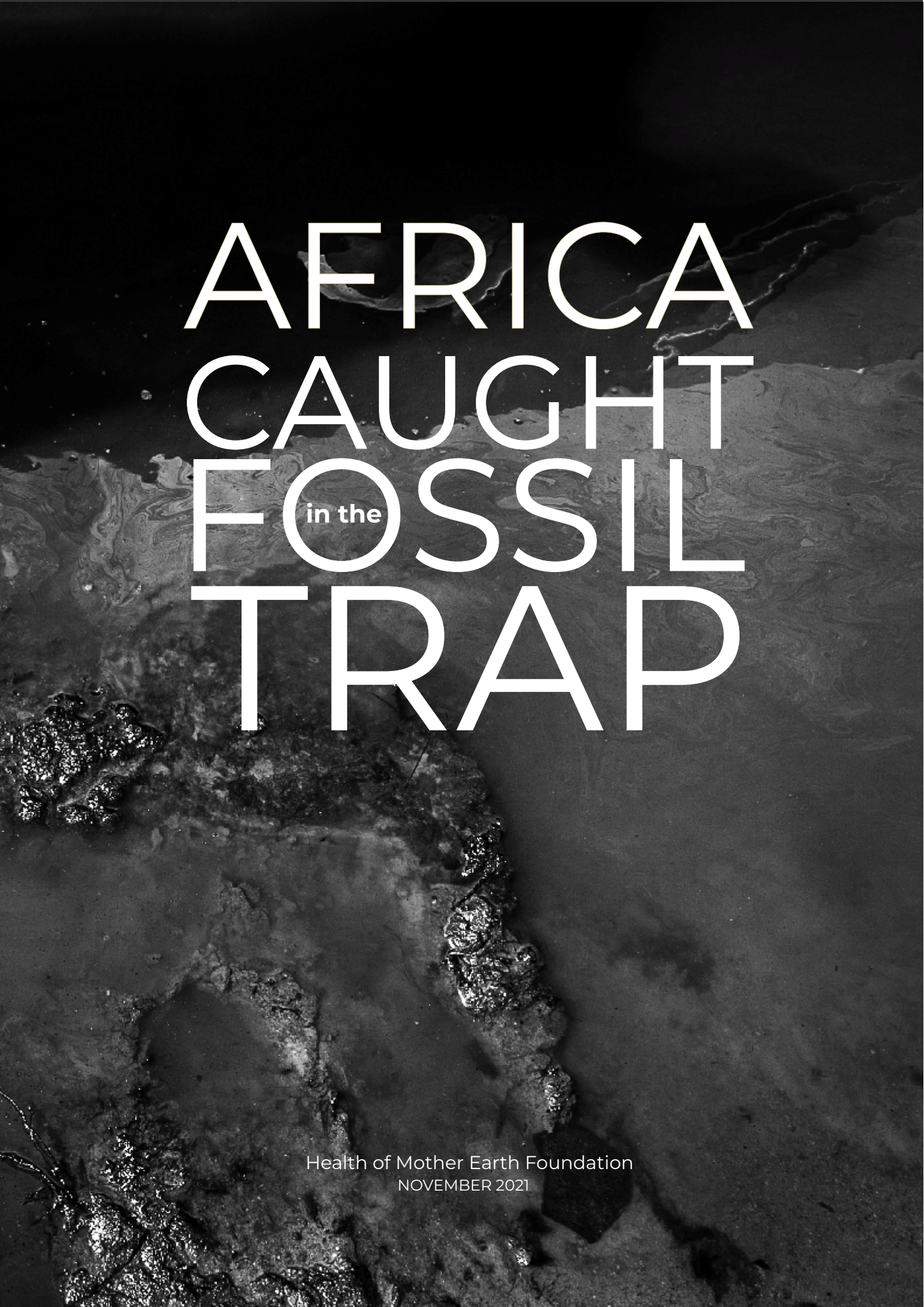


AFRICA CAUGHT FOSSIL in the TRAP

HEALTH OF MOTHER EARTH FOUNDATION





AFRICA CAUGHT FOSSIL in the TRAP

Health of Mother Earth Foundation
NOVEMBER 2021

This report is published by Health of Mother Earth Foundation (HOMEF) with overall coordination by Nnimmo Bassey.

Researchers and contributors:

Benita Siloko
Cadmus Atake-Enade
Magdalene Idiang
Stanley Egholo

We are thankful to **Africa Oil + Gas Report** for information on Africa's new fossil fuel projects.

Thanks to **Ken Henshaw** of We The People for critical review of the draft. Thanks also to **Oilchange International** for their ground-breaking **The Sky's Limit Africa** report and to Oilwatch Africa/International for overall framing and positioning.

We thank the **Energy Transition Fund** for the support.

Cover design and layout: Babawale Obayanju

The report may be reproduced and cited for non-commercial purposes provided the source is fully acknowledged.

Contact:

Health of Mother Earth Foundation
30, 19th Street, off Ugbowo-Lagos Road,
Benin City 300212, Nigeria
e: home@homef.org
w: <https://homef.org>

Contents

01

Introduction

02

Extractivism
and the Rise
of Oil

03

COVID-19 and
Shaky Fossil
Economies

04

Climate Change
and The Fossil
Trap

05

Future of Oil
in Africa

06

Africa's New
Fossil Fuel
Projects

07

Conclusion





Introduction

01

Before the rise of fossil resources extraction in Africa, most countries operated agrarian economies as their primary source of exchange. Other economies depended on mining while some others had a mix of mining and agriculture¹. The economic impact of oil discovery brought sudden changes in the economies of colonial and post-colonial African economies. The political economy of oil extraction in West and Central Africa is far older, with roots often dating back to the late colonial period². Becoming part of the Organisation of the Petroleum Exporting Countries (OPEC)³ added a dimension of power to tilt the balance of the cost of energy in the world.

The African oil sector has undergone momentous changes from the mid-1990s. In a short period, the oil-rich Gulf of Guinea area became one of the world's hotspots for petroleum investment with companies from Brazil, India, China, Russia, and Norway, amongst others, joining the predominant Western oil majors in the contest for acreage, in addition to increased production in established oil countries like Nigeria and Angola. During this time, massive new investment was witnessed in Ghana, Equatorial Guinea, Chad among others.

This history is essential when dealing with the older oil producers. However, it also reveals a great deal about the institutional and political economy impacts of oil in post-colonial Africa, its impact on the power calculus, and offers an understanding of the outcomes of oil wealth for several emerging oil countries. The role of oil in Africa's development remains a protracted discourse. Africa continues to be a significant source of oil. Nevertheless, the debate about the role of oil extraction in economic development on the continent is still empirically and theoretically unsettled. This means that it can be categorised as blessing or curses based on social construct and shaped and defined by power relations and institutions⁴.

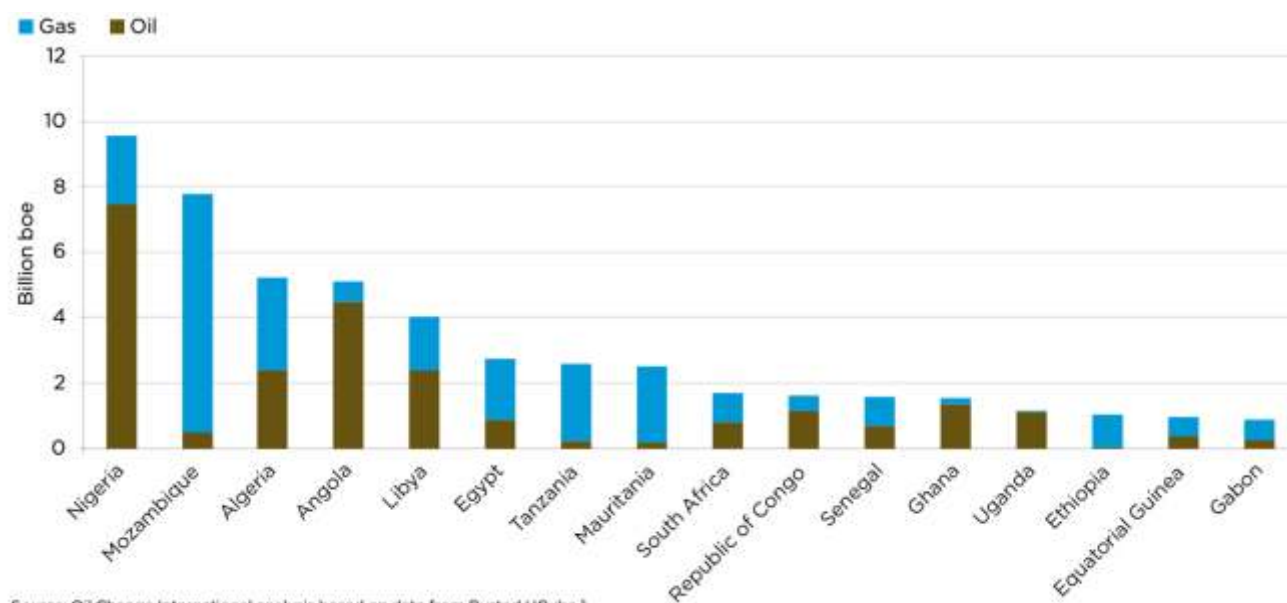
Presently, the predominant perspective is that oil is a curse, a cause of economic stagnation and political turmoil. This is typically shown in the case of oil revenues in Angola, which is a classic case of the resource curse and has experienced corruption and authoritarian government since its independence in 1975⁵. However, some also believe that oil is a blessing and a resource that drives a country's economic development. Yet others see fossil fuels as resources whose impacts depend on whether they are extracted, with what consequences they are extracted and how the costs and gains are distributed.

