of Vietnam's, or nearly one-hundredth of America's. The country is rural and lacks density, making an off-grid component essential. Studies show that Myanmar has huge solar potential in its central dry zone, with wind also attractive in parts of Rakhine and Ayeyarwady. However, the IFC's and MIGA's investment in Myanmar, instead of supporting a renewables sector with no current investment - solar or wind - is backing a fossil fuel-based option. This was an opportunity for the Asian Infrastructure Investment Bank (AIIB) to help Myanmar forge a new pro-poor and low carbon future, but instead the WBG has followed other banks - including the AIIB and Asian Development Bank (ACB) - in funding a gas project which did not lack investors.

The alternatives assessment carried out for the project did not attempt to explore the relative feasibility of solar or wind power, but rather focused on gas as an alternative to hydropower. One of the reasons given is a 'lack of funds' to support wind and solar:

"While Myanmar is rich in renewable resources, the development remains severely limited by availability of funds to support the research and development, lack of a clear renewable energy policy and lack of talented manpower." Instead, IFC and MIGA invested in a gas plant that will "result in the emission of nearly three quarters of a million tonnes of carbon dioxide per year" - an amount deemed "significant" under both ADB and IFC standards.

The project also failed to provide energy access for local people, who bore the brunt of the project, but did not see benefits from it, despite repeatedly asking for this in consultations.

9. Basrah Gas Company - Iraq

IFC is the lead arranger of this 5-year loan to BGC which altogether totals $360 million. Additional funds are provided by Bank of China, Citi, Deutsche Bank AG, Industrial Commercial Bank of China, Natixis, Sumitomo Mitsui Banking Corporation, Société Générale and Standard Chartered Bank[44]. Basrah Gas Company is a joint venture between Iraq's state-owned South Gas Company, Shell and Mitsubishi Corporation. The loan provides support to develop a processing plant to treat and process associated gas that would otherwise be flared at oil fields of West Qurna 1, Zubair and Rumaila in Southern Iraq. The project expects to increase BGC's processing capacity by 40%, contributing to an increase of an additional 400 million cubic feet of gas a day from nearby producers[45].

This project is presented as reducing gas flaring, improving energy access and decreasing emissions. Iraq currently faces a power shortage particularly during the summer months when temperatures can exceed 50°C. However, the

country has significant potential for solar power but as noted in other cases above ongoing investment in gas projects often comes at the expense of opportunities to invest in renewable energy, and preferential WBG-backed finance for fossil efficiency improvements helps free up capital for the corporations involved in Basrah Gas Company to invest elsewhere in fossil expansion. This is a further example of WBG investments going to expanding fossil fuel infrastructure and locking a country into a continued fossil fuel future without consideration for how it may crowd out funding for renewable energy projects.

10. Pan American Energy - Argentina

This IFC loan provides funds for the expansion and upgrade of Pan American Energy's (PAE) Campana refinery in Argentina. PAE is Argentina's fourth biggest gas producer and second largest oil company. According to PAE this loan for the refinery, which is located about 80km from Buenos Aires, will increase capacity by 60%. The IFC says the project is expected to "create value addition for Argentina by increasing supply of refined products in keeping up with the expected growth in demand". According to IFC, the refinery processes mainly heavy crude from southern and western Argentina (most of which is supplied by PAE's upstream business) from the Golfo San Jorge, Neuquina and Austral basins. A wide range of products are produced including gas oil, petrol, fuel oil, jet fuel, coke and others such as liquid petroleum gas (LPG), solvents for petrochemical uses, and coke for the steel industry.

Again, as above, the environmental impact considered waste, noise, and safety but again there was no mention in the project documents of the climate impacts and emissions resulting from the expansion of this refinery.

Local communities around the refinery report a wide range of environmental and health impacts including air pollution, respiratory problems and almost daily smells of burning[46].

The five additional case studies

1 Indonesia: Java 9 and 10 coal power plants

The 2,000 MW Java 9 & 10 coal plants in Indonesia, currently under construction, are the latest additions to Indonesia's largest coal complex – the 4,065MW Suralaya power plants in Banten province. As their name suggests, the latest two coal plants will add to the eight existing at Suralaya, increasing the burden of social and environmental impacts on local communities.

