

AFRODAD



**ANALYSIS OF POLITICAL  
ECONOMY OF FOSSIL FUEL  
FINANCING AND DEBT IN  
AFRICA**



# ANALYSIS OF POLITICAL ECONOMY OF FOSSIL FUEL FINANCING AND DEBT IN AFRICA

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## ABSTRACT

Energy is deemed as the lifeblood of economic development in any country given that it powers residential, services, transport, manufacturing and mineral beneficiation amongst many other sectors. Despite the importance of energy -especially electrification - over 600 million people remain with no access to electricity in developing countries. Electricity is generated from both renewable and nonrenewable sources —primarily fossil fuels—. Both renewable energy and fossil fuels are key in the achievement of the United Nations Sustainable Development (UN SDG) Goal 7 and Goal 1 on energy access and poverty eradication respectively. The fossil fuel role in the energy space is significant on the African continent where new fossil fuel explorations are occurring ad nauseam. As such, this paper assesses the political economy of fossil fuels, their importance and gradual phasing out in the light of climate change. The purpose of the briefing paper is to strengthen the evidence base and deepen understanding on the economic, social and political policy impacts of fossil fuel financing in the region as well as advocating for better deals for African fossil fuel producing countries to realise socioeconomic transformation in line with the African Union's Agenda 2063. This paper increases awareness and seeks to influence reform on sustainability and use of fossil fuels by African countries considering climate change. Results show that Africa is at a crossroads as Governments are caught between two agendas which are meeting their developmental needs using available natural resources and at the same time achieving climate action ambitions. At the intersection are stranded assets, energy insecurity poverty and low levels of economic growth. Africa is very

much blessed with fossil fuel natural resources many of which are beginning to emerge in this era. However, Africa is also simultaneously -if not more than fossil fuels - blessed with renewable natural resources that allow for the generation of electricity. It is paramount that Africa does not find itself locked in fossil fuel dependence as this could fuel a debt crisis and result in economic collapse. Regarding the financing of fossil fuel extraction in Africa, evidence indicates that most of this financing is from the global north particularly the United States and China. The profits of the financing normally accrue to countries in the global north and very limited processing occurs in Africa meaning financing of fossil fuels results in limited job and economic growth opportunities. Continuing financing fossil fuels has been shown to be a resultant effect of challenges associated with renewable energy options such as cost effectiveness, reliability, public acceptance and energy storage amongst other issues. The quest to improve energy security first before worrying about the energy source needs to be carefully balanced with the global climate objectives. This balancing act is what has been termed the Just transition which advocates for a gradual transition from fossil fuels towards clean low carbon energy sources on the African continent. Financing the just transition will be rooted in actions such as gradual penalties the extraction and use of fossil fuels —e.g., removal of subsidies and increases in taxes—, availing of complementary incentives that support the utilization of renewable energy sources, improving the institutional frameworks and ensuring they gradually support renewable together with seeking our and availing new technologies that allow for better and more efficient methods of energy storage.

## KEY EMERGING ISSUES

The stranding of assets is a real risk and it is paramount that African states begin mapping a way to deal with the challenges that this could bring in the long term. A possible solution could be researching better methodologies of utilizing fossil fuels in ways that do not emit greenhouse gases.

The contracts that African governments get into with investors from the global north now more than ever need to be scrutinized to avoid risks that come with stranded assets. These contracts would better off have most of the risk borne by the investor from the global north.

It is critical for African voices on the just transition to be heard. Issues of energy access before source judgment must come to the limelight in overall climate change management negotiations such as COP. Given that the upcoming COP27 will be on African soil, an opportunity to further debate the just transition from an African perspective has been availed.

An important moral question as we move toward COP27 in Egypt is how to manage the losses attendant on the 'de-carbonisation' of the global economy – if de-carbonisation eventually occurs. Leaving the oil – and the gas, and the coal – in the soil will have major consequences for several actors. It is critical to commission studies that assess the long-term winners and losers of de-carbonisation of Africa. Should outsiders seek to reduce or compensate these lost opportunities? Their representatives have repeatedly answered that question in the affirmative. Nigeria, Venezuela and a number of Gulf states have requested compensation for 'adverse economic impacts' arising from decarbonisation. Saudi Arabia, often the self-appointed representative of oil exporters, has complained that a global shift away from fossil fuels will seriously set back the economic interests of oil exporters, and has argued that, rather than placing the economic burden of climate mitigation onto the shoulders of citizens in exporting countries, the world ought to help them find alternative sources of income.

Securing political buy-in for the transition beyond carbon may require outsiders to take such claims seriously. 'Only a global climate deal that compensates losers,' it has been argued, 'can impose strict limits on the use of fossil fuels in the long term'. The UNFCCC accordingly indicates that Parties shall give 'full consideration' to the impact of mitigation measures on countries 'whose economies are highly dependent on income generated from the production, processing and export of fossil fuels.

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# LIST OF ACRONYMS

AfDB	African Development Bank
BP	British Petroleum
COP	Conference of Parties
EACOP	East Africa Crude Oil pipeline
ECAs	Export Credit Agencies
ECE	UN Economic Commission for Europe EIB European Investment Bank
FiTs	Feed-in-Tariffs
GDP	Gross Domestic Product
GFANZ	Glasgow Finance Alliance for Net Zero GHG Greenhouse gas
HGA	Host Government Agreement
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
ISDS	Investor–state dispute settlement
NNPC	Nigerian National Petroleum Corporation R&D Research and Development
RE	Renewable Energy
RET	Renewable Energy Transition
UK	United Kingdom
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention for Climate Change
UNSDG	United Nations Sustainable Development
USD	United States of America Dollar

# 1

## INTRODUCTION

Energy is deemed as the lifeblood of economic development in any country given that it powers residential, services, transport, manufacturing and mineral beneficiation amongst many other sectors (Mutezo and Mulopo, 2021). Nalule and Mu (2021) also conceded that access to modern energy such as electricity is key in the economic development of any country same applies to Sachs et al. (2021) who noted electrification as a fundamental input to development whose absence and unreliability has for far too long been a major hindrance to African development. Numerous other studies have come to similar conclusions. For instance, Cantore et al. (2016) found that lowering energy intensity (i.e., improving energy efficiency) are associated with higher total factor productivity and economic growth. Smulders and de Nooij (2003); Go et al. (2019) and Rajbhandari and Zhang (2018) have found a causal relationship from energy efficiency improvements to economic growth. In fact, Ayres and Warr (2009) note that, since the industrial revolution, improving energy efficiency perhaps has been the major driver of contemporary economic growth. Despite the importance of energy —especially electrification—over 600 million people remain with no access to electricity in developing countries (Geuskens and Butijin, 2022). Electricity is generated from both renewable and nonrenewable sources — primarily fossil fuels—. Both renewable energy

and fossil fuels are key in the achievement of the United Nations Sustainable Development (UN SDG) Goal 7 and Goal 1 on energy access and poverty eradication respectively.

In 2018, the Intergovernmental Panel on Climate Change (IPCC) stated that there are 12 years left for a global energy transition to occur. Energy transition is defined as a long process that replaces current fossil fuel reliant systems with clean energy from renewable sources (Smil, 2016). The UN has set a global target of reducing greenhouse gas emissions by 45% over the next 10 years and achieving net zero emissions by 2050. As such, the world will increasingly require green (zero-carbon) electricity as part of the global transition to zero greenhouse gas (GHG) emissions by 2050. Different regional bodies, business groups and multinationals have committed to addressing energy demand using fewer fossil fuels and more renewable energy (Geuskens and Butijin, 2022; Armstrong, 2020). Africa, like the rest of the world, will be expected to have a power grid based on zero-carbon energy (Sachs et al., 2021).

The fossil fuel role in the energy space explained above is clearly significant on the African continent where new fossil fuel explorations are occurring ad nauseam. As such, this paper assesses the political economy of fossil fuels, their importance and gradual phasing out in the light of climate change. The purpose of the briefing paper is to strengthen the evidence base and deepen understanding on the economic, social and

political policy impacts of fossil fuel financing in the region as well as advocating for better deals for African fossil fuel producing countries to realise socioeconomic transformation in line with the African Union's Agenda 2063. This paper increases awareness and seeks to influence reform on sustainability and use of fossil fuels by African countries in light of climate change.

Specifically, the paper explores Africa's fossil fuel potential —endowments, financial worth and its capacity to boost Africa's development—; fossil fuel financing regimes and their implications on Africa's Indebtedness; challenges and opportunities associated with the extended utilisation of fossil fuels in Africa and alternatives ways to boost Africa's development finance in cases of phasing out fossil fuel production in the global economy. The paper concludes by advancing policy recommendations that

would enable the use of resources for Africa's development efforts whilst ensuring minimisation of greenhouse gases (GHG) emissions.

The paper proceeds by giving a brief on the methods that were followed in gathering the data that has been used in authoring the paper. The methods are followed by a general accounting for the fossil fuel resource endowment on the African continent followed by a description of fossil fuel financing regimes in African countries. Challenges and opportunities associated with the extended utilization of fossil fuels are then considered together with alternative development financing for the energy transition. The paper then comes to the logical conclusions informed by the data presented and proffers recommendations that allow natural resource utilization with minimum GHG emissions.



# 2

## METHODS

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This paper is based on literature sourced primarily from google scholar using the key words 'fossil fuel financing in Africa' and 'the energy transition in Africa. Documents were also purposively sought from the archives of energy specialist institutions such as International

Renewable Energy Agency (IRENA) and African development institutions such as the African Development Bank. Energy specialists were also consulted through key informant interviews with the aim of soliciting their perspectives regarding key issues within the specific research objective and referral to key documents for analysis.