Nonetheless, African economies dependent on natural resources exploration are characterised by low living standards, poor economic growth, corruption, and political instability. With growing concern about the negative effect of extractive industries, a discursive shift is apparent within the international community, which has progressively incorporated vital norms such as transparency and disclosure of information with regards to the extraction of energy⁶.

Crude Oil	Natural (Fossil) Gas	Coal
Libya	Nigeria	South Africa
Nigeria	Algeria	Mozambique
Algeria	Senegal	Zimbabwe
Angola	Mozambique	Nigeria
South Sudan	South Sudan	Tanzania
Sudan	Egypt	Swaziland
Egypt	Tanzania	Botswana
Republic of Congo	South Africa	DR Congo
Uganda	Libya	Zambia
Gabon	Angola	Niger
Chad	Republic of the Congo	Central Africa Republic
Equatorial Guinea	Equatorial Guinea	Malawi
Ghana	Cameroon	
Cameroon	Sudan	
Democratic Republic of Congo	Mauritania	
Niger	Gabon	
Cote D'Ivoire	Ethiopia	
Tunisia		
Senegal		
South Africa		
Ethiopia		

Table of countries with proven fossil fuel resources

This table does not include the emerging crude oil finds offshore Namibia as well as in the Okavango Basin of Namibia and Botswana



Top 16 African countries for oil and gas production from new, not-yet-approved projects (2020–2050)

Africa will develop with oil and gas – whether the West likes it or not

by NJ Ayuk, Global Shaper

- Boycotting oil and gas firms in Africa is a misguided course of action.
- Many are diversifying into renewable.
- Africa's time to grow is here – and its natural resources are a part of that.

In a 2014 article, Archbishop Desmond Tutu of South Africa argued for an Apartheid-style boycott on coal, oil and gas companies as a way to fight climate change and help ensure global environmental sustainability goals. “We must stop climate change. And we can, if we use the tactics that worked in South Africa against the worst carbon emitters,” he wrote.

Climate change is something to be rightfully concerned about. But although Tutu's sentiment is laudable, it is also misguided. Oil and gas companies are not autocratic regimes focused on oppressing the people and steal their resources. They are businesses. Boycotting oil and gas companies will not have an impact on carbon emissions, but will raise the price of fuel in the long run. That is not the intended goal.

Oil and gas companies are increasingly diversifying their portfolios to include renewable energy assets. Many of them are at the forefront of research and development of new technologies to help develop renewable resources.

They are also transitioning into 'energy companies' and are even rebranding, with Equinor (formerly Statoil) being the most evident example. Who else is better prepared, better funded, and better placed to drive the energy transition we all seek? Demonizing energy companies is not a constructive way forward, and ignoring the role that carbon-based fuels have played in driving human progress distorts the public debate.

We cannot expect African nations, which together emitted seven times less CO₂ than China last year and four times less than the US, according to the Global Carbon Atlas (see figure below), to undermine their best opportunities for economic development by simply aligning with the Western view of how to tackle carbon emissions.

Gabriel Obiang Lima, Equatorial Guinea's minister of mines and hydrocarbons, summed it up decisively to the press last week during Africa Oil Week in Cape Town. “Under no circumstances are we going to be apologising,” he said. “Anybody out of the continent saying we should not develop those [oil and gas] fields, that is criminal. It is very unfair.”

While a few nations across the African continent have been producing hydrocarbons for decades, these resources have mostly been exported to fuel industrial development in Europe, the US and Asia. The reasons for this are varied and have as much to do with the European colonial legacy as with the lack of existing financial resources and expertise to develop local economies over the last century.

We must remember that nearly half of all Africans still don't have access to electricity and that nearly every company in the continent struggles with the lack of power reliability, which raises operational costs, reduces productivity, and hurts their ability to compete in international markets. As I have argued and championed for years, African nations are finally starting to make use of these resources to develop their own national economies. Today, natural gas is by far the most economically sustainable way of producing power in enough quantities to fuel economic development. The African Development Bank has estimated that between \$130 and \$170 billion a year until 2025 would be needed to close the infrastructure gap across the continent. How are African nations to fund these fundamental developments if they give up on exploring their natural resources? How can the Western world, or anyone for that matter, demand, that African nations leave these resources underground when it was these same resources that powered economic development everywhere else?

After decades of colonial occupation and subsequent political and military in-fighting, many African regions have now reached the level of stability that will allow them to build working functioning economies. The fuel for that will be these countries' natural resources, be it oil, gas, coal, or diamonds. Boycotting the companies that can help these countries develop these resources would be paramount to economic suicide.

This is not to say that environmental sustainability and climate change should not be at the top of the list of concerns when debating the African energy sector, but it should inform environmental impact assessment policies and foster best practices in the industry, not put a stop to it.
Africa. ...

Yes, renewable energy sources can have a role in contributing to expand electrification in Africa, and solar and wind power have become competitive when compared to carbon-based generation, but that will always depend on the resources available in each region and will always have to be supported by other forms of generation capacity that can overcome the issue of intermittency that follows renewable power generation.

Africa's time to grow and develop is finally here, and it will be funded by its natural resources. Misguided moral lessons from the West will do little to change that because the financial resources coming from these activities are crucial and irreplaceable. In a somewhat ironic way, even if Africa wanted to stop using fossil fuels and shifted every power station to renewable sources, it would still be forced to develop its oil and gas fields in order to fund that transition.

The New York Times quoted Mr. Gwede Mantashe, South Africa's Energy Minister, in an article covering Africa Oil Week. "Energy is the catalyst for growth," he said. "They even want to tell us to switch off all the coal-generated power stations... until you tell them, 'you know we can do that, but you'll breathe fresh air in the darkness'."

Box: Article by NJ Ayuk

COVID-19 and Shaky Fossil Economies

03

The coronavirus pandemic and the accompanied lockdowns and restriction on movement had an impact on fossil fuel production and consumption.

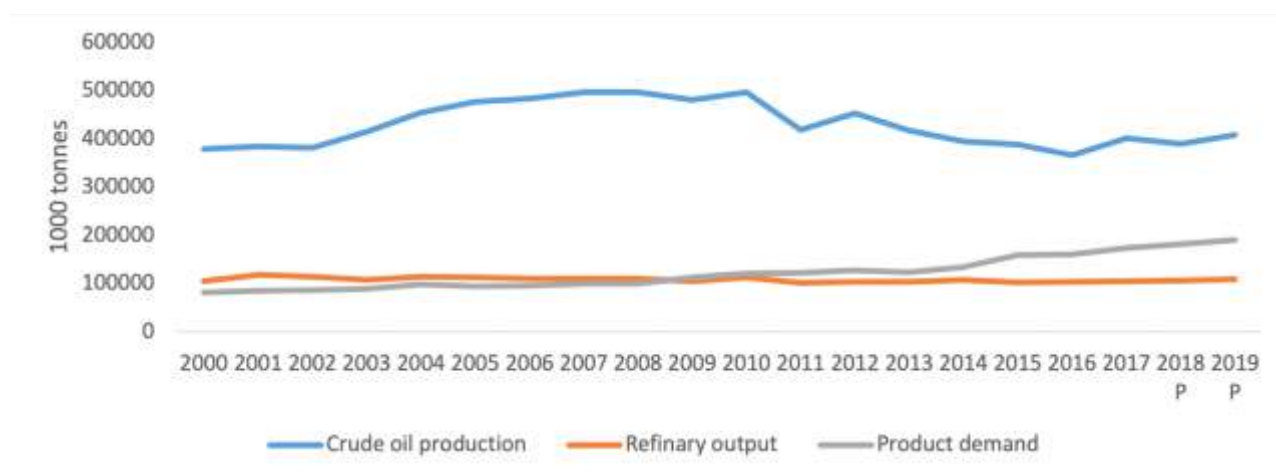
This led to the crash of the price of crude oil and elevated the level of unpredictability of the market which inadvertently translated into direct economic impacts for countries that depend on revenue from this source for their national budgets. At the height of this scenario there were several crude oil loaded vessels stranded at sea, unable to offload at intended ports due to low demands.