Java 9 & 10 coal plants, Indonesia. Photo credit: Melvinas Priananda.

The expansion is expected to have extreme adverse effects on the public health of the local community: pollutant emissions of the two future units will ***"cause between 80 and 244 additional annual premature deaths in the Indonesian population, accumulating to 2,400 to 7,300 additional pre- mature deaths over a typical 30-year lifetime of coal-fired power plants."***[47] Local communities express concern that the expansion of the complex will lock the area into even more pollution, whose skyrocketing air and water pollution levels already pose a serious threat to people's livelihoods, including to the fish from the local marine ecosystem, and to human health. Respiratory problems already account for over 30% of the local disease burden, according to the project's own Environmental Impact Assessment.[48]

The impacts are not just local: expansion of the plant is predicted to produce on average 10 million tonnes of carbon dioxide per year and 250 million tonnes of CO_2 over 25 years, which would be "equivalent to the annual emissions of Thailand or Spain"[49]. This seems all the less defensible when the Java and Bali grid is already experiencing 40% oversupply of electricity[50].

Java 9 & 10 coal plants, Indonesia. Photo credit: Melvinas Priananda.

This project is an example of the WBG's climate impacts through indirect loans, through financial intermediaries, making them harder to oversee and potentially allowing climate lending pledges to be worked around. The IFC was instrumental in founding Hana Bank Indonesia (HBI) as a subsidiary of South Korea's Hana Bank, providing $65 million in equity and loans since 2007. In May 2019, the IFC took an equity stake in HBI, signing the bank up to its Green Equity Approach. However, in July the following year, HBI and its parent company in South Korea provided project loans to PT Indo Raya Tenaga to develop the Java 9 and 10 coal plants.

In 2020, the IFC unveiled its new 'Green Equity Approach' (GEA), saying it will end equity investments in financial institutions that do not have a plan to phase out investments in coal-related activities. The "30 by 30 Zero Program" aims to help the banking sector increase climate-related lending to 30% and reduce their exposure to coal related projects to zero by 2030.[51]

Since its project loans to Java 9 and 10 do not mature until 2035, it is difficult to understand how HBI will be able to reduce its coal exposure to zero or near zero by 2030, as the GEA requires. Moreover, even if HBI divested from Java 9 and 10, the fact remains that IFC has helped to finance these coal plants, profiting from its equity investment, in conflict with its own GEA's commitment and targets. The plants risk becoming stranded assets, and emissions from the coal plants will continue over their lifetime – typically 40 years. IFC should remain responsible for this significant climate footprint, and for any other future coal plants funded by its equity clients. As the NGOs consulted by IFC on its GEA insisted back in 2019, it is vital that IFC's equity clients commit they will not finance new coal. If HBI does not withdraw its support from Java 9 & 10, IFC should divest from its equity client.

2 Country Climate Development Report Pakistan 2022

Recent floods demonstrate Pakistan's vulnerability to weather extremes, with impacts including loss of lives, livelihoods, shelters, businesses, and destruction of developed infrastructure. All this is even more unfair as Pakistan is responsible for less than 1% of global emissions, emitting 234.75 $MtCO_2$ compared to 34.81 $GtCO_2$ for the world in 2020.[52]

The World Bank is currently working to develop a new Country Climate and Development Report (CCDR)[53] for Pakistan, which would seem an important step in helping the WBG understand how the country's development goals can be achieved in the context of mitigating and/or adapting to climate change. Note that this report is from the perspective of the WBG, which operates in a very particular paradigm, including ruinous willingness to continue fossil fuel investments.