# 3

## FOSSIL FUEL ENDOWMENT IN AFRICA

This section assesses Africa's fossil fuel potential – endowments, financial worth and its capacity to boost Africa's development. According to the Atlas of Africa Energy Resources (UNEP, 2017), Africa is rich in energy resources but poor in its capability to exploit and use them. Many African countries face an energy crisis. Power is inaccessible, unaffordable and unreliable for most people, trapping them in poverty.

Africa has the world's lowest per capita energy consumption with 16 per cent of the world's population (1.18 billion out of 7.35 billion populations), it consumes about 3.3 per cent of global primary energy (Geuskens and Butijin, 2022). Of all energy sources, Africa consumes most oil (42 per cent of its total energy consumption) followed by gas (28 per cent), coal (22 per cent), hydro (6 per cent), renewable energy (1 per cent) and nuclear (1 per cent). Figure 1 goes further to explain Africa's energy complex from a supply side perspective which also shows the dominance of oil.

According to UNEP (2017), at the end of 2015, Africa had about 7.6 per cent of the world's proven oil reserves, produced 9.1 per cent of total global oil production and accounts for 4.2 per cent of total global oil consumption. Regarding natural gas, Africa has 7.5 per cent of the world's proved natural gas reserves; it produces about 6 per cent and consumes about 3.9 per cent of global reserves, respectively. South Africa is the world's seventh largest coal producer and accounts for 94 per cent of Africa's coal production. Corroborating the UNEP perspectives, Denton (2019) noted that African countries are endowed with 7.3% of the world's gas reserves while BP had lower oil reserve estimates—in comparison to UNEP— at 7.2% of the world's oil reserves (BP, 2019).

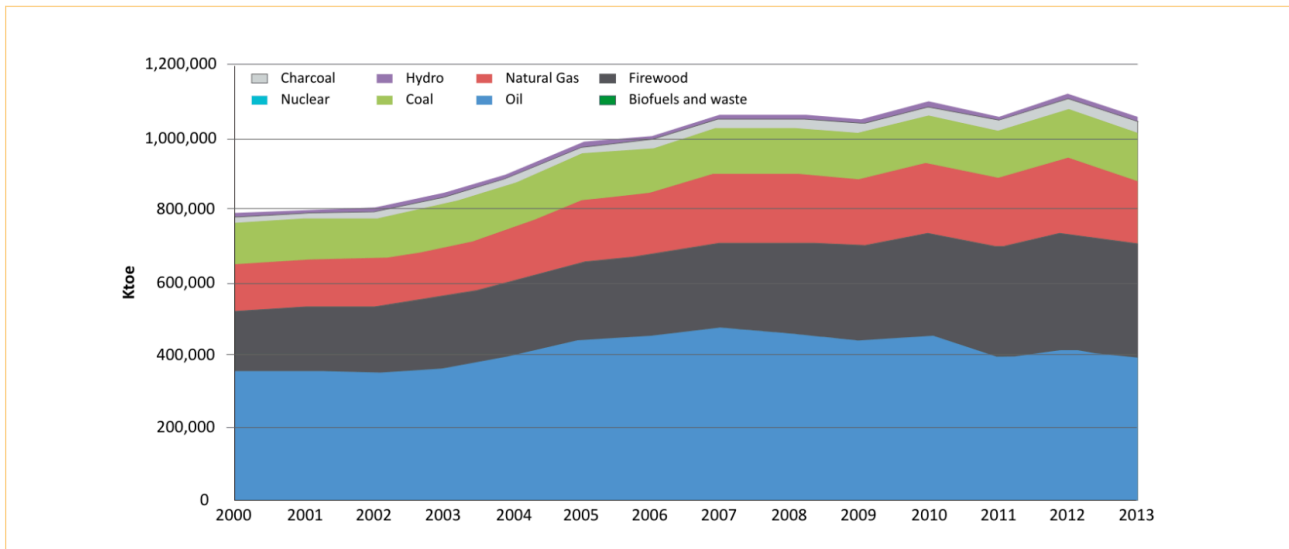


Figure 1: Africa's total primary energy supply, by fuel (ktoe), 2000-2013 Source: (UNEP, 2017)

In sub-Saharan Africa it is estimated that recoverable energy resources include 115.34 billion barrels of oil and 21.05 trillion cubic feet of gas (Denton, 2019). Africa's renewable energy resources are diverse, unevenly distributed and enormous in quantity almost unlimited solar potential (10 TW), abundant hydro (350 GW), wind (110 GW) and geothermal energy sources (15 GW) (UNEP, 2017). New oil and gas discoveries are being made in Mozambique, South Sudan and Ethiopia; the Ogaden Basin alone contains 8 trillion cubic feet of natural gas reserves – worth a potential \$7 billion a year once at full capacity. Between 2000 and 2012, expansion of the mineral extractive sector increased foreign direct investment into Africa from \$10 billion to \$50 billion (Halland et al., 2015).

Energy from biomass accounts for more than 30 per cent of the energy consumed in Africa and more than 80 per cent in many sub-Saharan African countries. Some 70% of African exports are derived from the oil, gas and mineral sectors, accounting for about half of Africa's gross domestic product (GDP), as well as contributing significantly to government revenues. Figures 2, 3 & 4 show Africa's fossil fuel endowments when compared to the rest of the world (Geuskens and Butijin, 2022).

Nalule and Mu, (2021) noted that with the new oil discoveries in countries such as Uganda and Kenya, there have been initiatives to invest in more fossil fuel infrastructure. For instance, Uganda has proven crude oil reserves of 6.5 billion barrels, about 2.2 billion of which is recoverable. The country recently – on the 10th of September 2020— concluded and signed with Total, a Host Government Agreement (HGA) for the East Africa Crude Oil pipeline (EACOP) project<sup>2</sup>. Further, with the high anticipation to benefit from fossil fuels, Uganda and Tanzania represented by the heads of State, finally signed an agreement for the construction of a 1,445 km (898 miles) East Africa Crude Oil Pipeline. This \$3.5bn project is intended to connect Uganda's oil fields to Tanzania's port of Tanga<sup>3</sup>. Gas infrastructure is also evident in different oil-rich countries. For instance, on 30th June 2020, President Muhammadu Buhari launched a \$2.6 billion gas pipeline project in Nigeria. The 614-km long pipeline will run from Ajaokuta to Kano under the auspices of Nigerian National Petroleum Corporation (NNPC)<sup>4</sup>.

2 Uganda New Vision: Uganda, Total sign key oil pipeline agreement. Can be accessed at <https://www.newvision.co.ug/news/1526795/ugandatotal-sign-key-oil-pipeline-agreement>. Last accessed 28 June 2022.

3 BBC, 'Uganda and Tanzania sign \$3.5bn oil pipeline deal' (BBC News, September 2020). Can be accessed at <https://www.bbc.co.uk/news/world-africa-54137090>. Last accessed on the 28 June 2022.

4 24 The Guardian: Unlocking Nigeria's economic possibilities via gas infrastructure (2020). Can be accessed at, <https://guardian.ng/energy/unlocking-nigerias-economic-possibilities-via-gas-infrastructure/>. Last accessed on 28 June 2022.

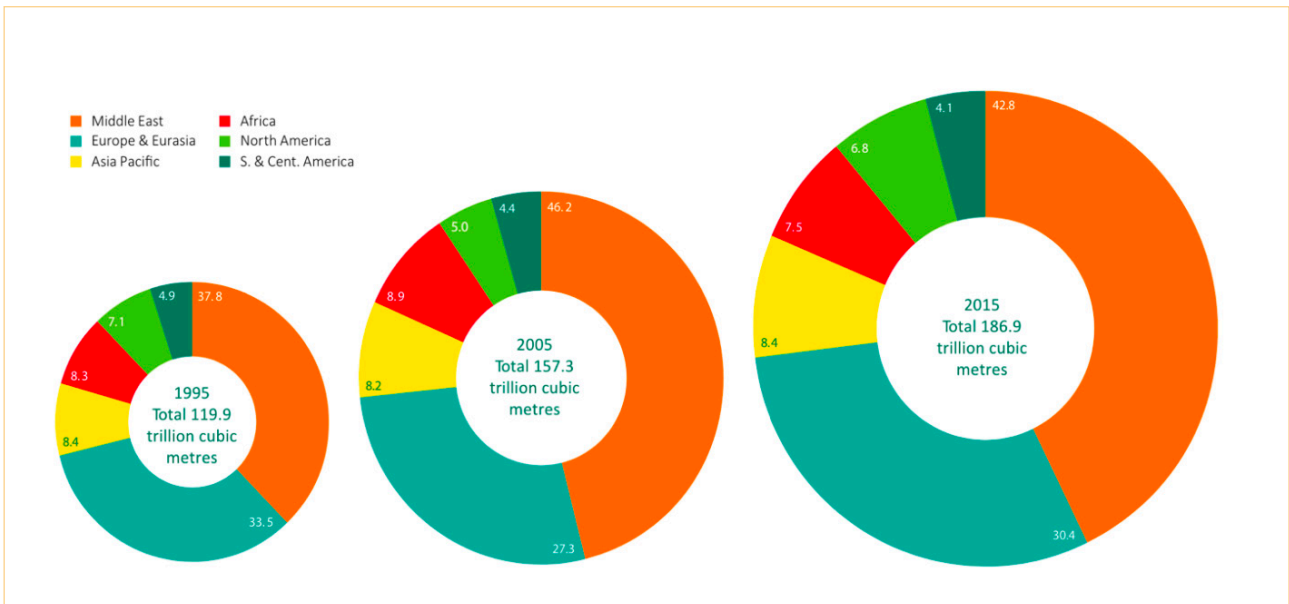


Figure 2: Global distribution of proved natural gas reserves (percentage), 1995, 2005 and 2015 Source: (UNEP, 2017)