By February 2020, ships headed for China were diverted to South Korea, Malaysia, Singapore, and others due to the oil glut¹⁵. One highlight of the period was the briefly negative benchmark price for the West Texas Intermediate oil in the United States of America¹⁶. The average price of a barrel of crude oil (Brent crude) in 2019 was \$64. This initially fell to \$30/barrel by March and slipped to \$25/barrel by April 2020 due to disagreement between Saudi Arabia and Russia over production levels.

The impact of the coronavirus pandemic on oil prices was compounded by a gradual systemic shift that is seeing many countries making efforts to cut

carbon emissions and to shift to renewable energy resources. The price crash of 2020 was the third to be experienced in just over a decade. The key difference is that while the industry quickly recovered from the crash, this time the process of recovery will likely be decidedly slower, if at all.

The African Union projected that the reduced demand for crude oil would lead to at least 10 percent drop in crude oil exports in 2020. Africa exports 75% of crude oil produced in the continent and stands alone as a net petroleum product importing continent with only 16 of the 55 countries have refining capacities.¹⁷



Crude oil production and demand in Africa

Source: AFREC: Africa Energy Database

Nigeria has been the leading crude oil producing country in Africa with a peak of 2.5 million barrels per day (m b/d)¹⁸, followed by Angola with a peak production level of 1.29m b/d¹⁹. By August 2021, Libyan crude oil output averaged 1.163mbd, pushing Angola to a third position as it produced 1.129m b/d in the same month.

The two countries face different oil production challenges. While Angola's challenge is related to its geology, Libya faces a volatile political situation, and the production level is only edging upwards because of a peace deal reached by warring factions in the country²⁰. Meanwhile Nigeria's crude oil production level stood at 1.25 m b/d in September 2021 and 1.23m b/d in October of 2021. The pandemic did not only affect livelihoods, but it also affected the way many people lived and work, causing social and economic changes that will have implications for many years to come. For about three months, nations across Africa were all on lockdown and the Government's actions to deal with the pandemic changed all parts of the economy and life.

In March 2020, the Organisation of the Petroleum Exporting Countries (OPEC) nations met to discuss the fate of the oil price cut and with the advent of the virus and other containment strategies OPEC countries agreed to cut another 1.5 million barrels per day from production²¹.

From late 2019 to mid-2020, the number of oil and gas exploration and exploitation projects in the US decreased from 805 to 265. Most of the world's major oil and gas role-players' had to revisit their capital expenditures due to the COVID-19 in 2020²².

Another Energy Future is Possible

The declines in the production and prices of crude oil across the world is a clear indication that there are no future in the fossil fuel industry. Rather nations across the world are seeking for new ways to cater for the energy needs of their nation.

This has led to seeking refuge in other forms of renewable energy sources, thereby curbing the harsh realities that someday the much depended on extractives and fossil fuel industries will not be a viable means of safe guarding the energy needs of citizens across the world²³. The covid19 pandemic has also revealed to investors that there are no future in investing in fossil fuel industries any longer. What then should be done?

Companies that survive the downturn needs to prepare for a very different kind of future, one in which volatility and uncertainty around demand will rule the day, and the only companies that attract capital will be companies with detailed, specific, and ambitious plans for managing the just transition to renewable energy.

One of the major implications of the Covid19 pandemic is the fact that continued dependency on fossil fuels has complex negative implications for the continent. A just transition away from fossil fuel production and dependence across Africa is the way forward, bearing in mind that Africa suffers higher temperature increases than the rest of the world. This should guide the fossil phase-out on the continent. This should be preceded by robust diversification plans (including financial support for the agricultural sector and renewable energy sectors) that will build resilience, safeguard health, and protect citizens and communities from future crises.

Climate Change and The Fossil Trap 04



Crude oil is produced in 20 African countries with the outputs mostly concentrated in five countries Algeria, Angola, Egypt, Libya, and Nigeria.

These countries account for over 80% of Africa's oil production.²⁴ Africa is caught in a trap with multiple tentacles. Firstly, the continent has attractive and prodigious amounts of fossil fuel resources. Secondly, despite the humongous volumes of fossil resources, the continent is a net exporter of refined petroleum products. Thirdly, this is the resource that contributes the most to the unfolding climate crisis to which the continent is highly vulnerable.

The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) revealed very dire climate prospects for Africa. Researchers show that Africa contributes only 3.9 per cent of carbon dioxide emissions in the world.²⁵ It showed among other things that

- Sea level rise around the continent has been higher than the global average in the last three decades and the trend will continue.
- Climate change will amplify water stress on the continent.
- Flooding is projected to increase in eastern Africa
- Frequency and intensity of rainfall will increase across the continent
- Annual maximum temperature in northern and southern Africa will likely be close to 4 degrees Celsius above normal. The average temperature in these two regions will rise by 3.6 degrees Celsius if the earth warms at 2 degrees Celsius above pre-industrial levels.
- Extreme heat waves will increase throughout this century.
- Extreme cold waves will also decrease in the century.
- West and Central Africa will likely experience heavy precipitation and flooding.
- Most regions in Africa will experience increased frequency and severity of agricultural and ecological droughts.
- Aridity and droughts will increase in all regions of the continent.
- Overall impact on ecosystems will remain substantially high.
- Higher levels of health impacts.

Madagascar is already experiencing a drought, and this will increase. According to the Food and Agricultural Organisation, harvest for 2021 of crops such as maize, rice, pulses and cassava would be less than 50% of the five-year average.²⁶ The

agricultural system and food production on the continent will be highly impacted. The IPCC also confirms that Africa is one of the most vulnerable continents due to its high exposure and low adaptive capacity.²⁷

Considering the extreme effects of climate change on Africa it would be expected that African nations would be focused on tackling the problems at source. This would mean keeping carbon in the ground and not joining the world in scrapping the bottom of the fossil fuel barrels and squeezing out petrodollars before the resource becomes globally stranded. As already seen, political leaders on the continent continue to harp on how dependent they are on revenue from fossil fuels and how much that revenue is needed to close the energy gaps on the continent and drive development.

However, the questions remain concerning the value of having a load of revenue if the planet is on fire and is uninhabitable. Another question pertains to what was achieved with the revenue garnered over many decades of resource exploitation in countries like Angola and Nigeria?

Weaning Africa from fossil fuel dependency in terms of extraction and revenue will be a critical approach to reducing the impacts of catastrophic global warming on the continent. This approach was considered at a Global Gathering of Oilwatch Africa where the outcome²⁸ included the observation that the United Nations Framework Convention on Climate Change's Conference of Parties (COP) has over the years become an avenue for trade talks, commercial pledges, and avoidance of real action irrespective of the glaring unfolding climate catastrophe.

Weaning Africa from fossil fuel dependency in terms of extraction and revenue will be a critical approach to reducing the impacts of catastrophic global warming on the continent. This approach was considered at a Global Gathering of Oilwatch Africa where the outcome included the observation that the United Nations Framework Convention on Climate Change's Conference of Parties (COP) has over the years become an avenue for trade talks, commercial pledges, and avoidance of real action irrespective of the glaring unfolding climate catastrophe.

Participants at the Oilwatch International meeting also observed that big polluters that are the perpetrators of greenhouse gas (GHG) emissions globally have continued to wield untoward influence on the climate negotiations as evidenced in the new mantra of Net Zero, a suite of algorithms and

technologies, an updated version of the myth of carbon offsetting, which now seems still to be leading the discussions, rather than real climate actions, now under the Paris Agreement. The network also noted that countries and territories in the Global South that have not contributed significantly to the problem are disproportionately impacted by climate change. They expressed concerns over the fact that the fossil fuel industry and allied political leaders are seeking ways to expand destructive fossil extraction in places such as the Okavango Basin in Namibia and Botswana, Saloum Delta in Senegal and Delgado in Mozambique while continuing their polluting activities in the Niger Delta, the Amazon, and other places.

Oilwatch International made several demands on political leaders including a call for Africa to reject the “net zero” construct and all false solutions including constructs around so-called Nature Based Solutions. Oilwatch International also demanded that there should be no new coal, oil, or gas extraction expansion plans in line with the best available science as outlined by the Sixth Report of the Intergovernmental Panel on Climate Change (IPCC). They called for a phase-out of existing

extraction of fossil fuels in a manner that is fair and equitable, considering the respective dependency of countries on fossil fuels and the importance of transitioning workers in the fossil fuels industry to more social, environment and climate friendly sectors.