Energy analysts and civil society in Pakistan have welcomed some aspects of the planned report, but raise concerns about the WBG's paradigm and thus its lack of recognition of the factors that have caused the situation in Pakistan. The WBG considers as challenges to development oil imports, disincentives for the private sector, and circular debt in the energy sector, but does so without analysis of the policies that were enacted to bring about these situations and the Bank's paradigm's role in bringing them about. In Pakistan, the import-based fossil-fueled economy is related to the Bank's past policy advice to privatize the power markets and incentivize investments by the private sector in fossil fuel based independent power projects (IPPs). Understanding how a situation arose is key to avoiding making the same mistakes going forward. The Bank must ensure that CCDRs are developed in cooperation with a wide range of stakeholders including civil society, affected communities and energy and adaptations experts not just with government policy makers and private sector in mind.

Pakistan Sindh Province Floods, 2022. Photo credit: Alternative Law Collective.

The CCDR will need to clarify the pathway forward for Pakistan to decarbonize its energy mix, particularly on the scope, extent and timeline for the proposed complete phaseout of coal. It also needs to specify the nature and quantity of the Bank's financial commitment to the decommissioning of legacy coal and fuel projects: Pakistan cannot act at the speed needed without external support.

The CCDR will also need to address the Bank's on-going treating of fossil gas as a "bridging" fuel, rather than as a continuation of a ruinous fossil paradigm and one that will almost inevitably lead to the economically-damaging stranding of fossil assets. Worse, the funding of gas crowds out the needed investments in clean energy – rather than promoting leapfrogging of technologies, the Bank is acting as a significant barrier, rather than an over-leap-able frog. The volatility of global gas prices should act as a caution against the Bank supporting gas infrastructure in ANY country: that volatility spills over into economic and potentially political volatility.

An area where the Bank could add value, but has shown little interest in doing so is around creating mechanisms for new non-debt-creating finance solutions that are predictable, fair, and accessible to the most vulnerable. Debt cancellation, climate reparations, and green financing programs solutions such as debt-for-nature swaps have to be made a part of the discussion around the CCDR in Pakistan – and more widely.

3 Ghana: locked into fossil contracts

The issue of understanding how a country got to where it has is, as for Pakistan, important for Ghana. The evolution of its energy sector is a sorry tale of woe, with foreign donors, including the WBG, with their hands on the pen.

Until the late 1990s, Ghana's electricity was almost exclusively produced through hydropower, oil then began to become part of the energy mix with gas coming onstream in about 2009, following discoveries of significant offshore oil and gas reserves. To exploit these reserves, Ghana become the recipient of significant Development Finance Institutional (DFI) interest and finance. Since 2010 Ghana has received at least US$2.8bn in direct project finance from DFIs for upstream and downstream fossil fuels. This includes $2.1bn committed since 2015, with additional unquantified project finance through indirect investments, and a further $300m in prospective fossil fuel-related sector support[54].

Despite having a target of 10% of grid electricity coming from renewables, Ghana is currently stuck on an energy mix that is 60% fossil (almost all gas) and 40% hydro (roughly the same capacity as in 1990), with less than 1% coming from renewables[55]. This is as a direct result of fossil funding from donors, including the WBG, crowding out investment in Ghana's renewable resources.

In the period of 2012-16, Ghana experienced electricity shortages in part because the West African Gas Pipeline was failing to deliver anticipated supply. This US$590m pipeline had been built to bring gas from Nigeria to other West African countries[f] and was supported by a take-or-pay contract for gas supply by Ghana, backed by IDA and MIGA guarantees. This undersupply, at a time when renewable energy costs were falling swiftly and climate science was pretty clear, was met by donor financing to develop Ghana's domestic oil and gas resources.

Ghana was encouraged by a number of donors to into further 'take-or-pay' contracts for gas and fossil fuel power supply: some of these were backed by WBG sovereign guarantees leaving these debt-stressed governments committed to spending hundreds of millions of dollars on gas and gas-fired power they are unable to use, on pain of sovereign default. These contracts were opposed by civil society organization at the time[56], but their (correct)

[f] In an example of where unachieved benefits of a project were asserted by the WBG, the West African Gas Pipeline was intended to "contribute to reducing gas flaring in Nigeria, which is aiming to eliminate all gas flaring by 2008." (MIGA, undated) If achieved, it could have usefully used the energy produced as methane is converted to CO_2 – this happens naturally in the atmosphere – and avoided the period where the methane would have been in the atmosphere acting as a greenhouse gas with 82.5x eh global warming potential of CO_2

analysis that these contracts would be financially and environmentally damaging was ignored (another sorry tale of woe, oft repeated worldwide...).