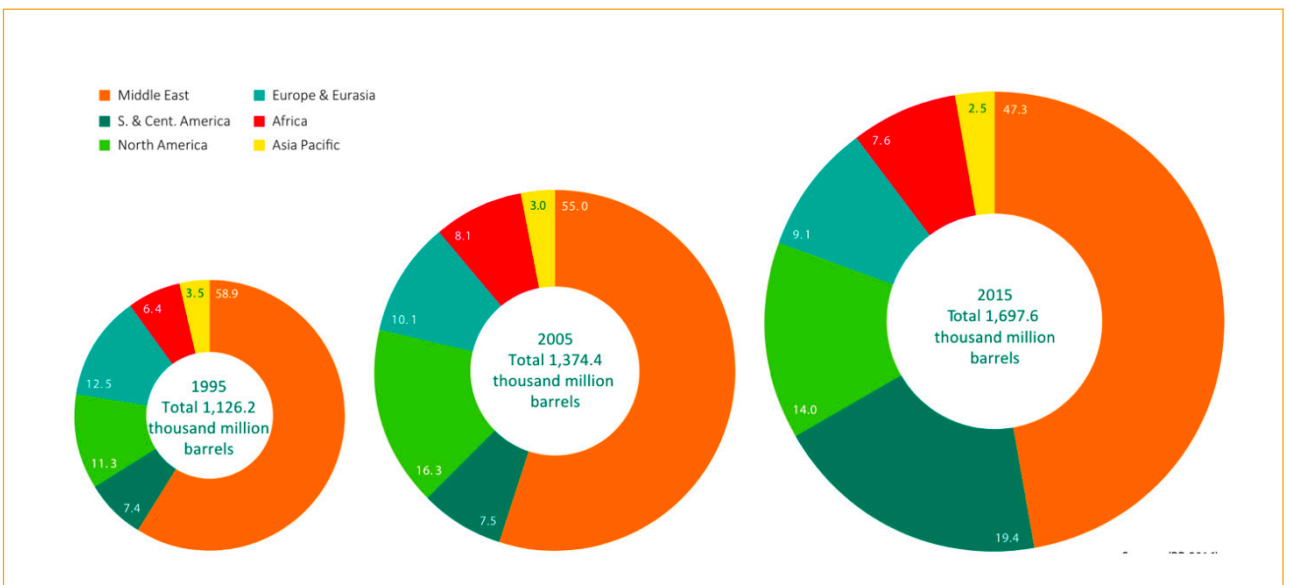


Figure 3: Global distribution of proved oil reserves (percentage), 1995, 2005 and 2015 Source: (UNEP, 2017)

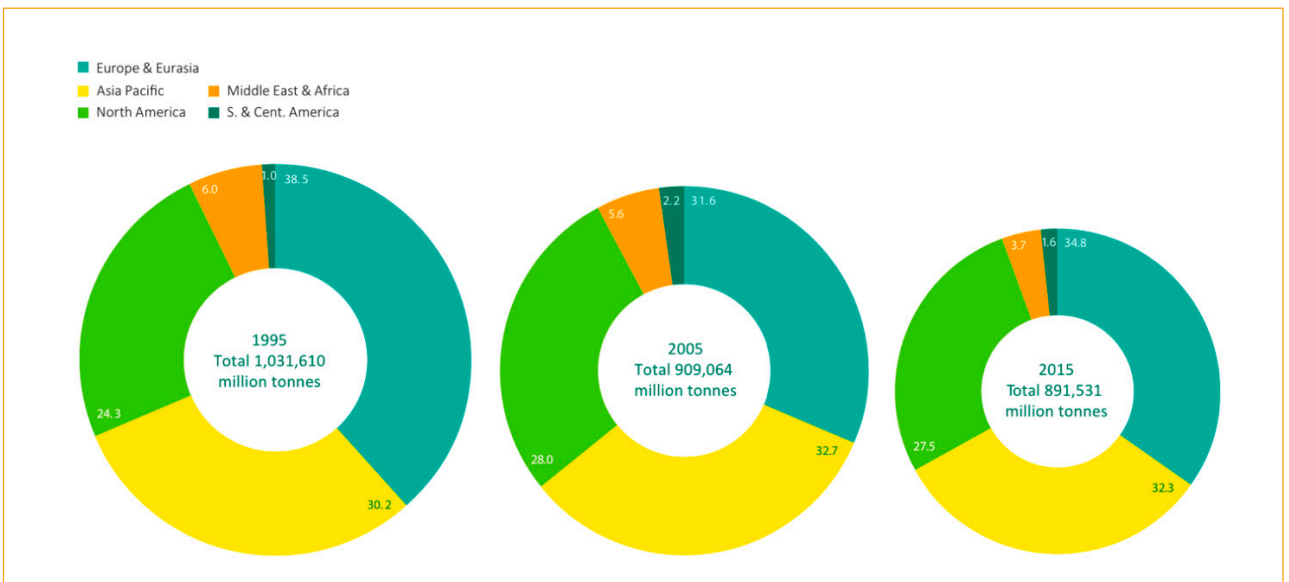


Figure 4: Global distribution of proved coal reserves (percentage), 1995, 2005 and 2015 Source: (UNEP, 2017)

### 3.1. Stranded assets and fossil fuel endowment

The section above has painted a very Rosey picture regarding the overall endowment and value of Africa's fossil fuel resources. However, this picture would not be complete if we do not consider the upcoming risks associated with fossil fuel assets globally. Beneath the immense potential for economic development through the exploitation of these resources lies the risk that potential gains may be written off before they are enjoyed. The African countries beginning to unlock the potential of their natural gas reserves to boost power supply and economic growth, such as Angola, Ghana, Mozambique, Nigeria, Republic of Congo and Tanzania, need to factor in stranded asset risks.

Stranded assets are assets that become devalued before the end of their economic lifetime or can no longer be monetised due to changes in policy and regulatory frameworks, market forces, societal or environmental conditions, disruptive innovation or security issues. Natural resource deposits are also commonly regarded as 'stranded' when the quantity and market value is below thresholds set by investors. It is through this lens that fossil fuel and mineral resource assets in Africa have to be assessed against the context of global carbon emissions reduction targets. Assets typically considered at risk of stranding due to carbon emission reduction targets are fossil fuels such as coal, oil and gas ("Banking on Climate Chaos Fossil fuel report of 2022," 2022; Denton, 2019; UNEP, 2017).

Carbon Tracker Initiative, (2015) estimated financial losses from stranded assets at more than \$2 trillion. African governments, who depend hugely on revenue windfall from mineral resources, could be the losers. These revenue flows will be at best reduced and at worst cut (Denton, 2019). Similarly, African governments that continue unabated investment in fossil fuel assets could face massive economic losses, just as Angola experienced after the 2014 global oil price decline (World Bank, 2017). New and stronger global climate policies will exacerbate the situation given that global markets are also beginning to shift towards renewable energy alternatives.

Carbon Tracker (2018) estimates that by 2030 new wind and solar energy will be cheaper than 96% of existing coal power, and that 42% of global coal capacity is currently unprofitable. Countries could therefore save several billions of dollars by moving to clean energy sources in line with the Paris Agreement targets. This will leave infrastructure geared towards the use of fossil fuels stranded, while the costs of new infrastructure will need to be met from national budgets.

An additional element in the political economy of how to manage or avoid stranded assets is the little understood risk of developing countries becoming liable to pay compensation to private sector fossil fuel companies under investor law. The legally binding Energy Charter Treaty applies to UN Economic Commission for Europe (ECE) countries and supports investor confidence in part with mechanisms for investor–state dispute settlement (ISDS). It is perhaps not surprising, then, that two-thirds of claims settled so far were found in favour of the foreign investor (Bos and Gupta, 2019).

Some industrialised countries like France are managing a low-carbon transition by outsourcing production to other parts of the world, so while greenhouse gas emissions are falling in some parts of the global North, they are rising in emerging economies. Aid and trade agencies based in the global North support the transfer of carbon-intensive technologies to developing countries (Burrows, 2018; Hermann, 2018). This may increase energy access in the global South, but it ameliorates the costs of stranded assets (technologies, knowledge, labour) in the global North while passing the burden of climate change. For instance, the French oil and gas company Total, along with the government of Angola, inaugurated the Kaombo project, which is set to produce 230,000 barrels per day (Denton, 2019). Total energies, which holds a 30% stake, will operate the Kaombo's reserves, estimated at 658 million barrels.

As the international climate movement gains momentum, it is likely that Africa will increasingly

face asset stranding scenarios as divestment policies bite and the value of fossil fuel assets depreciates. Declining costs of wind and solar energy generation are already dimming the prospects for struggling energy sources such as coal. Most coal-producing African countries are already closing mines. In South Africa, which generated \$6.2 billion of export revenue from coal in 2018 (ranking second in extractives to platinum and ahead of gold), the impacts, if poorly managed, could be dire (Healy and Barry, 2017; Power et al., 2016; Baker et al., 2014; Büscher, 2009). Whatever the rate of Africa's transition to a low-carbon economy, other countries will be looking towards new energy technologies. Africa risks being technologically 'locked out' – left without the relevant infrastructure and technologies to transition, and unable to change course. This prospect is particularly worrying given that Africa is already stuck in something of an energy 'time warp'.