05

The Future of Oil in Africa

In Africa, particularly in the impoverished and highly polluted Niger Delta region, vocal and occasionally violent grassroots protection groups emerged to oppose the corporation-state nexus and the tragic consequences of oil production for the communities. Put together, these trends amounted to a searing critique of previous decades' oil partnerships that led to their politicisation and poor governance record. However, the rapidity with which this critique entered international policy debates raised more issues.³⁰

While progressive agendas matured rapidly in the early 1990s, a tragic event in late 1995 precipitated their near-universal acceptance in the subsequent years. Despite strong international opposition and pleading, Nigeria's military ruler Sani Abacha ordered Ken Saro-Wiwa, and eight other Ogoni environmental and social justice activists executed. Oil companies came under fire after Human Rights Watch, Global Witness, Transparency International, and other international organisations exposed their role in the region.³¹

This included the fact that Royal Dutch/Shell, the largest oil company in Ogoniland and Nigeria held a “watching brief” during a kangaroo tribunal that tried the Ogoni leaders and was generally believed to be complicit in the processes that built up to the executions and the long-term destruction of lives and the Niger Delta ecosystems. Other developments cast doubt on the oil industry's record in Africa. In France, long-simmering scandals surrounding ELF-Aquitaine finally came to

light, exposing a vast Gabonese regional corruption strategy and influence peddling. At the International Financial Institution, conventional wisdom regarding the beneficial effects of extractive industries was challenged by research demonstrating an inverse relationship between mineral resource endowment and broad-based development. Indeed, research appeared to indicate that oil and mineral-rich states in the “developing” countries were more likely than non-resource-rich states to face increased political competition, corruption, and civil war and to be more deficient in the long run.³²

Numerous factors conspired against progress in resolving the oil states' long-standing problems. As was customary in July 2008, when oil prices reached an all-time high of \$147 per barrel, policymakers in industrialised countries reverted to the default realpolitik approach to relations with major energy producers. Along with high oil prices, other factors have tempered the West's reformist enthusiasm. Oil provinces – from Mexico and Venezuela to Russia and various Middle Eastern states – either were not open or became more difficult to access and this increased the value of access to Africa's oil fields. Additionally, significant competitors from Asia's oil-hungry economies – including China's PetroChina and Sinopec, Malaysia's Petronas, and India's ONGC – engaged with Africa's oil elites without the pretext of reform.³³

Another factor is that reform commitments have historically been skewed toward the incremental and voluntary rather than the regulatory and obligatory.

Even when they appeared to join the reformist bandwagon, oil companies were frequently engaged in voluntary, non-binding commitments, and damage limitation exercises. What is considered corrupt practises have never materially impacted these companies' bottom lines, and their engagement with African oil states has always been highly profitable. Indeed, the most obvious danger for oil companies was the deterioration of relations with power holders in oil-rich states if reforms were pursued too vigorously.

Perhaps the most significant reason for the reformist agenda's failure is that there was never a sufficiently strong reformist constituency within oil-producing countries. Despite protests, mainstream NGOs and the media, and the occasional armed rebellion in countries such as Angola, Chad, Congo-Brazzaville, and Nigeria, the arrangements dismissed as abhorrent by those outside the oil elite were and continue to be highly lucrative for those on the inside. Few realistic competitors to the oil incumbents think significantly differently about the state or economy, and those who do are not currently in positions of decision-making authority.³⁴

Pipelines and Pipedreams

Political peril has often played a role in shaping African oil and gas industries. Nevertheless, the oil boom decade gave new significance to regional risk. International high oil prices between 2004 and 2014 stimulated exploration in frontier countries that led to new oil and gas discoveries across the continent. Large oil and gas onshore and offshore discoveries in Ghana, Mozambique, Uganda, and Kenya has also led to political competition at both the national and local level over incoming investment and billions in anticipated Petro-dollars.³⁶

Country risk can be linked with the relationship of oil and gas with governance and development; and can also stem from conflict. The impact of national risks in African extractive industries varies, and conflicts and war influence international companies depending on the market operation, ownership structure, and company size. Miners of diamond winning unusually profitable deals in Angola during its long-lasting civil war portrays an example of risk being an opportunity to some. This displays that some international companies are insignificantly affected by political risk than others, and in some other cases, may even benefit from conflict and political instability.³⁷ The tensions between Sudan and South Sudan have lingered largely due to fossil fuel resources located at the border zone³⁸.

In East Africa, Uganda became the future backbone of oil production, following the initial discovery of oil in 2006.

It has an estimated 6.5 billion barrels of oil with recoverable oil between 1.8 and 2.2 billion barrels. From present discoveries, oil production is expected to get to a 10-year plateau of about 200,000 and 250,000 barrels per day over a three-decade production period. Furthermore, these scales are comparable to current day mid-level African producers, South Sudan, Equatorial Guinea, and Gabon, which will possibly decline in production in the coming years, making Uganda one of the top oil producers in Africa.³⁹ Uganda is building a refinery to reduce its import bill and limit its dependence on Kenya as the main source of petroleum products. However, with regards to the fall in global oil prices and Uganda's increasing debt, the economic challenge of such a project has become evident.

Since discovering oil in the Albertine region in Uganda, many studies examined how these resources can benefit both the country and host communities⁴⁰ with both positive and negative expectations. The positive expectations include the usual promises of improved social service delivery, health care, education, employment opportunities. Experiences and trends also show the communities that they may expect the negative impacts of extractive industries: inequalities, environmental pollution, loss of livelihood, and land grabbing and conflicts. All these risk factors pose a threat for local economic development⁴¹.

Extractive activities in Uganda are situated in some of the most environmentally sensitive and fragile districts⁴². The Albertine region, for instance, has a rich biological diversity including nature reserves. One of the most contentious issues related to the exploitation of crude oil in Uganda is the proposed 61 cm diameter 1443 km heated East African Crude Oil Pipeline (EACOP) that would convey the country's waxy crude oil to an export terminal at Tanga in Tanzania.

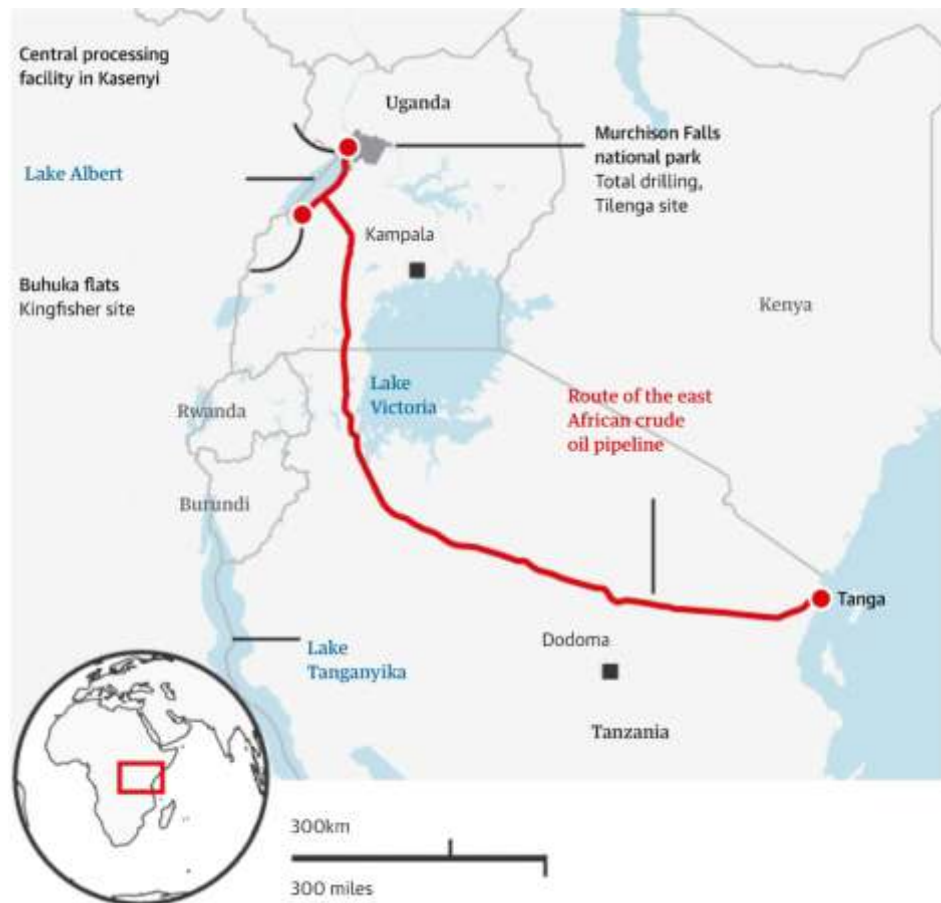
The pipeline is proposed to be buried at a depth of 2 metres and would be heated at a temperature of 50 degrees Celsius to keep the crude flowing. Uganda and Tanzania signed the agreement for the construction of the pipeline in April 2021 with the French oil and gas company Total and the China National Offshore Oil Corporation (CNOOC). The shareholder agreement indicates a skewed EACOP shareholders arrangement: Total (72%), Uganda National Oil Company (15%), CNOOC (8%), and Tanzania Petroleum Development Corporation (5%).⁴⁴

Some of the financial institutions that were eager to fund the project have pulled out of the project on seeing the massive negative impacts the pipeline would have on the communities as well as the ecosystems it would traverse. Compensation for those displaced from their lands are miniscule – with a villager offered 39,715 Ugandan shillings or US\$11.2.⁴⁴ The EACOP is aligned to pass on the western border of Lake Victoria and would threaten the water supply of up to 40 million persons.⁴⁵

In addition, civil society groups in Uganda and Democratic Republic of Congo oppose the pipeline because of non-disclosure of detailed environmental impact as well as social impact assessment reports considering that thousands of community persons will be impacted and the means of protection of Lake Albert is not assured.