Ghana now faces fossil fuel oversupply, which it has to pay for under the terms of these contracts at volumes and prices far greater than demand for energy within the country. As of November 2020, the ex-head of Ghana's Energy Commission estimated that Ghana was paying a combined $1.2bn annually for excess power capacity and gas it does not use[57]. Total power sector arrears already amount to several billion dollars and the accumulated cost is estimated to reach $12.5bn by 2023 without corrective action - a situation driven, at least in part, by a series of new and unnecessary fossil fuel projects financed by DFIs. This is another example of gas being promoted as being needed for development, but sadly so demonstrably wrongly so. To add insult to injury, rather than cancelling the debts it contributed to causing through bad advice and financing, the World Bank is currently considering a $300m loan which would provide funding to Ghana so that it can clear debts in the energy sector. But these debts were created in part by gas supply contracts and agreements supported by the WBG and other DFIs.

Ghanaian citizens are therefore bearing the price (literally) of bad donor advice and projects promoted by WBG members, for energy to which they often have little or no access, even as international fossil companies continue to make record profits.

4 Guyana: smoothing the path for the oil majors

Guyana is another example of where the World Bank has interfered, not with large amounts of money, but with the kinds of regulations that make deals more attractive to the private sector, whatever the cost to the country, its people and its biodiversity.

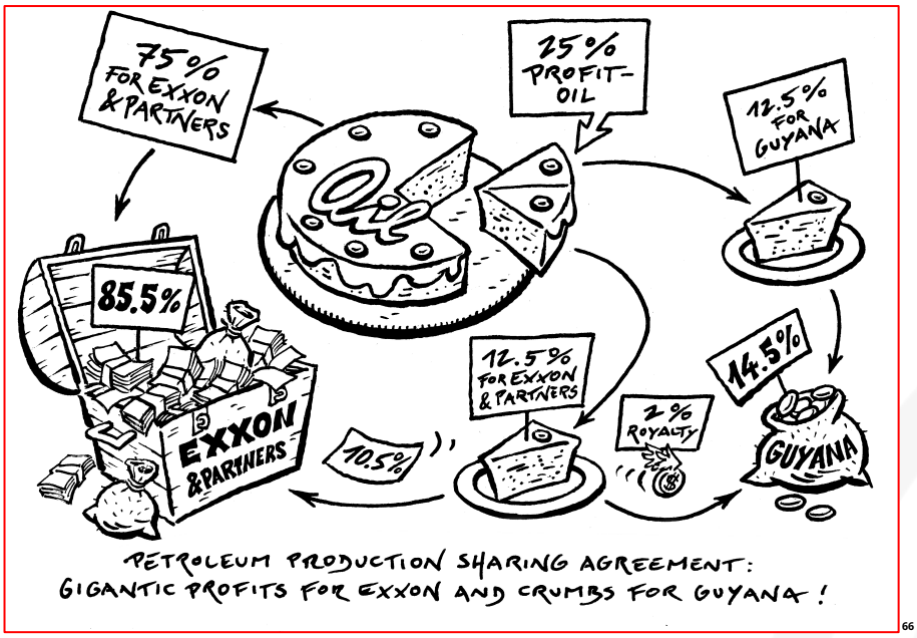
Guyana has been found to have 11 billion barrels of oil in offshore formations[58] and Exxon and other oil giants have stepped in to exploit this. Around 300,000 barrels a day are currently extracted from the deep sea 190km offshore and this is expected to rise to 1 million barrels a day by 2027 as new oilfields are developed. Since each barrel gives rise to ~63kg CO_2 in emissions this would imply that low-lying Guyana's output would be adding 10MtCO_2 to the atmosphere each and every day, adding to sea level rise and other climate impacts.