# 4

## FOSSIL FUEL FINANCING REGIMES

This section considered the previously discussed fossil fuel endowments with a focus on the financial resources that support their exploitation and what this means for the immediate and far future of Africa.

Adom and Adams (2020) noted the lack of financing as the fundamental reason for Africa's failure to improve energy efficiency and provide energy for all Africans. Finances could be raised within an African state through taxing citizens more or through external means in the form of debt. Tax financing however imposes tax liabilities on the present generation and this could crowd-out private and household investment in innovation that enhances energy efficiency. Thus, in order to promote energy efficiency, the alternative financing source for government activities should be able to postpone current tax liabilities into the future and free resources for both private firms and individual households to invest in energy-efficient technologies. This reasoning has seen the contemporary energy financing era dominated by greater appetites for debt in financing for energy and infrastructure in Africa (Africa Development Bank, 2018). Debt

financing postpones current tax liabilities into the future, and this frees resources for investment in innovation, all things being equal. Thus, debt financing provides a setting where the future taxes implicit in the public debt can be capitalized by current generation (Adom and Adams, 2020; Anderson et al., 1986).

### 4.1. Debt financing amidst the climate crisis and the risk of stranded assets

The year 2021 was the year of net zero: 44 of the 60 banks in the scope of this report have now committed to “net zero emissions by 2050” — that is, to reduce the emissions from the companies and projects they finance, including potentially through the use of offsets, by three decades from now<sup>5</sup>. The Net-Zero Banking Alliance and the umbrella initiative Glasgow Finance Alliance for Net Zero (GFANZ) launched in April. That was followed by the self-congratulatory announcement in November that the capital committed to GFANZ had topped \$130 trillion<sup>6</sup>.

Nalule and Mu (2021) also noted that in June 2020, the Norwegian parliament recommended that the Sovereign wealth fund sells off more

5 Net-Zero Banking Alliance, accessed March 2022; “Net Zero Banking Alliance Germany,” Green and Sustainable Finance Cluster Germany, accessed March 2022.

6 “Amount of Finance Committed to Achieving 1.5°C Now at Scale Needed to Deliver the Transition,” Glasgow Financial Alliance for Net Zero, 3 November 2021.

than USD10 billion worth of stocks in companies related to fossil fuels halting fossil fuel financing<sup>7</sup>. Besides Norway, in November 2019, The European Investment Bank (EIB), approved a policy to ban funding for oil, gas and coal projects at the end of 2021. Although gas projects could still be funded, as long as they are utilizing clean technologies such as carbon capture and storage, combining heat and power generation, or mixing in renewable gases with the fossil natural gas<sup>8</sup>.

In addition, the President of the African Development Bank (AfDB), Dr Akinwumi Adesina, declared at the UN Climate Summit that the African Development Bank is no longer going to finance coal projects - “for us at the African Development Bank, we are getting out of coal” (Nalule and Mu, 2021). This was the first public pledge by the bank to avoid funding coal-fired power plants from 2020, following footsteps of the World Bank, the European Investment Bank, the Asian Development Bank and the Asian Infrastructure Investment Bank, who either have specific policies excluding coal-based projects or have made known their intentions.

The Banking on Climate Chaos Fossil fuel report (2022) also noted that La Banque Postale — a major French bank with \$901.7 billion in assets — announced a groundbreaking policy that suspends support for all companies expanding oil and gas, and commits the bank to exit oil and gas financing entirely by 2030.

There is evidence therefore that the much-required financing that would enable the realization of the fossil fuel bonanza in Africa is getting ready to flee in the face of the global climate disaster. In the global view, the acknowledgement of banks’ accountability for their climate impact is welcome, as is the setting of their long-term direction of travel. However, long-term commitments cannot serve as cover for short-term continuation of business as usual; if they do, they are simply greenwashing. Also, it

is critical to understand what this green washing would mean to African economies.

## 4.2. The short-term fossil fuel financing situation

Coal is a major area where global financiers have indicated fleeing from. However, as crucial as it is for the global economy to exit coal, financing to coal and mining companies represents only about 4% of the fossil fuel lending and underwriting in the scope of this report, while 26% went to utilities including coal power generators - dwarfed by the approximately 67% that went to oil and gas (the remaining 4% went to diversified companies that are not primarily related to either oil and gas or coal (“Banking on Climate Chaos Fossil fuel report of 2022,” 2022).

Taken as a whole, bank fossil fuel financing stayed flat from 2020 to 2021. As the global economy continues to emerge from the COVID-19 pandemic, there is a real danger that bank fossil fuel financing could stay the same, or even increase, given that most major banks do not have policies in place to ensure that fossil fuel financing will decline going forward.

U.S. banks continue to be the single worst grouping of fossil banks, with the top four fossil fuel funders in the world (JPMorgan Chase, Citi, Wells Fargo, and Bank of America) all headquartered in the U.S., joined by Morgan Stanley and Goldman Sachs<sup>9</sup>. Together, these six banks provided 29% of fossil fuel financing identified in 2021 — and 31% of fossil fuel financing since the Paris Agreement, a finding that is flatly incompatible with U.S. aspirations to be a global leader on climate. Wells Fargo and JPMorgan Chase both increased their fossil fuel financing in 2021 (“Banking on Climate Chaos Fossil fuel report of 2022,” 2022).

Canadian banks also continue to be overrepresented in the dirty dozen top fossil banks since the Paris Agreement, with RBC,

7 David Nikel, ‘Norway Wealth Fund to dump fossil fuels stock’ (Forbes, 12th June 2020). Can be accessed at, <https://www.forbes.com/sites/davidnikel/2019/06/12/norway-wealthfund-to-dump-fossil-fuel-stock-worth-billions-in-environmentalmove/#4dbb5c9748a3>. Last accessed 29 June 2022.

8 12 BBC, ‘European Investment Bank drops fossil fuel funding’ (BBC News, 14th November 2019). Can be accessed at, <https://www.bbc.co.uk/news/business-50427873>. Last accessed 29 June 2022.

9 “Global Oil & Gas Exit List,” urgewald e.V., November 2021. <https://gogel.org>. last accessed 29 June 2022.



Scotiabank, and TD all in the top 12. Remarkably, this trio, plus Bank of Montreal and CIBC, all increased their fossil fuel financing from 2020 to 2021. Japan is the other country with two banks among the worst 12, with MUFG and Mizuho at #6 and #8, respectively. Both increased their fossil fuel financing in 2021 as well. Barclays continues

to be worst in the UK, at #7 globally, and BNP Paribas is the worst in mainland Europe, at #11 (“Banking on Climate Chaos Fossil fuel report of 2022,” 2022). Figure 5 shows the biggest financing increases for fossil fuel projects in the global finance sector.

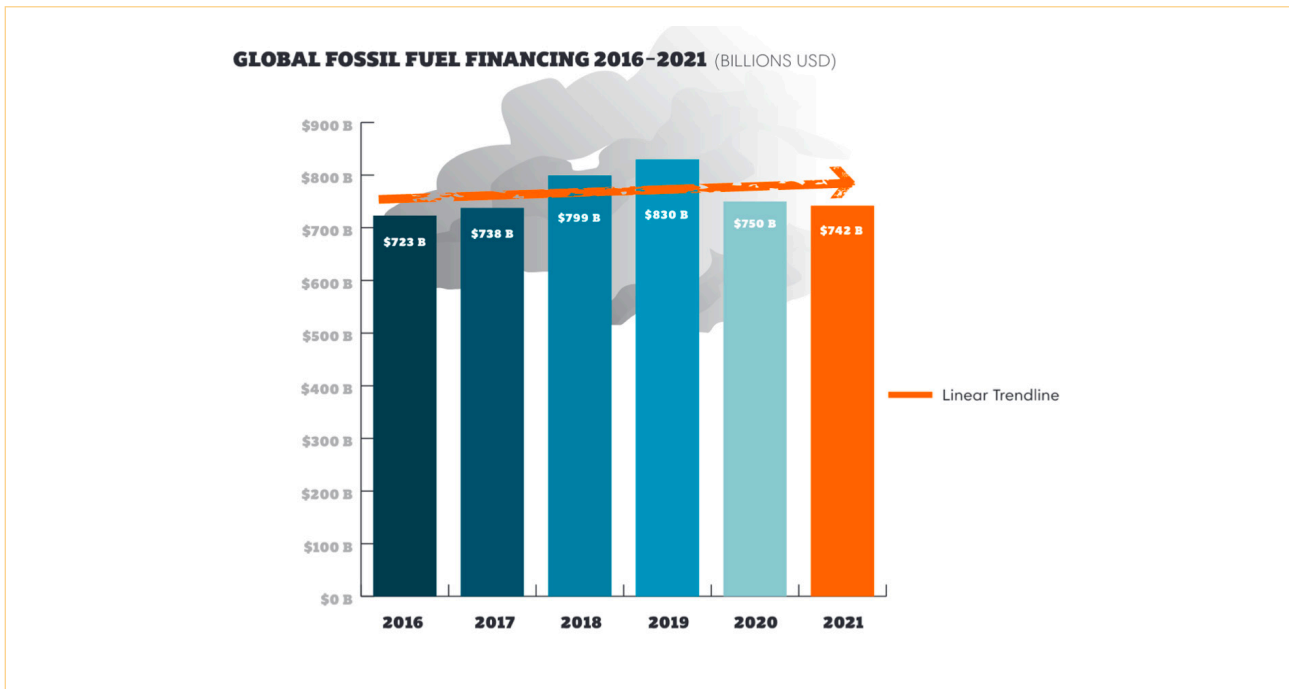


Figure 5: Top financiers of fossil fuel investments Source: Banking on Climate Chaos Fossil fuel (2022)

In the six years since the adoption of the Paris Agreement, the world’s 60 largest private sector banks financed fossil fuels with USD \$4.6 trillion. Fossil fuel financing plateaued last year, yet with levels still higher than in 2016. Only 10 of the world’s 60 biggest banks have a policy restricting financing for ultra- deep water offshore oil and gas activities. Yet banks need to contend not only with their financing of drilling deeper than around 7,000 feet (2,100 meters), but also with all offshore drilling, given the potentially devastating impacts of a spill at any depth<sup>10</sup>. The Deepwater Horizon oil spill in 2010, for example, occurred when BP was drilling at a depth of about 5,000 feet (1,500 meters)<sup>11</sup>.