Analysts like Lapo Pistelli hold that Africa's economic development is being held back by an extensive lack of access to energy. Short-changed by low oil prices, cash strapped governments in Africa have been forced to concurrently maximise output at mature fields and bring new field output online. Nevertheless, this has stopped declines in production, but it has not changed the fortunes.⁴⁶ With the survival of many companies at risk due to the downturn of demand due to the coronavirus pandemic, the prospects of depending on this resource further recedes. It is generally expected that the cost of solar and wind generators and the price of batteries for storing electricity is on a downward trend.

The drive for a shift to renewable energy is gradually receiving policy attention in some countries. This is another reason for a bleak future for oil industries. Further reduction in demand will further depress global oil prices. Countries that are dependent on oil for economic survival will be forced to look elsewhere, further dampening the dominance of oil as a source of foreign exchange⁴⁷.



Rather than focussing just on developing oil and gas for export, African governments and energy companies must give immediate attention to the development of commercially viable local energy markets. Harnessing Africa's abundant renewable energy resources and expanding off-grid distributed energy programmes are crucial for meeting the needs of the people. Overcoming Africa's energy challenge is essential in developing internal markets and attracting domestic and international investors to lift hundreds of millions of people out of poverty and this requires regional integration, innovation and technology, and reallocation of resource and investment to achieve this at scale⁴⁸.

Future of oil and diversification of the Africa economy

Policy decisions will play a critical role in developing low carbon economies in Africa. According to Rod Crompton, Director of the Energy African Leadership Centre, South Africa's policy stance on whether to continue supporting internal combustion engines and the oil industry or transitioning to electric vehicles will determine the country's oil future. However, he noted that the only disadvantage would be increased infrastructure costs if this switch occurred⁵⁰.

As previously noted, global oil price collapse has happened before. The oil industry has dealt with two price collapses in the 12 years preceding Covid-19. However, multiple factors were at play now, including the supply shock, the unprecedented drop in demand, the global humanitarian crisis, and the industry's financial and structural health being worse than it had ever been⁵¹.

Recent years have demonstrated how vulnerable African countries are to economic shocks and currency and commodity price fluctuations. Some economies are more vulnerable than others because they rely on exporting a single or a few commodities or primary products. When commodity prices fall, mono-product economies such as Nigeria, Angola, and Zambia experience economic stagnation. China's imports from Africa fell by 40% in 2015 as the country's growth slowed, and the decline in demand for oil and other minerals triggered a global commodity price collapse. Zambia, where copper accounts for 60% of exports, saw its currency fall to an all-time low in 2015 and has remained depressed since⁵².

Nigeria's budget deficits and depleted foreign reserves were exacerbated by the collapse in oil prices, culminating in a recession from which the country had only recently emerged. This has demonstrated to African policymakers the critical importance of diversification for long-term economic growth. This realisation, according to the Deloitte report,⁵³ indicates that most African governments have failed to diversify their economies during the last decade's growth spurt.

Economic diversification has been a priority for low- and middle-income economies for decades. Diversification is also critical for resilience and holds benefits for the people. Regrettably, this objective continues to elude many African countries. Indeed, the continent is home to eight of the world's fifteen countries with the least economic diversification⁵⁴.

This reality erodes the economic foundations of Africa's transformation and retards progress. According to Njuguna Ndung'u, former governor of Kenya's Central Bank, "Africa has made socioeconomic progress over the last two decades, but economic diversification would have provided a more stable foundation for accelerated development." Without diversification, economies experienced a decline in growth, accompanied by weak institutions and stalled efforts at structural and economic transformation. Lack of diversification weakens economies, making them vulnerable to global crises such as a pandemic.⁵⁵

In recognition of this reality, many countries' policy directions have been shaped by the goal of economic diversification. For example, oil- and mineral-rich economies in Africa, Latin America, and the Persian Gulf seek to diversify their exports and fiscal revenues to reduce their reliance on these natural resources.

The importance of export diversification is frequently highlighted by the periodic boom and bust cycles of international commodity prices, as occurred in 2015 and, more recently, during the global shock to oil supply and demand caused by the coronavirus pandemic. Saudi Arabia launched Vision 2030 in 2016, a ground-breaking strategy that, among other objectives, seeks to reduce the country's reliance on oil by fostering the development of a robust private sector⁵⁶.

On the African continent, the difficulties associated with a lack of economic diversification compound one another, making countries particularly vulnerable to external shocks. Africa has a low intra-regional trade level (17%), compared to Europe (69%), Asia (59%) and North America (31%). Only the Middle East has a lower level⁵⁷. Due to various factors, including infrastructure deficits, tariff and non-tariff barriers, many African countries trade more with distant countries, including former colonial powers, than with neighbours.

Several vital indicators illustrate Africa's frequently precarious position within the global economy, despite its enormous potential. African countries (excluding North Africa) account for only 2% of global economic activity, despite the region's population of 14%⁵⁸. As the region's population rises — it is expected to exceed 2 billion people by 2050 — the region's share of global poverty increases proportionately. By 2030, the World Bank projects that Africa will be home to 90% of the world's extreme poor⁵⁹.

The coronavirus pandemic exacerbates an already dire situation, with an estimated 39 million people in Africa facing extreme poverty by 2021. All these pessimistic projections underscore the critical importance of developing robust, resilient, and diverse economies to ensure that Africa realises its potential for shared prosperity⁶⁰ away from being fixated in the fossil trap.

Thus, Africa must transition away from reliance on oil and toward diversification, as the collapse of oil prices tipped the Nigerian economy into a five-quarter recession in 2016, from which it is only now recovering. In 2015-2016, Angola, Equatorial Guinea, the Congo Republic, and Gabon all experienced significant economic slowdowns due to low oil prices. Zambia, where copper accounts for 60% of exports, was also hit hard by the copper price collapse. These experiences emphasise the importance of diversifying economies and developing resilience to such large external shocks⁶¹.

While economic diversification remains elusive in most African countries, some are making strides. Mauritius, for example, has made some progress in transitioning from a sugar-dependent economy to a significant financial services hub with a thriving export sector in tourism, textiles, apparel, and jewellery. From 98% of exports in the 1970s, sugar now accounts for about 5% of Mauritius's exports. Botswana is attempting to diversify its economy along the value chain by establishing cutting, polishing, and marketing hubs for diamonds. Kenya's burgeoning private sector lays the groundwork for stronger growth in services sectors such as financial services, telecommunications, and tourism⁶².

Rwanda's efforts to diversify its economy are fuelled by significant business environment reforms and economic and regional integration initiatives. It has successfully allocated significant public resources to programmes that stimulate growth, boost agricultural productivity, expand infrastructure investment, expand access to financial services, and promote higher-value economic activities. Indeed, these countries have weathered the commodity price shocks of 2014–2016 while maintaining robust growth rates. Agribusiness, light manufacturing, textiles, energy, tourism, financial services, and other service sectors appear to offer visible opportunities for African economies to diversify and structurally transform. Diversification of the economy will be a game-changer for Africa's future⁶³.

Africa is endowed with abundant natural resources, including minerals, and the revenue generated by their export is a significant source of revenue for many countries. Algeria, Angola, Libya, and Nigeria produce a significant portion of the world's crude

oil; South Africa and several other African countries produce a significant portion of the world's gold. Diamonds are mined extensively in Botswana, the Democratic Republic of the Congo (DRC), and Sierra Leone. Several African countries also have strategic minerals such as chrome, coltan, bauxite, and manganese. Additionally, the continent produces a sizable amount of tropical hardwood, coffee, cocoa, and rubber. A national economy's reliance on a single economic activity or a limited range of exports and imports is detrimental. The United Nations has repeatedly urged African countries to avoid becoming overly reliant on extractive commodities and to diversify their economic base⁶⁴.

We have devoted attention to the need for the diversification of economies in Africa because if this is not done, fossil fuel resources will continue to offer rosy promises that are never fulfilled, leaving the continent with an empty bowl and at the mercy of speculators and shrewd financial institutions. Africa's natural resources must be added value. Cocoa production is an example of where this approach could be profitable. Cote d'Ivoire and Ghana are the world's largest cocoa producers, but manufacturing activities associated with the raw material are not sufficiently developed leading to continued dependence on exportation of cocoa beans.

oil; South Africa and several other African countries produce a significant portion of the world's gold. Diamonds are mined extensively in Botswana, the



06

Africa's New Fossil Fuel Projects

Start-Ups (Commissioned), Under-Construction (Ongoing) and Planned (Proposed, Studies)

The seven year-long "correction" in crude oil prices has slowed down the pace of both exploration activity and development projects around Africa. Here are some of the projects which are still in play on the continent.