In 2018 and 2019, the World Bank allocated a total of US$55 million for the 'development' of the oil and gas sector in Guyana[59] (again, this is after the IPCC published their report on the importance of keeping temperatures well below

1.5ºC with concomitant cuts in fossil fuel use). World Bank advisory services facilitated Exxon and China National Offshore Oil Corporation to have legal regulations and services being put in place favorably and expeditiously for the corporations: indeed this was the WBG's stated objective: "The objective of the Petroleum Resources Governance and Management Project is to support the enhancement of legal and institutional frameworks and the strengthening of the capacity of key institutions to manage the oil and gas sector in Guyana."[60] Despite the country's massive wealth in solar and wind resources, the World Bank had no intention of advising the country off this path of fossil exploitation. Between 2019 and 2030, Guyana's gross domestic product is projected by the World Bank to more than triple. By then, the oil and gas sector is expected to account for more than 25 percent of GDP[61], perhaps the very opposite of equipping Guyana with a future-proof, climate friendly, diversified economy.

In 2020, the World Bank recommended that Guyana contract with Houston law firm Hunton Andrews Kurth to draft the petroleum laws for Guyana, at US$1.2 million[62]. Turns out, Exxon Mobil is listed as a "regular client" of Hunton Andrews Kurth[63]. Once this became public knowledge, through Big Shift member research[64], the contract was stopped. Although the World Bank claimed to be striving for 'good governance' in revising Guyana's legal framework for oil development, this was 'good governance' for the oil companies, not for the people of Guyana or the global climate.

Guyana's interests have predictably been overwhelmed by the interests of the big corporates. In negotiating the terms for exploitation of the oilfields, although Guyana is set to receive 50% of the profits from the Stabroek block, it will only do after the oil giants have paid off their costs of development at a rate of 75% of the revenues[65]. **In other words, Exxon can continue to charge Guyana for every newly developed oil field. It could take decades before the money trickles down to the people. This leaves Guyana with just 12.5% from oil production plus the very low 2% royalty.**



[66]

Guyana is a biodiverse country: rainforest covers almost 80% of the country and this has contributed to it being an attractive ecotourism destination[67]. However, its offshore biodiversity did not receive adequate ecological mapping by Exxon, which didn't spend the money to engage scientists to map the plants and animals that live and migrate along the South American coast[68], ecosystems now being hit by seismic blasts every 10 seconds as the exploration is in progress. These blasts are very loud, at up to 250 decibels, louder than the Hiroshima bomb[69], and disturb – including the complex communications of cetaceans[70] - maim and kill marine wildlife. What all this seismic blasting means for migration pathways of marine animals remains undocumented.

What the oil exploitation means for failing Guyana, its people and ecosystems is obvious.

5 South Africa's Medupi coal power plant

Although this report has focused on recent WBG fossil fuel support, this final case study is included as it both shows gendered impacts of a massive WBG fossil lending decision, and as a reminder that a project's devastating impacts can live on and on well after the Bank is merely collecting its repayments.

In 2010, the WBG approved a loan of US$3.73 billion to South Africa to contribute finance towards construction of the Medupi coal power plant. This plant has 4800MW generating capacity, making it the world's fourth biggest coal-fired power plant, when fully operational[71]. Clauses in the loan contract emphasized that the project should adopt cleaner technologies such as more efficient boilers[72], lipstick on a carbon pig.

It also emits more than 25MtCo_2 per year, making it a larger climate polluter than 115 other countries, including Kenya, Burma and Croatia.[73]

As well as its climate impacts, the impacts on local people and society have been devastating, as found in workshops conducted by Oxfam South Africa and Big Shift members[74] in 2013 and 2022. Since the project outset, community members have continuously experienced air and water pollution and land degradation, harming their health. Women, who compose the majority of the cleaning staff at Medupi, and men who built and work at the plant, are routinely exposed to chemicals that harm their health.