During this crucial decade for action, when we need the financial sector to rapidly reduce its support for fossil fuels, the overall linear financing trend since Paris is still headed upward (see Figure 6).

In addition to the banks, no major oil and gas company has committed to ending new expansion beyond existing fields. While these companies claim to be part of the solution to the climate crisis, the reality is very different. A 2020 report from Oil Change International (endorsed by 30 other civil society organizations) analyzed the current climate commitments of eight of the largest integrated oil and gas companies — BP, Chevron, Eni, Equinor, ExxonMobil, Repsol, Shell,

10 “What Is Deepwater and Ultra Deepwater Drilling?,” Enhanced Drilling, accessed March 2022. [https://www.enhanced-drilling.com/deepwater-and-ultradeepwater-drilling#:~:text=Deepwater%20drilling%20is%20typically%20defined,7%2C000%20feet%20\(2%2C134%20meters\)](https://www.enhanced-drilling.com/deepwater-and-ultradeepwater-drilling#:~:text=Deepwater%20drilling%20is%20typically%20defined,7%2C000%20feet%20(2%2C134%20meters)) last accessed 29 June 2022.

11 Richard Pallardy, “Deepwater Horizon Oil Spill,” Encyclopedia Britannica, last updated 30 November 2021. <https://www.britannica.com/event/Deepwater-Horizon-oil-spill>. Last accessed 29 June 2022.

and TotalEnergies — in light of the ambition and integrity required to achieve a 1.5°C-aligned managed decline of oil and fossil gas use. It found that none of the evaluated oil and gas majors' climate strategies, plans, and pledges come close to alignment with the Paris Agreement<sup>12</sup>.

Worldwide, only one oil major, BP, has committed to make an absolute cut to oil and gas extraction by 2030<sup>13</sup>. Another oil major, Shell, has stated that it believes that 2019 was the year that its oil production peaked, and that oil production will begin to decline by 1–2% until 2030 — but Shell's plans to expand gas extraction mean its total fossil fuel production could still rise. In any case, such plans fall short of the bare minimum ambition needed to align with 1.5oC<sup>14</sup>.

Though several companies have released new climate promises and plans over the last year, the conclusion remains unchanged. No major oil and gas company has yet released a climate pledge or sustainability plan that meets the bare minimum criteria for alignment with the Paris Agreement (“Banking on Climate Chaos Fossil fuel report of 2022,” 2022).

Evidently there seems to be multiple sources for international financing that African governments can still rely on in pursuit of the fossil fuel bonanza particularly for emerging fossil fuel producers in Africa. The next section considers the general impact that this ‘supposedly short-term financing will have on African economies.

### 4.3. Long term fossil fuels financing in Africa and the socio-economic implications

Geuskens and Butijin (2022) noted that despite the impacts of the climate crisis already disproportionately affecting African countries, the continent is also host to an increasing number of fossil fuel developments. These fossil fuel developments are expected to further drive climate change and harm local communities and the environment, and risk locking African countries into fossil fuel dependency and preventing them from making a timely leap to renewable energy. These fossil fuel projects operate with the previously discussed financial support from across the world.

By the end of 2021, 782 fossil fuel projects were in operation or under construction in West, East, Central and Southern Africa, with a further 111 projects announced, proposed or permitted, between 2016, the year in which the Paris Agreement entered into force, and the end of June 2021 (Geuskens and Butijin, 2022). Also in this time, 71 projects were shelved, although these may become viable again in the future. These 964 fossil fuel projects are owned or supported by 406 companies, the majority headquartered in Europe, the United States and China.

Geuskens and Butijin (2022) also considered direct financing for 58 fossil fuel projects as well as general purpose finance for 24 fossil fuel companies provided between 2016 and June 2021 in Africa. Within these, public and private sector financial institutions poured at least \$132.3 billion into fossil fuel companies and projects in Africa in this period. This includes \$82.5 billion in corporate finance for fossil fuel companies

12 David Tong, “Big Oil Reality Check: Assessing Oil and Gas Company Climate Plans,” Oil Change International, September 2020. <https://priceofoil.org/content/uploads/2020/09/OCI-Big-Oil-Reality-Check-vF.pdf>. Last accessed 29 June 2022.

13 BP to Exit Rosneft Shareholding,” bp, 27 February 2022. <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-to-exit-rosneft-shareholding.html>. Last accessed 29 June 2022.

14 “Shell Accelerates Drive for Net-Zero Emissions With Customer-First Strategy,” Shell, 11 February 2021. <https://www.shell.com/media/news-and-media-releases/2021/shell-accelerates-drive-for-net-zero-emissions-with-customer-first-strategy.html>. Last accessed 29 June 2022.

and \$49.8 billion in direct finance for fossil fuel projects. Of the top 15 financial institutions behind this sum, 10 are commercial banks and five are public finance institutions.

The majority of the largest fossil fuel financiers are from North America and Europe, in particular from the United States, the United Kingdom and France. JPMorgan Chase, Standard Chartered and Barclays are all in the top 5. The largest single financier of fossil fuel projects and

companies in Africa in this period is the China Development Bank. In all, the vast majority of finance for fossil fuels in Africa flows from the Global North<sup>15</sup>. Financial institutions from North America, Europe and Australia provided \$72.5 billion of the finance between 2016 and mid-2021. Finance from Asian financial institutions, mostly from China and Japan, makes up \$41.8 billion of the total amount. In contrast, African financial institutions only provided \$15.4 billion (see Figure 7).

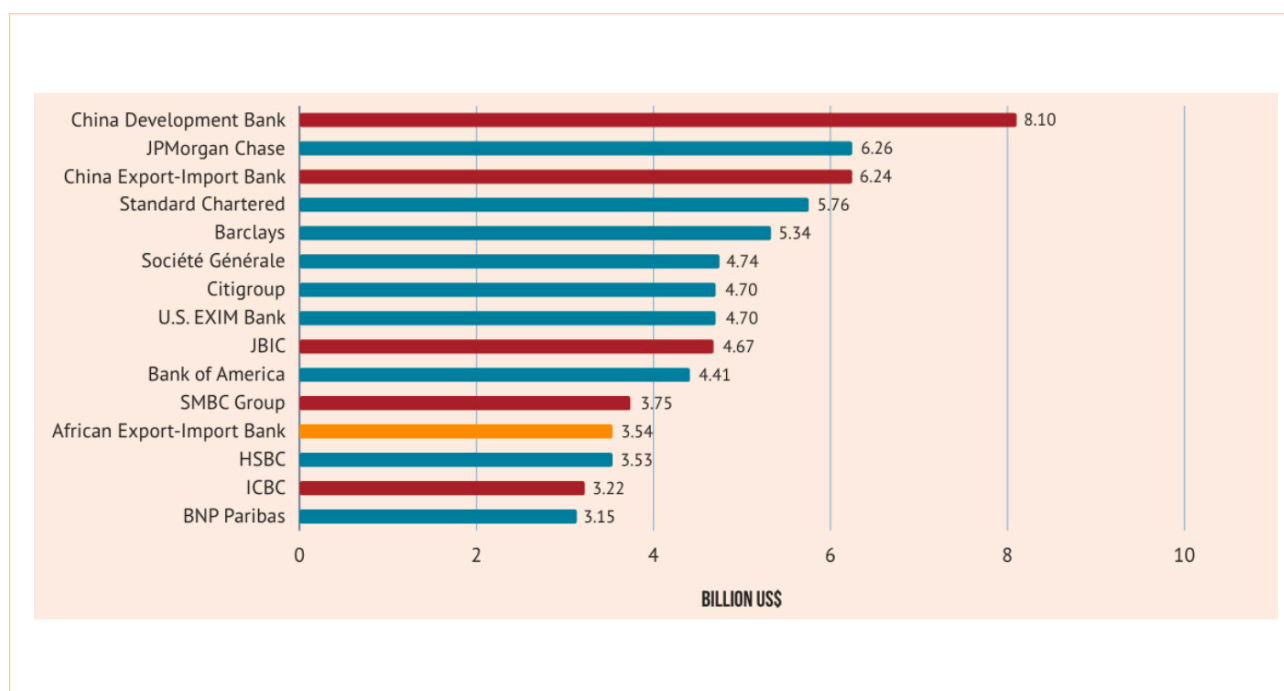


Figure 5: Top financiers of fossil fuel investments Source: Banking on Climate Chaos Fossil fuel (2022)

15 Major fossil fuel investments on the African continent at the moment are:

- i. Medupi coal power plant in South Africa
- ii. West African Gas Pipeline / Nigeria – Morocco Gas Pipeline
- iii. Offshore Cape Three Points in Ghana
- iv. Nigeria LNG
- v. Malicounda oil-fired power plant in Senegal
- vi. Mozambique LNG
- vii. East African Crude Oil Pipeline (EACOP) in Uganda and Tanzania
- viii. Oil and gas drilling in the Okavango River Basin in Namibia & Botswana
- ix. Sengwa coal power plant in Zimbabwe
- x. Oil and gas in the Virunga landscape in the Democratic Republic of Congo