UPSTREAM-Start Ups FIRST QUARTER 2021

ANGOLA

TOTAL, the French major, commenced production of the Zinia Phase 2, expected to produce 40,000 Barrels of Oil Per Day at peak, in first quarter of 2021.

EGYPT

ENI operated Damietta LNG Plant was back in production in February 2021, nine years after it was mothballed. The 5MMTPA plant is unlikely to be delivering full capacity until October 2021

BP operated Raven field gas project came on stream in 1st Quarter-2021, after an estimated nine-month delay. Raven will produce 900MMscf/d of natural gas and 25,000BCPD of condensate, at peak.

NIGERIA

First E&P exported its first cargo of oil from the Anyala and Madu fields, in OMLs 83 and 85, in shallow offshore Nigeria on January 10, 2021.

UPSTREAM Projects Close to Start Up ANGOLA

TOTAL will commence crude oil production from CLOV Phase 2 in the second quarter of 2021.

ALGERIA

- SONATRACH will start natural gas production from Tinhert project by fourth quarter 2021
- SONATRACH will start natural gas production from Gassi Touil Periphery by fourth quarter 2021
- SONATRACH will start natural gas production from Hassi R'Mel by fourth quarter 2021

UPSTREAM Projects -Under Construction

MAURITANIA/SENEGAL

BP is continuing construction of the 1st Phase Greater -Tortue Floating LNG in Mauritania/Senegal, with capacity for 2.5 Million Tonnes Per Annum (2.5MMTPA). First gas is looking more like early-2023.

MOZAMBIQUE

TOTAL is constructing but has declared a Force Majeure on the thirteen Million Metric Tonnes Per Annum (13MMTPA) Liquefied Natural Gas Mozambique LNG project in Afungi in northern Mozambique. "As a result of the evolution of the security situation in the north of the Cabo Delgado province, TOTAL confirms the withdrawal of all

Mozambique LNG project personnel from the Afungi site", the company says. Construction at the site began in 2020.

SASOL took Final Investment Decision (FID) in February 2021, on a multi-layered gas development project on its PSA onshore licence including (1) increasing natural gas it exports from Mozambique to South Africa (2) constructing an LPG plant (3) investing in a Power Plant in Mozambique and supplying part of the gas.

ENI is continuing construction of the 3.3MMTPA Coral South Floating LNG, to be sited off Mozambique. First gas is expected 2022.

NIGERIA

NLNG Ltd is constructing an eight Million Metric Tonnes Per Annum (8MMTPA) LNG Plant in Bonny, in eastern Nigeria. The plant is the seventh plant (Train) in the Bonny LNG factory in the country. It will take the capacity of the factory from 22MMTPA to 30MMTPA. The NLNG facility is the largest industrial complex in West Africa

SHELL/SEPLAT continue construction of the ANOH Gas development and processing project which is meant to monetise 600MMscf/d of gas from the two straddling fields: Assa North and Ohaji South, in eastern Nigeria. First gas is expected in mid-2022.



SENEGAL

Woodside Energy progressed Sangomar oil field project construction in First Quarter 2021 with cutting of first steel for the FPSO topsides and preparation for the drilling campaign in mid-2021. The development is expected to deliver 100,000BOPD at peak. Field should come on stream by 2nd Quarter 2023.

UGANDA

TOTAL and the other partners of the Lake Albert oilfield development project, the Ugandan basin wide crude oil development, have concluded the final agreements required to commence construction of the major project. The Tilenga project, operated by TOTAL, and the Kingfisher project, operated by CNOOC, are expected to deliver a combined production of 230,000 barrels per day at plateau. First oil export is planned in early 2025.

UPSTREAM Planned, in Study, or Awaiting FID

NIGERIA

SHELL is in discussion with the NNPC over a range of issues before it could announce Final Investment Decision for the development of the Bonga South West Aparo (BSWA) oil field. ENI is interpreting a March 2021 ruling, by an Italian court in Milan, as paving the way for progress to Final Investment Decision (FID) for the Etan-Zabazaba Project in the Oil Prospecting Lease (OPL 245). The ruling declared that ENI's CEO Claudio Descalzi and members of his management had no case to answer for the payment the company made to acquire its stake, ten years ago.

TOTAL is finalizing the development of the Preowei field, a deepwater hydrocarbon pool located north of the Egina field in Oil Mining Lease (OML) 130, off Nigeria. The field development plan calls for a subsea tie back to the Egina field FPSO. Final Investment Decision was scheduled for 4th Quarter 2020 but was postponed. At peak, Preowei is expected to output 50,000Barrels of Oil Per Day.

ExxonMobil put the brakes on development drilling in Owowo field because the Nigerian President signed off on the Deep Offshore and Inland Basin Production Sharing Contract (Amendment) Act, 2019, which introduces a flat rate royalty on all Deep Offshore PSCs (i.e., areas greater than 200m water depth) of 10% chargeable on the volume of crude oil and condensates produced from the relevant area.

AMNI International has been slower, since the COVID -19 pandemic, in developing the Tubu field in shallow water offshore eastern Nigeria. With only two of eight planned wells drilled, first oil is unlikely before the end of 2021.

MOZAMBIQUE

ExxonMobil operated 15MMTPA Rovuma LNG project is not about to take Final Investment Decision anytime soon. The operator has had financial challenges. And now that attacks by insurgents have increased near the project area, the project has rolled to the back of the burner.

MIDSTREAM- (PIPELINES, FLOW STATIONS) Start-Up 1st HALF 2021

NIGERIA

NNPC has completed the 36" x 342Km Escravos – Lagos Gas Pipeline Project, which is a looping of the 24" x 342 Escravos-Lagos Pipeline. Combined throughput of the two lines is 2Billion standard cubic feet per day (2Bscf/d).

NNPC is commissioning the 48-inch, 127-kilometre Obiafu-Obrikom-Oben (O83) gas export pipeline, scheduled to evacuate two billion cubic feet of gas per day (2Bscf/d). Some section of the line has been commissioned. The facility, under construction since 2013, is an important, grid length evacuation infrastructure, meant to deliver gas from the rich reservoirs in the eastern Niger Delta to the established markets in the west of Nigeria. On completion, it will enable the first major outline of a national gas grid.

MIDSTREAM (PIPELINES, FLOWSTATIONS) -Under Construction

NNPC is rapidly constructing the Ajaokuta-Kaduna-Kano (AKK) gas pipeline, to transport natural gas from Ajaokuta, in Kogi State to Kano, in Kano State, through several states and urban centres. It is considered as the first part of the Trans Nigeria Gas Pipeline. Construction of the AKKP commenced in July 2020 and it is expected to come on line in 2022.

MIDSTREAM (PIPELINES, FLOWSTATIONS)- Planned, in Study, or Awaiting FID

NIGERIA's NNPC is studying the feasibility of the Qua Iboe - Cawthorne Channel / Alakiri gas pipeline and the Obigbo to Obiafu / Obrikom as second and third parts of the Trans Nigeria Gas Pipeline Project development.

The TNGP, which is expected to be 1,300km in total length, then forms a piece of the Trans Sahara Gas Pipeline (TSGP) system, which is envisaged to pump Nigerian gas through Algeria or Morocco to Europe.

MID/DOWNSTREAM (REFINERIES/PETROCHEMICALS)- Start-Ups

1st HALF 2021

NIGERIA

Dangote Industries has completed the Dangote Fertilizer complex, with capacity to produce three million metric tonnes of Urea Per annum (3MMTPA). The plan is to expand the project to produce multiple grades of fertilizers to meet soil, crop, and climate-specific requirement for the African continent.

Niger Delta E& P commissioned the third train of its Ogbale modular refinery complex, making 11,000BOPD capacity in total, in April 2021.

SOUTH SUDAN

Nilepet, the South Sudanese state hydrocarbon company and a private company Safinat commissioned the new 10,000Barrels of Oil Per Day Bentiu Oil Refinery (BOR) on the Unity oil field, in April 2021. Currently dispensing 30% diesel and 70% Fuel Oil, plans are to introduce gasoline in the product mix before the end of 2021.

MID/DOWNSTREAM (REFINERIES/PETROCHEMICALS)- Under Construction

ALGERIA

SONATRACH, the Algerian state hydrocarbon company, is constructing a new 110,000 BOPD Hassi Messaoud refinery at Hassi Messaoud. The commissioning is expected in the second half of 2024, a delay to the previous timeline. The refinery will include a Process and utility unit, Crude distillation unit / vacuum distillation unit, Continuous catalytic reforming unit, Isomerization, Naphtha hydro-treating unit, Hydrodesulfurization unit, Hydrocracker unit, Utility systems.