An influx of male workers who constructed and operate the plant transformed the local ratio of men to women to 6:5[75], propelling demand for sex work, increasing rates of sexually transmitted diseases, HIV/AIDS, sexual and gender-based violence, high school dropouts, teenage pregnancies, orphaned children (due to maternal mortality and disappearing fathers) and divorces. One female can "service" multiple men. "Blessers" who buy women's and girls' sexual services also spread alcohol and drug dependency amongst them. HIV/AIDS has become the leading cause of death amongst youth. External patriarchy and money have eroded and replaced household structures and other social bonds.

The coal plant's heavy water consumption caused women, who are primarily responsible for water collection, to travel farther to collect clean water or buy unaffordable bottled or privately supplied water. The coal plant and neighboring coal mines are polluting one of the area's last remaining clean water sources, the Waterberg Biosphere Reserve, further reducing women's access to clean water. The vast majority of affected women were neither consulted nor compensated for forced resettlement which destroyed their livelihoods. Although plant jobs mostly bypassed women, the project did not provide them training and skills development for alternative employment.

Farm and forest destruction to construct Medupi eliminated plants and animals used for nutritional and medicinal purposes including: the Mopani worm and Kgwaga tree, sources of food and nutrition; the Baobab tree, used to prepare food and heal skin ailments; and local aloe species used to treat high blood pressure and boost immune systems. Women's time devoted to taking care of the sick increased, while their livelihoods from collecting medicinal and nutritional plants and animals collapsed, increasing their financial stress.

Medupi, is a Sepedi word which means "gentle rain"[a]. Despite the World Bank project's 2021 closing date, Flue-Gas Desulphurization (FGD) equipment to reduce Medupi emissions included in the Bank legal covenant has not yet been installed[a]. Since the Medupi Coal-Fired Power Station's operator, the public utility Eskom, is now considered the biggest sulfur dioxide polluter on the planet[a], with Medupi generating much of this toxic pollutant, perhaps it should better be known as 'acid rain'.

Big Shift campaign asks

Multilateral Development Banks must:

1. End all direct and indirect finance to fossil fuels and promote a just transition away from fossil fuel and high carbon intensity industries.

2. Significantly scale up investment in sustainable renewable energy and ensure everyone has access to clean, safe energy.

3. Include strong environmental, social and governance safeguards relating to fossil fuels and renewable energy including Full Prior Informed Consent with local communities.

4. Be transparent and accountable about direct and indirect energy finance, the impacts of investments and in measuring emissions from the projects they fund.

End notes

[1] International Bank for Reconstruction and Development https://www.worldbank.org/en/who-we-are/ibrd

[2] International Development Association https://en.wikipedia.org/wiki/International_Development_Association

[3] International Finance Corporation https://en.wikipedia.org/wiki/International_Finance_Corporation

[4] Multilateral Investment Guarantee Agency https://www.miga.org/

[5] International Center for Settlement of Investment Disputes https://icsid.worldbank.org/about

[6] Climate Change News 2017 https://www.climatechangenews.com/2017/12/08/miga-dirtiest-world-bank-wing-youve-never-heard/

[7] World Bank 2018 https://olc.worldbank.org/system/files/Financing_for_Development_at_the_WBG_Brochure.pdf

[8] UNFCCC 2015, Article 2.1a https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[9] World Bank 2018 https://www.worldbank.org/en/news/press-release/2018/12/03/multilateral-development-banks-mdbs-announced-a-joint-framework-for-aligning-their-activities-with-the-goals-of-the-paris-agreement

[10] World Bank Group, et al, 2018 https://thedocs.worldbank.org/en/doc/784141415438063483331-0020022018/original/JointDeclarationMDBsAlignmentApproachtoParisAgreementCOP24Final.pdf

[11] UNFCCC 2015, Article 2.1c https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[12] UNFCCC 1992 https://unfccc.int/resource/docs/convkp/conveng.pdf

[13] Bretton Wood Project 2018 https://www.brettonwoodsproject.org/2018/03/world-bank-signals-end-extraction-finance-csos-call-end-fossil-fuel-funding/

[14] World Bank 2022 https://www.worldbank.org/en/news/press-release/2022/09/07/world-bank-group-delivers-record-31-7-billion-in-climate-finance-in-fiscal-year-2022