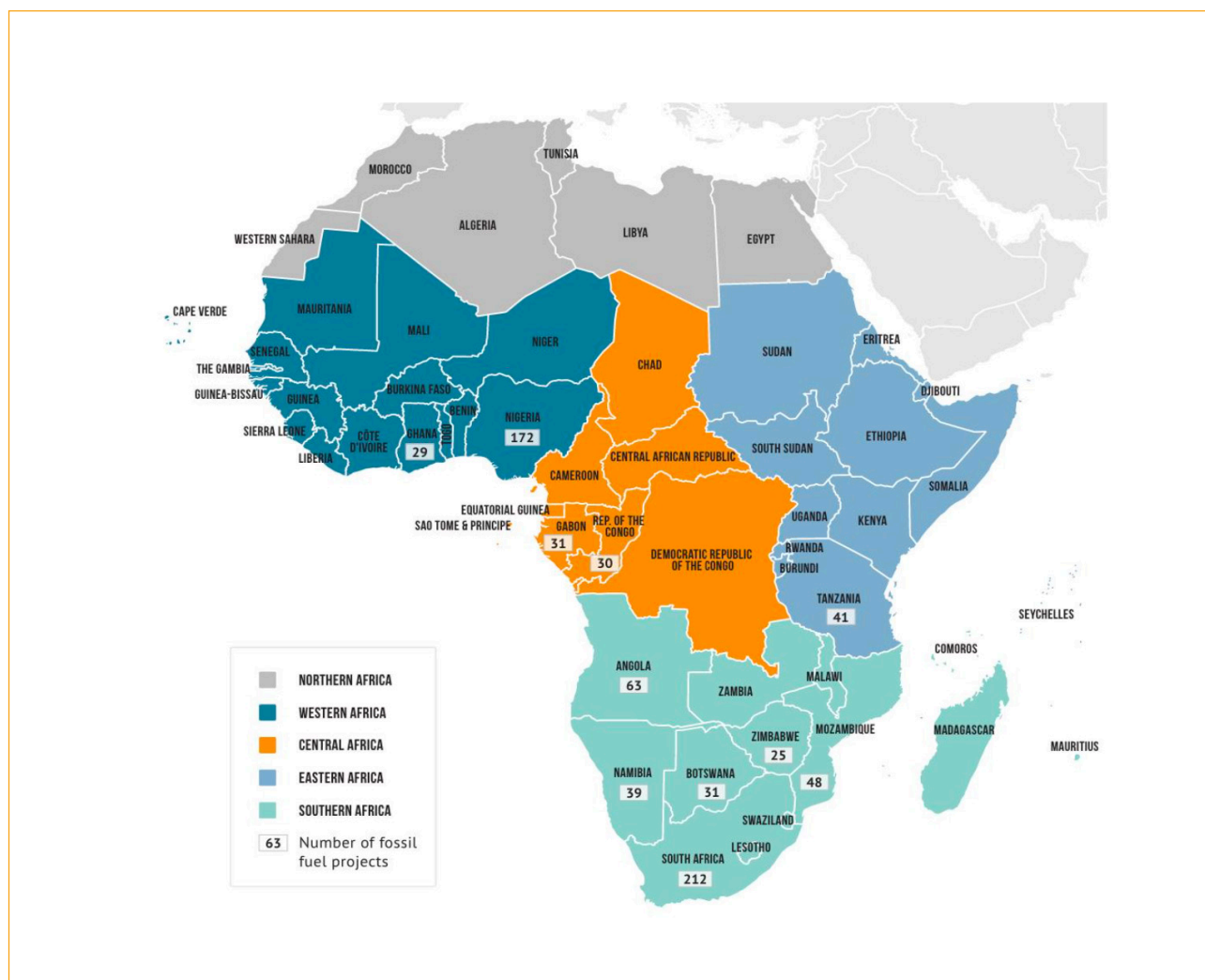


Figure 8: African countries with the highest number of fossil fuel projects Source: (UNEP, 2017)

In the five and a half years since the Paris Climate Agreement was adopted, public and private sector financial institutions have poured at least \$132.3 billion into fossil fuel companies and projects in the African regions covered by this report (Geuskens and Butijin, 2022). Corporate finance makes up the larger part of this sum, namely \$82.5 billion, while the remaining \$49.8 billion went into direct finance for fossil fuel projects. While public and private financial institutions provided roughly similar amounts of project finance, public financial institutions provided only \$8 billion of the \$82.5 billion of corporate finance, with the rest taken up by private financial institutions. Of the top 15 financial institutions, 10 are commercial banks and five are public finance institutions. One of these five is the China Development Bank, which has been the single largest financier of fossil fuel projects and companies in Africa in this period.

However, the majority of the largest fossil fuel financiers are from North America and Europe, in particular from the United States, the United Kingdom and France.

The above sentiments in this section demonstrate the general foreign control of African fossil fuel resources which has dire consequences when it comes to utilization and management in general. The fossil fuel industry and its financiers continue to market ongoing and new fossil fuel extraction as an important driver of development, claiming that it will create public revenues, jobs and energy access for the world's poorest nations. However, poor contract terms, debt traps, and disproportionate ownership by foreign multinationals means the industry mainly serves the interests of companies and nations outside of Africa, with African people and governments bearing the risks such as that of stranded assets

(Geuskens and Butijin, 2022; Power et al., 2016; Healy and Barry, 2017).

With most of the region's coal, oil and gas being exported, these developments also are not addressing the energy poverty faced by millions of Africans. New projects risk locking countries into fossil fuel dependency. In the next ten years, new oil and gas projects to the value of \$230 billion are at risk of becoming stranded assets (Denton, 2019). Combined with growing national debt and government deficits, these could generate a dangerous ripple effect leading to massive unemployment and rising poverty, locking countries into a vicious cycle of poverty for decades to come. While there are a large number of proposals for new pipelines, ports, gas liquefaction plants and other infrastructure designed to facilitate export, there are only a few projects that aim to build plants and infrastructure needed for generating electricity or fuel for domestic use.

Instead of bringing development, fossil fuel projects often have severe impacts on local communities and the environment, leading to displacement, loss of access to land and water, and consequently loss of food security. Consultation processes are not taking place or are not done properly, and women are often not included in consultation processes. The jobs promised seldom materialise or are only short term (Geuskens and Butijin, 2022). Pollution caused by oil spills and gas flaring has severe consequences for health, water and ecosystems. Also, fossil fuel developments contribute to climate change, which in turn disproportionately affects African communities.

The fossil fuel industry and its financiers continue to market the fossil fuel industry which is also increasingly becoming a risky business for financial institutions themselves (Adow, 2020). Systemic weaknesses, including unsustainable levels of corporate debt, are already present in the industry, and intensified during the COVID-19 pandemic and the oil price crash in 2020. All new oil, gas and coal projects are at risk of becoming stranded assets, along with some projects already in operation (Denton, 2019). Climate change litigation is on the rise, and the risk of reputational damage is enhanced by the

lack of transparency, corruption, illicit financial flows, and record of severe environmental and human rights violations endemic to the industry (Geuskens and Butijin, 2022). Further, a failure to limit global warming will present a systemic threat to the whole global financial system.

The vast investments being ploughed into the fossil fuel sector are also undermining the enormous potential of Africa's renewables. According to Carbon Tracker (2018), the African continent has 39% of the world's potential for renewable energy. Yet Africa and the Middle East together receive only 2% of investment into renewable energy annually. Instead, financial institutions keep providing large amounts of finance to the fossil fuel industry in the region, ignoring people's need for affordable and clean energy and Africa's huge

renewable energy potential, and undermining the opportunities for a transition from fossil fuels to clean energy ( Geuskens and Butijin, 2022; Sachs et al., 2021; Denton, 2019)

The support of financial institutions plays a significant role in determining which energy projects get built. Right now, they are driving the imbalance and playing an active role in undermining African countries' chance for a Just Transition. This includes providing direct finance to fossil fuel projects or credit to fossil fuel companies in the form of general corporate loans, revolving credit facilities and underwriting services. It also includes buying shares in or holding bonds of fossil fuel companies. In addition to providing finance, Export Credit Agencies (ECAs) can support fossil fuel developments by backing loans from commercial banks to fossil fuel projects to guarantee repayment. Lastly, financial institutions can act as financial advisors to fossil fuel projects, helping ensure they get the finance they need to proceed.

Evidently, one of the great challenges emerging from the continued utilization of fossil fuels is the failure to realise a just energy transition in Africa which could see some of the devastating consequences discussed above coming to light. The next section considers the challenges associated with the continued use of fossil fuels in Africa together with the Just transition issues.

# 5

## TECHNICAL CHALLENGES ASSOCIATED WITH EXTENDED FOSSIL FUEL USE

The extended use of fossil fuels in Africa is often pinned on the unreliability and risk of using renewable clean energy. Todd and McCauley (2021) explained this dimension stating that the main barriers to renewable energy were seen to be in three groups – technological, cost-effectiveness, and market barriers. Following the global credit crunch beginning in 2008, there was less capital available for renewable energy, due to capital provider bankruptcies and higher risk aversion (Best, 2017). From a similar perspective Qadir et al. (2021) noted that to achieve an effective renewable energy transition (RET), an enormous amount of capital will be required. Although the overall costs relating to renewable energy (RE) production have decreased significantly in recent years due to technological advancements (IRENA, 2019), there has been no corresponding increase in investment. Investors are less willing to take investment risk due to changes in policies and the amount of capital involved, making financing the RET arguably one of the biggest problems of the 21st century (Qadir et al., 2021).