ANGOLA

Sonangol, the Angolan state hydrocarbon company is upgrading the Luanda Refinery to increase output of gasoline from 72,000 tons to 450,000 tons per

year.

Gemcorp, an emerging markets trade and investment group, commenced construction of the 60,000BOPD refinery at Cabinda in late 2020 under a joint venture agreement with Sonangol. Phase 1 of the Cabinda refinery is expected to include a 30,000 BOPD CDU with a desalter, kerosene treatment and ancillary infrastructures including a conventional buoy mooring system, pipelines, and storage facility for over 1.2 Million barrels. It is due to be commissioned in Q1-Q2 2022. Phases 2 and 3 will upgrade the plant to a full conversion refinery with additional 30,000BOPD capacity, a new catalytic reformer, hydrotreater and catalytic cracking unit.

US based Quanten Consortium, won, in March 2021, the tender) for construction of the 100,000BOPD grassroots Soyo refinery. Soyo is in Zaire Province. The project is a Design, build, own, and operate a tank farm and marine terminal for feedstock (including crude oil) delivered to and products exported from the refinery

CONGO BRAZZAVILLE

The Republic of Congo government signed a deal with China's Beijing Fortune Dingsheng Investment Co. Ltd. (BFDI) to construct the 2.5 Million Metric Tonnes Per Annum Atlantic Petrochemical Refinery in the port city of Pointe Noire. The refinery is expected to commence operation by 2023.

EGYPT

Assiut National Oil Processing Company (ANOPC) is upgrading the Assiut Refinery. The resulting facility will convert lower-value petroleum products to meet the requirement for Euro 5-standard diesel and other high-value products. New process units including a Vacuum Distillation Unit, a Diesel Hydrocracking Unit, a Delayed Coker Unit, a Distillate Hydrotreating Unit a Hydrogen Production Facility Unit are to be added.

NIGERIA

Dangote Industries is nearing completion of the 650,000Barrels of Oil Per Day input Dangote Refinery in the east of Lagos. It will experience a delay in its 2022 start-up but only for about six months at the most; coming on stream in July-August 2022. The construction work and overall progress, including design, engineering, and procurement is around 80% complete.

Brass Fertiliser and Petrochemical Company Limited (BFPCL) is constructing a 10,000Tons

A Day Brass Methanol Plant in Odeama, Bayelsa State. Shell will be supplying the plant with Three Hundred and Forty Million standard cubic feet per day (340MMscf/d) of gas as feedstock. The methanol plant is expected to come on stream in 2025

Notore Chemical Industries Plc commenced in January 2021, the Turn Around Maintenance (TAM) of the Notore Fertiliser. The objective of the TAM is to return the Plant to its 500,000MTPA nameplate capacity and improve the reliability index to 95%.

The 10,000BOPD capacity Omsa Pillar Astex Company (OPAC) Refinery, currently in commissioning stage in mid-western Nigeria, will start its life with a larger capacity than any of the two existing modular refineries in the country. NNPC signed an engineering, procurement, and construction (EPC) contract with Italy's Maire Tecnimont for the rehabilitation of the Port Harcourt refinery, expecting to raise the plant's utilization rate to 90% of its nameplate 210,000 BOPD capacity.

The repairs commenced in mid-May 2021 and will be carried out in three phases of 18, 24 and 44 months respectively.

MID/DOWNSTREAM (REFINERIES/FERTILISERS/PETROCHEMICALS)- Planned, in Study, or

Awaiting investors.

GUINEA CONAKRY

Brahms Oil Refineries progresses towards construction of 12,000BOPD capacity Brahms Refinery and Storage Terminal project in Guinea - Conakry. Promoters look forward to Financial Close by the third quarter of 2021.

UGANDA

The Albertine Graben Refinery Consortium (AGRC) is expected to announce Final Investment Decision for the 60,000BOPD Uganda refinery in 2022, now that all the agreements have been signed to launch the upstream and midstream segments of the Lake Albert development project.

MID/DOWNSTREAM (REFINERIES/PETROCHEMICALS)-In Planning, Awaiting Investors

EQUATORIAL GUINEA

Equatorial Guinea's 5,000 BOPD Punto Europa modular oil refinery project is unlikely to receive a final investment decision until 2022. Funding is the challenge. The feasibility study was undertaken by Houston-based VFuels Oil & Gas Engineering.

NIGERIA

The 2ND Phase of the Ibigwe Refinery, which will add 25,000Barrels of Condensate capacity to the existing 5,000BOPD First Phase facility, is awaiting Final Investment Decision.



A graphic impression of Kabale Industrial Park (KIP) in Hoima showing investment opportunities.

BUA Group, a Nigerian conglomerate is proposing the 200,000BOPD BUA Refinery and Petrochemical Plant to be cited in Akwa Ibom state, in the eastern Niger Delta. It selected Axens as the technology provider and has contracted KBR to carry out front-end engineering and design (FEED). Final investment decision awaits the FEED result. BUA is hoping to commission the project by 2025.

Conclusion 07

photo: mike-erskine on unsplash.com

We conclude this report with the findings published in Africa's Sky Limit⁶⁵ by Oil Change International. That report clearly shows the trajectory of things on the continent and lays out how African countries should plan and work towards a shift away from fossil fuels dependence.

The findings of the report include that Africa's extractive sectors as a whole employ less than 1% of Africa's workforce, with very few permanent and high-paying jobs going to local populations. This fact puts a lie to any claim that lingering on with this sector will bring a definitive improvement to the economic lives of the people.

Another factor that shows the disconnect of petroleum resources exploitation from local economies is that African countries export almost all the oil, gas, and coal they extract. This also reflects in the development of pipeline and port infrastructure mostly designed to supply overseas markets rather than addressing energy poverty on the continent. Moreover, 33% of projected production in Africa over the next three decades will be owned by multinational corporations.

Nigeria, Mozambique, Algeria, Angola, Libya, Egypt, Tanzania, Mauritania, South Africa, Republic of Congo, Senegal, Ghana, Uganda, Ethiopia, Equatorial Guinea, and Gabon constitute the top 16 African countries for oil and gas production from new, not-yet-approved projects (2020–2050)⁶⁶.

As new entrants to the sector emerge, projects come with added costs of building new infrastructure and regulatory systems for extraction. In the case of Uganda, laws intended to govern actions in the petroleum sector are only being proposed after the fact. Some of the countries that will have significant production of oil and gas in Africa from now through 2050 include Mozambique, Tanzania, Mauritania, South Africa, Senegal, Uganda, and Ethiopia. These new entrants are expected to contribute 46% of gas production, 36% of oil production, and 23% of coal production.

In all, the fossil Industry plans to make a risky investment of \$230 billion in Africa in the next decade and \$1.4 trillion by 2050 for exploration and development of new, not-yet-approved oil and gas projects in the periods.

With the expected shift of the world from fossil fuel dependence, Africa risks being saddled with “stranded” assets that will put further stress on national economies as well as piling decrepit and polluting infrastructure on the continent. This will spell job losses as well as having major health impacts on the people and the environment.

We recommend that African countries take the climate crisis seriously and take urgent steps towards a just energy transition by investing on distributed renewable energy rather than on things that are bound to become stranded assets. It is the time to protect the health of our people and ecosystems by halting polluting activities and engaging in remediation and restoration of already polluted locations.