[15] Recourse 2022 https://www.re-course.org/wp-content/uploads/2022/04/The-Trouble-with-Gas-in-Indonesia_web.pdf

[16] IFC 2021 https://www.ifc.org/wps/wcm/connect/3cf49cdd-2eab-4cbc-8886-a8c2ae29f385/IFC-AR21-Highlights.pdf?MOD=AJPERES&CVID=nOUHGHs

[17] This data is from OCI's Public Finance for Energy Database/ 2021 data is preliminary and not yet published on the site. Access at https://energyfinance.org/

[18] World Bank 2021 https://www.worldbank.org/en/news/factsheet/2021/10/29/10-things-you-didn-t-know-about-the-world-bank-group-s-work-on-climate

[19] MIGA https://www.miga.org/project/trans-anatolian-pipeline

[20] Fred Economic Data, St Louis Fed Aug 2022 https://fred.stlouisfed.org/series/PNGASEUUSDM

[21] IBRD 2017 https://projects.worldbank.org/en/projects-operations/procurement-detail/OP00041759

[22] World Bank2018 https://documents1.worldbank.org/curated/en/347381523905707766/pdf/Executive-Summary-04112018.pdf

[23] *Ibid*

[24] MIGA 2019 https://www.miga.org/project/ghorasal-polash-urea-fertilizer-project-0

[25] https://ewsdata.rightsindevelopment.org/projects/14070-ghorasal-polash-urea-fertilizer-project/

[26] MIGA 2019 https://www.miga.org/project/ghorasal-polash-urea-fertilizer-project-0

[27] *ibid*

[28] World Bank 2020 https://www.worldbank.org/en/news/press-release/2020/05/29/myanmar-power-system-efficiency-project-brings-country-closer-to-universal-electricity-access

[29] World Bank 2020 https://projects.worldbank.org/en/projects-operations/project-detail/P162151

[30] IFC 2018 https://disclosures.ifc.org/project-detail/SII/40314/gas-natural-acu

[31] WWF https://wwf.panda.org/discover/knowledge_hub/where_we_work/atlantic_forests/

[32] The Nature Conservancy https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/atlantic-forest/

[33] Milbank 2018 https://www.milbank.com/en/news/milbank-advises-celse-on-largest-lng-to-power-project-in-latin-america.html

[34] UK Committee on the Medical Effects of Air Pollutants 2015 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411756/COMEAP_The_evidence_for_the_effects_of_nitrogen_dioxide.pdf

[35] IFC 2017 https://disclosures.ifc.org/project-detail/ESRS/39652/celse

[36] USAID 2021 https://www.usaid.gov/uzbekistan/program-updates/nov-2021-uzbekistan-leap-towards-renewable-energy

[37] ACWA Power https://www.acwapower.com/en/projects/sirdarya-ccgt/

[38] MIGA 2021 https://www.miga.org/project/acwa-power-sirdarya

[39] *ibid*

[40] MIGA 2019 https://www.miga.org/project/sembcorp-myingyan-power-company-limited-0

[41] BBC 2019 https://www.bbc.co.uk/news/world-asia-50931565

[42] IFC 2015 https://disclosures.ifc.org/project-detail/SII/36627/myingyan

[43] *ibid*

[44] Oil and Gas Middle East, 2021 https://www.oilandgasmiddleeast.com/news/38740-basrah-gas-company-signs-agreement-with-ifc-to-reduce-gas-flaring

[45] The National News (UAE) 2021 https://www.thenationalnews.com/business/energy/basrah-gas-gets-360m-ifc-loan-to-expand-one-of-the-world-s-largest-flaring-reduction-projects-1.1251026

[46] Red International 2020 https://www.laizquierdadiario.com/Incendio-en-refineria-en-Campana-alerta-ambiental-e-impunidad-empresarial&sa=D&source=docs&ust=1664632269322250&usg=AOvVaw0N-hD-KzYzEnwh6K8OXrNb

[47] Greenpeace 2019 https://www.greenpeace.org/static/planet4-indonesia-stateless/2019/12/b3e7f0a9-korean-jawa-9-10-cpp-health-impact.pdf