Public financing of research and development (R&D) for RE is needed to overcome the financing gap in the RE and to develop RE technologies (RET). Private financing can play an important role in the RET, as emphasized by Curtin et al. (2017), who proposed feed-in-tariffs (FiTs), energy usage quotas, grants, and tax incentives to

successfully involve citizens in RET. While this addresses the hurdles of private financing from the citizens' perspective, the roles of other private financiers, such as banks, venture capitals, and private equity in the short term remains murky (The Energy Council, 2020).

Energy storage technologies provide a feasible solution for the intermittent nature of RE (Yao et al., 2016). This makes investment in storage technologies necessary for the effective implementation of the RET. Gallo et al. (2016) argue that financial and regulatory barriers hinder the efficient use of energy storage technologies. Since energy storage technologies require investment and cooperation among different stakeholders, such as the investor, consumer and utility company, it is difficult to estimate the share of each stakeholder.

The deployment of clean energy technologies is critical to transforming the energy sector to reduce fossil fuel usage (IEA, 2018). Major conventional energy producers have criticized the use of RE and portrayed it as costly and unpredictable (Geels et al., 2017). Several studies in different capacities thwart the deployment of RE by arguing that it is not feasible that RE will meet the world's energy demand (Harjanne and Korhonen, 2019; Heard et al., 2017). These biases have impacted and indeed influenced public perception of RE sources in terms of reliability, security, and affordability (Diesendorf and Elliston, 2018). Also, key stakeholders, such as large investors or governments, are typically

unaware of the market changes in the RE sector, and thus their decisions tend to be based on old perspectives (UNESCAP, 2021). This institutional barrier delays the provision of more space for RE to enter the market.

Adom and Adams (2020) noted that due to challenges such as those stated above, dependence on fossil fuels, especially in electricity generation, is on the ascendency as economies expand generation to improve energy access rate in these economies. As the economies grow, the continued exploitation of fossil fuel resources is fueled by their locked-in nature. For instance, *Banking on Climate Chaos Fossil fuel* (2022) notes that new oil and gas fields and new coal mines, once developed, are locked in as there is overwhelming pressure to fully extract them. Furthermore, new or expanded fossil fuel infrastructure drives expanded extraction upstream.

These technical challenges generally tend to enable fossil fuel utilization and some perspectives see no harm in this. For instance, Nalule (2021) argues that fossil fuels still have a significant role to play in the transition to a low-carbon economy. Firstly, revenues from fossil fuels can be used to finance and invest in clean energy projects. Additionally, the massive natural gas resources on the continent could contribute to climate change mitigation and global energy security. Despite these perspectives in support of the continued exploitation of fossil fuels in Africa, it is hard to ignore the associated risks and challenges associated with their exploitation. Some of the challenges have been explained in previous section thereby making this part

one that re-emphasises the importance of their consideration. The challenges are summarized as follows:

- i. Failure to deliver on the promise of development in Africa for years as multinationals reap profits while unemployment, human rights violations, corruption and inequality engulf the producing African country —e.g., Nigeria and Angola<sup>16</sup>.
- ii. Failure to support energy sufficiency in Africa as Africans in fossil fuel producing countries continue to suffer from energy insecurity
- iii. Poor contract terms have also led to many African governments bearing the risks of worsening debt. As fossil fuel investments are becoming riskier due to price fluctuations and climate policies, many fossil fuel companies are demanding a softening of fiscal terms. Many African countries have agreed to these terms in order to ensure that investors stay on board. Many African governments are incurring costs and debts linked to the fossil fuel development, without sufficient tax income flowing back, meaning public interests end up being sacrificed<sup>17</sup>.
- iv. An enormous debt burden could phase Africa in the event that fossil fuels become stranded assets in the near future.

16 United Nations Economic Commission for Africa, *Illicit financial flows: report of the High-Level Panel on illicit financial flows from Africa, 2015*. — It is estimated that the corruption and illicit financial flows connected to fossil fuel development have amounted to Africa losing out on approximately \$50 billion annually between the 1980s and 2018. The losses due to capital flight exceed African countries' debts and the cumulative foreign aid received combined.— <https://repository.uneca.org/handle/10855/22695>. Last accessed 29 June 2022.

17 The majority of the fossil fuel resources in Africa is in the hands of foreign - mainly European and US companies. When oil and gas is in the hands of African countries – such as Nigeria and Angola, the state-owned companies hold 94% of the total share held by African companies. Yet many of these companies have gone through liberalisation in the 90s, which means they transfer less profits for public spending and more to multinational corporations and elites. Source: Bronwen Tucker and Nikki Reisch, *The Sky's Limit Africa*, Oil Change International, October 2021. <http://priceofoil.org/content/uploads/2021/10/Skys-Limit-Africa-Report-2021.pdf>. Last accessed 29 June 2022.

- v. It undermines the growth and development of other sectors and often creates financial deficits when investments run dry. In Zimbabwe for example, the continued focus on coal energy undermines the Just Transition.” – Centre for Alternative Development, Zimbabwe
- vi. In terms of health impacts, pollution caused by oil spills and gas flaring has severe consequences for local communities, with medical implications ranging from respiratory problems, leukemia due to benzene exposure, as well as miscarriages and higher child death rates. A recent study by Marais et al. (2019) has revealed that exposure to fossil fuel use would increase the disease burden among Africans.
- vii. Fossil fuel production in African countries severely affects local ecosystems. Oil pollution incidents have contaminated sensitive ecosystems including water resources, mangroves and swamps, as well as the agricultural lands people depend on for their survival. As a result, safe drinking water, fish and crop levels have been affected, impacting local communities as well as the many species dependent on them<sup>18</sup>.

## 5.1. The Just transition

These challenges are the main basis for the Just transition and arguments raised in this paper would be incomplete without reflections on this concept.

The evidence discussed in this paper thus far shows that a global energy transition is required immediately to meet SDG 7 and the Paris Agreement objectives by 2030. However, predicting the timing and the extent is not simple. Mutezo and Mulopo (2021) showed that energy transition requires long term planning and takes approximately 50 years from the first market

uptake. Smil (2016) also noted that replacing the current global energy system, relying overwhelmingly on fossil fuels, with biofuels and electricity generated intermittently from renewable sources will be a long, multi-decade process. Industry reports state that the reality of transitioning from fossil fuels to renewable energy is not so simple. Fossil fuels comprise of 70% to 80% of the total energy supply globally. The United States of America, China, India and the Middle East are still highly dependent on coal and oil resources. On the contrary, very few African countries rely on fossil fuels apart from Africa’s Big Five economies, not forgetting Angola (Mutezo and Mulopo, 2021).

As it is, Africa contributes between two-to-four percent of total global carbon dioxide (CO<sub>2</sub>) emissions, the smallest compared to the United States of America, China and the Middle East Region<sup>19</sup>. It is the least responsible for warming the planet yet the hardest hit by extreme weather conditions thereby justifying the Just transition.

Nalule and Mu (2021) explained that energy transition does not mean a total ban on fossil fuels. In simple terms, energy transition refers to a shift from fossil fuels to cleaner forms of energy. Energy transition is a progressive process; however, some experts have used the term to shame countries that still desire to develop their fossil fuels (Nalule, 2021). Although some parts of the globe such as Europe have made significant efforts to de-carbonise the energy sector by among others deploying renewable energy, energy efficiency technologies, smart grids, smart meters and electric vehicles, other regions especially rural areas in developing countries are still progressing from traditional biomass, although there are various renewable energy projects in these countries (Todd and McCauley, 2021; Armstrong, 2020; Baker et al., 2014).

Healy and Barry (2017) also note the potential and perceived socio-economic costs of decarbonizing policies, which can hinder democratic/popular support for those policies. These include the negative impacts on fossil fuel energy workers and communities affected by a decarbonization energy transition. Without an energy justice dimension, decarbonization strategies run the

18 <https://milieudefensie.nl/actueel/a-just-energy-transition-for-africa.pdf>  
Last accessed 29 June 2022.

19 International Energy Agency. Africa energy Outlook. International Energy Agency; 2019.



risk of ‘locking in’ patterns of exploitation and dispossession that characterize the current global political economy, even while seeking to overcome carbon ‘lock in’ (Unruh, 2002).

Here it is essential that social costs are taken into account as part of any just energy transition (Newell and Mulvaney, 2013). Recognizing the importance of a just transition and political economy questions within conceptualizations of energy justice means critical questions of: ‘who wins, who loses, how and why’ as they relate to the existing distribution of energy, who lives with the side effects of its sites of extraction, production and generation, and who will bear the social costs of decarbonizing energy sources and economies (Newell and Mulvaney, 2013).

Global energy systems are shaped by a political economy in which the interests of elites and powerful actors are more often than not misaligned with the energy needs and environmental vulnerabilities of the world’s poorest people (Newell and Mulvaney, 2013). Changes in energy regimes therefore must address inequalities in power and injustices across entire socio-energy systems.

Miller and Richter (2014) highlight how major national energy policy and planning documents concentrate almost exclusively on energy technologies, while social considerations tend to be narrowly economic, focusing on energy prices, jobs and, to some extent, energy access. As a result, energy policy and planning systematically fail to recognize broader social and economic assemblages surrounding energy systems, while energy engineers, economists and bureaucrats dominate energy policy design and implementation. Thus, a central but often overlooked dimension, energy justice, addresses the serious and conflict-laden normative and ethical issues raised by energy extraction (Healy and Barry, 2017).