Notes

1. We conclude this report with the findings published in Africa's Sky Limit⁶⁵ by Oil Change International. That report clearly shows the trajectory of things on the continent and lays out how African countries should plan and work towards a shift away from fossil fuels dependence.
2. Okotie, S. (2018) The political ecology of oil and gas activities in the Nigerian aquatic ecosystem. Academic Press, pp 71-81
3. Soares de Oliveira, R. (2013) Oil Politics in Routledge Handbook of African Politics. Edited by Nic Cheeseman, et al. Taylor & Francis Group, London.
4. Biersteker, T.J. (1987) Multinationals, the State and the Control of the Nigerian Economy, Princeton, Princeton University Press.
5. Obeng-Odoom, F. (2013) Resource curse or blessing in Africa's oil cities? Empirical evidence from Sekondi-Takoradi, West Africa. *City, Culture and Society*, 4(3), pp 229-240.
6. Hammond, J.L. (2011) The resource curse and oil revenues in Angola and Venezuela. Guild Press Home. Alstine, J.V. (2014) Transparency in resource governance: the pitfalls and potentials of new oil in Sub-Saharan Africa. *Global Environmental Politics*.
7. Ibe Kachikwu (2021). Banning Fossil Fuel Investments Would Crush Africa – Prof Yemi Osinbajo. <https://ibekachikwu.com/banning-fossil-fuel-investments-would-crush-africa-prof-yemi-osinbajo/>
8. https://www.foreignaffairs.com/articles/africa/2021-08-31/divestment-delusion?utm_medium=referral&utm_source=www-foreignaffairs-com.cdn.ampproject.org&utm_campaign=amp_kickers
9. Sub-Saharan Africa must stick to fossil fuel – Agunbiade. (6 October 2020). <https://thenationonlineng.net/sub-saharan-africa-must-stick-to-fossil-fuel-agunbiade/>
10. NJ Ayuk (02 March 2020). We Must Not Jeopardize Africa's Future In The Name of Fighting Climate Change. https://freshangleng.com/10407/we-must-not-jeopardize-africa-s-future-in-the-name-of-fighting-climate-change?fb_comment_id=3031365213570039_3034666469906580
11. Crisis Group (11 June 2021). Stemming the Insurrection in Mozambique's Cabo Delgado. Report No 303/Africa. <https://www.crisisgroup.org/africa/southern-africa/mozambique/303-stemming-insurrection-mozambiques-cabo-delgado>
12. Oilwatch Africa (July 2021). Hotspots of Conflicts: Fossil Fuels driven community conflicts in Africa. <https://homef.org/wp-content/uploads/2021/08/hotspot-of-conflict.pdf>
13. The African Tenderpreneur (9 November 2021). Uganda's oil pipeline construction hits obstacles. <https://africantenderpreneur.com/ugandas-oil-pipeline-construction-hits-obstacles/>
14. Excerpted from <https://europeansting.com/2020/01/20/africa-will-develop-with-oil-and-gas-whether-the-west-likes-it-or-not/>
15. Muyu Xu, Shu Zhang and Devika Krishna (13 February 2020). Stranded tankers, full storage tanks: coronavirus leads to crude glut in China. Reuters. <https://www.reuters.com/article/us-china-health-oil-storage-idUSKBN2072NR>
16. OECD (30 September 2020). The Impact of Coronavirus (COVID-19) and the global oil price shock on the fiscal position of oil-exporting developing countries. <https://www.oecd.org/coronavirus/policy-responses/the-impact-of-coronavirus-covid-19-and-the-global-oil-price-shock-on-the-fiscal-position-of-oil-exporting-developing-countries-8bafbd95/>
17. AFREC (May 2020). The impact of COVID-19 on African Oil Sector – A special report by AFREC on the implications on African Countries. https://au.int/sites/default/files/documents/38601-doc-afrec_report_covid-19_and_its_impact_on_african_oil_markets_final_27-05-2020.pdf
18. NNPC. Oil Production. <https://nnpcgroup.com/NNPC-Business/Upstream-Ventures/Pages/Oil-Production.aspx>
19. Trading Economic. Angola Crude Oil Production. <https://tradingeconomics.com/angola/crude-oil-production>
20. Africa Oil + Gas Report (8 November 2021). Libya Knocks Angola to Third Place African Oil Producer. <https://africaoilgasreport.com/2021/11/in-the-news/libya-knocks-angola-to-third-place-african-oil-producer/>
21. From the barrel to the pump: the impact of the COVID-19 pandemic on prices for petroleum products October 2020 <https://www.bls.gov/opub/mlr/2020/article/from-the-barrel-to-the-pump.htm>
22. IEA . Gas 2020; International Energy Agency: Paris, France, 2020; Available online: <https://www.iea.org/reports/gas-2020> (Accessed on June 30, 2020) .
23. Short Term Energy Outlook Shows Impact Of COVID-19 On Energy Sector Robert Rapier Senior Contributor Energy/ 17, 2020,06:00pm EDT <https://www.forbes.com/sites/rrapier/2020/05/17/short-term-energy-outlook-shows-impact-of-covid-19-on-energy-sector/>

24. AFREC (May 2020). Ibid
25. Kiran Pandey (12 August 2021). Africa warming faster than rest of world: IPCC Sixth Assessment Report. DownToEarth. <https://www.downtoearth.org.in/news/africa/africa-warming-faster-than-rest-of-world-ipcc-sixth-assessment-report-78424>
26. Anshika Ravi (15 July 2021). Climate Crisis: Madagascar drought worsens. <https://www.downtoearth.org.in/news/climate-change/climate-crisis-madagascar-drought-worsens-77964>
27. IPCC (August 2021). Africa. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap22_FINAL.pdf
28. Oilwatch International (October 2021) Demanding Real Zero Not Net Zero. <https://www.oilwatch.org/2021/10/25/demanding-real-zero-not-net-zero/>
29. Ibid., Soares de Oliveira, (2013).
30. Soares De Oliveira, R. (2008) Oil and politics in the Gulf of Guinea. Foreign Affairs.
31. Ibid., Soares De Oliveira, (2013).
32. Cheeseman et al., (2013) Routledge Handbook of African Politics. Taylor & Frances Bool, London.
33. Ibid., Soares de Oliveira, (2013)
34. Patey, L. (2020) Oil, risk, and regional politics in East Africa. *The Extractive Industries and Society*, 7, pp. 1182-1188.
35. Mawejje, J. (2019) The oil discovery in Uganda's Albertine region: local expectation, involvement, and impacts. *The Extractive Industries and Society*, 6(1), pp. 129-135.
36. Ibid., 1.
37. Nnimmo Bassey (2016). *Oil Politics: Echoes of Ecological Wars*. Daraja Press
38. The Oxford Institute for Energy Studies (2017) A belated boom: Uganda, Kenya, South Sudan, and prospects and risk for oil in East Africa.
39. Mawejje, J. and Bategeka, L. (2013) Accelerating growth and maintaining intergenerational equity using oil resources in Uganda. Economic policy Research Centre.
40. Ogwang, T., Vanclay, F. and Van den Assem, A. (2018) Impacts of oil boom on the lives of people in the Albertine Graben region of Uganda. *The Extractives Industries and Society*, 5, pp. 98-103.
41. Mawejje, J. (2019) The oil discovery in Uganda's Albertine region: Local expectations, involvement, and impact. *The Extractive Industries and Society*, 6, pp. 129-135.
42. NEMA (2012) The environmental monitoring plan for the Albertine Region 2012-2017. National Environmental Management Authority.
43. International Trade Administration (12 November 2021). Uganda- Country Commercial Guide. <https://www.trade.gov/country-commercial-guides/uganda-oil-and-gas>
44. AFIEGO (13 April 2021). Ugandan and DRC CSOS' Communique Rejecting Secret Agreement Signed for the Lake Albert Oil Project in Uganda. <https://www.afiego.org/download/ugandan-and-drc-cso-communique-rejecting-secret-tilenga-kingfisher-and-eacop-oil-deals-13-april-2021/?wpdmdl=2305&refresh=6195046feecd21637155951>
45. Alex Tunuhimbise (8 November 2021). 'No power to stop it': optimism turns to frustration over east Africa pipeline. *The Guardian*. <https://www.theguardian.com/environment/2021/nov/07/no-power-to-stop-it-optimism-turns-to-frustration-over-east-africa-pipeline>
46. Forum (2019) Africa's oil and gas scene after the boom: what lies ahead. The Oxford Institute for Energy Studies. The University Of Oxford.
47. Deloitte (2021) Exploring oil and gas trends and impact of COVID-19. *Oil and Gas Industry Outlook*.
48. Ibid., Forum (2019).
49. Bulbulia, T. (2021) Policymaking will determine future of oil in Africa. Creamer Media.
50. Ibid., Bulbulia, (2021)
51. Ibrahim, E. (2021) Policymaking will determine the future of oil in Africa. Creamer Media.
52. Yusuf, K. (2017) Why African economies need to diversify. Think Ahead.
53. Deloitte, (2017) African trends going into 2017.
54. Lagarde, C. (2019) Benin: harnessing the power of economic diversification, speech by Christine Lagarde, IMF Managing Director Chamber of Commerce, Cotonou.
55. Ndung'u, N. (2020) COVID-19 crisis amplifies the urgency for economic diversification in Africa. *Africa Renewal*.
56. Usman, Z. and Landry, D. (2021) Economic diversification in Africa: how and why it matters. Carnegie Endowment for International Peace.

57. Songwe, V. (2019) Intra-African trade: a path to economic diversification and inclusion. Brookings Institution
58. Ibid., Usman and Landry, (2021)
59. Beegle, K. and Christiaensen, L. (2019) Accelerating poverty reduction in Africa. World Bank.
60. African Development Bank (2021) African development outlook 2021, from debt resolution to growth: the road ahead for Africa.
61. African Development Bank Group, (2018) Why Africa must dependence to diversification, now.
62. Ibid., African Development Bank Group (2018)
63. Ibid., African Development Bank Group (2018)
64. Ndung'u., N. (2020) COVID-19 crisis amplifies the urgency for economic diversification in Africa.
65. Oil Change International (2021). The Sky's Limit Africa – The case for a just energy transition from fossil fuels production in Africa. <http://priceofoil.org/content/uploads/2021/10/Skys-Limit-Africa-Report-2021.pdf>
66. Oil Change International analysis based on data from Rystad UCube page171.



HEALTH OF MOTHER EARTH FOUNDATION

WWW.HOMEF.ORG