[48] Chowdhury 2017 MOJ Ecology and Environmental Sciences **2** https://vdocument.in/environmental-impact-of-coal-based-power-plant-of-rampal-coal-fired-power-plant.html

[49] Asian People's Movement on Debt and Development 2020 https://www.apmdd.org/members/networks/japanese-and-korean-coal-energy-financiers-and-developers-under-fire

[50] Re-course 2020 https://www.re-course.org/news/ifcs-quiet-financial-revolution-away-from-fossil-fuels-a-very-promising-start-but-loopholes-and-problems-remain/

[51] IFC https://www.ifc.org/wps/wcm/connect/05541643-0001-467d-883c-5d7a127ffd57/IFC+Greening+Report+Sept+2020.pdf?MOD=AJPERES&CVID=nisvaOC&ContentCache=NONE&CACHE=NONE

[52] https://ourworldindata.org/co2-emissions

[53] World Bank 2021 https://www.worldbank.org/en/news/feat

ure/2022/07/13/what-you-need-to-know-about-country-climate-and-development-reports

[54] World Bank 2021 'Ghana Energy Sector Recovery Programme for Results (PforR) - Project Information Document' http://documents1.worldbank.org/curated/en/524021611844673400/Concept-Stage-Program-Information-Document-PID-GH-Energy-Sector-Recovery-PforR-P173258.docx

[55] IRENA https://www.irena.org/IRENADocuments/Statistical_Profiles/Africa/Ghana_Africa_RE_SP.pdf

[56] https://www.pulse.com.gh/ece-frontpage/power-generation-in-ghana-parliament-passes-early-power-deal/kxbkc9n

[57] BFT Online 27th Nov 2020 https://thebftonline.com/27/11/2020/excess-power-unutilised-gas-cost-us1-2bn-yearly/

[58] https://oilnow.gy/featured/yarrow-1-is-exxons-next-target-offshore-guyana/

[59] World Bank 2019 https://projects.worldbank.org/en/projects-operations/project-detail/P166730

[60] *ibid*

[61] Stabroek news 2022 https://www.stabroeknews.com/2022/05/22/sunday/guyana-and-the-wider-world/guyanas-oil-and-gas-sector-break-even-prices-brent-oil-price-and-the-world-banks-boom-cycle-projections/

[62] Urgewald 2020 https://www.urgewald.org/medien/world-bank-funds-exxonmobils-go-law-firm-revise-petroleum-law-guyana

[63] Legal 500, Hunton Andrews Kurth LLP Offices https://www.legal500.com/firms/51238-hunton-andrews-kurth-llp/52332-houston-usa/lawyers/596262-robert-jewell/

[64] Urgewald 2020 https://www.urgewald.org/medien/world-bank-funds-exxonmobils-go-law-firm-revise-petroleum-law-guyana

[65] https://www.reuters.com/business/energy/guyana-races-against-clock-bank-its-oil-bonanza-2022-07-18/

[66] Cartoon drawn by Andi Wolff for Urgewald

[67] https://dpi.gov.gy/guyana-takes-lead-in-eco-tourism/

[68] https://news.mongabay.com/2017/11/guyana-seeks-offshore-oil-wealth-in-a-green-economy/

[69] ABC 2022 https://www.abc.net.au/news/2022-08-25/bass-strait-seismic-testing-plan-gas-exploration-fears/101367052

[70] New Scientist 1996 https://www.newscientist.com/article/mg15120451-400-seismic-bangs-silence-sensitive-dolphins/

[71] Power Technology 2015 https://www.power-technology.com/projects/medupi-power/

[72] *ibid*

[73] The Guardian 2010 https://www.theguardian.com/environment/2010/apr/01/medupi-world-bank-loan-vote?view=mobile

[74] Oxfam South Africa and Big Shift Member - Gender Action

[75] Mail and Guardian 2020 https://mg.co.za/article/2020-04-29-the-story-of-sas-biggest-power%E2%80%89plant-and-its-little-town/