Taking stock of the above, a wholesome transition away from fossil fuels is not expected nor is it desirable (Nalule and Mu, 2021; Nalule, 2019). For example, it is often said that our world has transitioned from “coal age” to “oil age” decades

ago. Yet, coal still accounted for more than a quarter of global energy supply in 2019 and the world used two and half times of coal in 2019 than in 1973<sup>20</sup>. Additionally, many developing countries such as those in Asia and Africa, are still struggling to transition from traditional energy to modern energy.

A wholesome transition is likely to escalate energy access challenges given that socially, many people lack access to electricity and are still reliant on traditional energy. The focus for developing countries in Asia and Africa, therefore is access to electricity. In this respect, for a country with more than 80% of the population lacking electricity, the focus will not entirely be on the kind of primary energy used to provide this electricity, but rather on ensuring that people shift from wood and biomass usage. Fossil fuels are also still essential for the urbanisation and industrialisation of many developing countries. As such, a wholesome transition will negatively affect developing countries that are counting on their fossil fuels for economic development (Nalule and Mu, 2021; Mutezo and Mulopo, 2021; Nalule, 2019).

Thus, countries should not fire sell their oil and gas assets. Additionally, finances in these projects should not be reduced, but rather cleaner forms of technology should be embraced. What is desirable is for countries to invest in both fossil fuels and renewables (Nalule and Mu, 2021). A transformational Just Transition approach towards renewable energy, rooted in environmental, social, political, economic and gender justice, is urgently needed if the injustices that have plagued the African continent for so long are to be addressed and reversed. A Just Transition requires transforming the current energy system. The way fossil fuel resources have been extracted, managed, distributed and used has not economically benefited Africans and has had severe ecological, socio-economic and political impacts in African countries. The same could easily happen to the abundant renewable energy potential that Africa harbours, if it follows the same economic model of exploitation.

20 Mu and Jena, Comparison of Outlooks and Implications for Energy Transition” in *The Global Energy Transition: Law, Policy and Economics for Energy in the 21st Century*, edited by Cameron, P., Mu, X., Roeben, V. Hart, 2020.

# 6

## METHODS OF DEVELOPMENT FINANCE

This final part of the paper briefly considers development finance methods that could support a just energy transition that recognizes current fossil fuel financing and also supports the financing of renewable clean energy sources.

The AfDB's High Five Priorities which — Integrate Africa, Industrialize Africa, Feed Africa, Light Up and Power Africa and Improve the Quality of Life for the People of Africa<sup>21</sup> - are a good starting point when considering aspects of development finance for a just transition. The bank provides grants for project preparation and to create supportive technical and regulatory frameworks for renewable energy projects. One such grant is the Sustainable Energy Fund for Africa<sup>22</sup>. Additional instruments include US\$ 500 million “carbon baseload” loan facility, US\$ 250 million disaster risk financing facility, and US\$ 500 million debt fund for small-scale renewable energy projects.

Other options include:

- i. The removal of subsidies for fossil fuels and imposition of carbon tax on organizations contributing towards the emissions.
- ii. Secondly, the institution of policies that drive more investments towards the green economy.
- iii. Thirdly, a systematic phase-out of coal, technically through gradually decommissioning existing older plants.
- iv. Fourth, fiscal and tax incentives may be used. Such incentives are when taxes and duties on the imports of RE equipment are waived so that RE can progressively be integrated into the system. China implemented this policy to encourage the import of technologies that had not yet reached maturity in China (Zhao et al., 2016). When these taxes are waived, the

21 21 African Development Bank. Annual development effectiveness review 2017 transforming Africa - unlocking agriculture's potential [Internet]. Abidjan: African Development Bank Group; 2017. p. 76. Available from: [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Development\\_Effectiveness\\_Review\\_2017/ADER\\_\\_2017\\_EN.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Development_Effectiveness_Review_2017/ADER__2017_EN.pdf). Last Accessed 29 June 2022.

22 Cunha JD. AfDB's instruments for renewable and sustainable energy solutions. [Abidjan].

- per-unit electricity cost becomes cheaper, allowing the technology to compete with other power generation sources, such as gas and oil. Another way to promote RE is to tax fossil fuel generation, thereby increasing the per-unit cost of electricity generation and influencing the competition between the two power production technologies (Lipp, 2007). Another fiscal incentive is to provide loans at a minimal rate, specifically to construct RE plants for residential use (Zhi et al., 2014).
- v. Fifth option would be to support market development incentives related to the reduction of bureaucracy in the development of the RE market. Obtaining government approval for projects is often challenging, and projects are not always awarded based on merit (Zhao et al., 2016). Consequently, a loss of confidence may develop among potential investors. Establishing a policy with standard tariffs under a regulatory authority would encourage RE investors to participate in clean energy projects. Additionally, standard testing and certification for small power producers may also promote the RE market (Zhang and Ji, 2019).
- vi. Sixth option would be to provide Grid connection and tariff incentives. One reason for why investors do not finance an RE project is grid non-availability, i.e., there is electricity production, but the grid infrastructure cannot accommodate the additional power. In such a case, the electricity generated from that power producer goes to waste or is only partially purchased (Pilz and Al-Fagih, 2019). Such situations prevent investment in RE. FiTs are the most common form of grid connection incentive. Hereby, the government sets the electricity price to benefit the producer; the high profitability paves the way for more investment (Zhao et al., 2016). However, legislation is required to bind the power grid companies to purchase the power generated by such RE producers.
- vii. Seventh option would be the promotion of Energy Storage Technologies RE resources that are more abundant, such as solar and wind, have an intermittent nature. To meet peak demand given the variable production, storage technologies are required (Ali et al., 2018; Pilz and Al-Fagih, 2020), with batteries being the most common (Gallo et al., 2016).

# 7

## CONCLUSIONS AND RECOMMENDATIONS

This section draws logical conclusions based on the arguments provided in the various sections of the paper. The section also advances policy recommendations that would enable the use of resources for Africa's development efforts whilst ensuring minimisation of greenhouse gases emissions.

### 7.1. Conclusions

The paper has shown that Africa is at a crossroads as Governments are caught between two agendas which are meeting their developmental needs using available natural resources and at the same time achieving climate action ambitions. At the intersection are stranded assets, energy insecurity poverty and low levels of economic growth.

Regarding endowment of fossil fuels, the perspectives presented in the paper have showed that Africa is very much blessed with fossil fuel natural resources many of which are beginning to emerge in this era. However, Africa is also simultaneously —if not more than fossil fuels— blessed with renewable natural resources that allow for the generation of electricity. Regarding the fossil fuel endowment, it is critical that African states take the stranded assets risk seriously and begin developing processes that limit the pollutive potential of fossil fuels or speed up the process of adopting renewable

energy production mechanisms. It is paramount that Africa does not find itself locked in fossil fuel dependence as this could fuel a debt crisis and result in economic collapse.

Regarding the financing of fossil fuel extraction in Africa, evidence indicates that most of this financing is from the global north particularly the United States and China. The financing is championed by banks and multinational corporations through multiple intermediaries. Africa still receives disproportionate sums to finance fossil fuels in comparison to green energy sources. Also, the projects finance have limited traceable benefits on the African continent which remains largely energy insecure. The profits of the financing normally accrue to countries in the global north and very limited processing occurs in Africa meaning financing of fossil fuels results in limited job and economic growth opportunities.

Continuing financing fossil fuels has been shown to be a resultant effect of challenges associated with renewable energy options such as cost effectiveness, reliability, public acceptance and energy storage amongst other issues. These challenges have favoured the continued financing of fossil fuel extraction on the continent. The continued financing however does not promise to do away with the ills associated with fossil fuels but at least could be an avenue towards improving energy security. The quest to improve energy security first before worrying about the energy source needs to

be carefully balanced with the global climate objectives. This balancing act is what has been termed the Just transition which advocates for a gradual transition from fossil fuels towards clean lowcarbonenergysourcesontheAfricancontinent. Whereas the word ‘progression’ emphasizes the need to ‘improve’, the word ‘transition’ on the other hand focuses on changing. It is possible for someone to change from one condition to another without addressing the critical circumstances. However, for someone to move forward to an ‘improved’ state, it is essential for that person to be ready and to work towards achieving the ‘improved’ state. How are these words important in energy terms? Well, the global focus on energy transitions is reducing reliance on fossil fuels, without necessarily addressing the factors that are making it hard to ensure this transition. It would take time, more finances, advanced technology and preparation to jump from fossil fuels to renewables on the African continent.

Financing the just transition will be rooted in actions such as gradual penalties the extraction and use of fossil fuels —e.g., removal of subsidies and increases in taxes—, availing of complementary incentives that support the utilization of renewable energy sources, improving the institutional frameworks and ensuring they gradually support renewable together with seeking out and availing new technologies that allow for better and more efficient methods of energy storage.

## 7.2. Recommendations

### To African countries

- i. The stranding of assets is a real risk and it is paramount that African states begin mapping a way to deal with the challenges that this could bring in the long term. A possible solution could be researching better methodologies of utilizing fossil fuels in ways that do not emit greenhouse gases.
- ii. The contracts that African governments get into with investors from the global north now more than ever need to be scrutinized in order to avoid risks that

come with stranded assets. These contracts would better off have most of the risk borne by the investor from the global north.

### To CSOs in Africa

- iii. It is critical for African voices on the just transition to be heard. Issues of energy access before source judgment have to come to the limelight in overall climate change management negotiations such as COP. Given that the upcoming COP27 will be on African soil, an opportunity to further debate the just transition from an African perspective has been availed.
- iv. An important moral question as we move toward COP27 in Egypt is how to manage the losses attendant on the ‘decarbonisation’ of the global economy – assuming that decarbonisation eventually occurs. Leaving the oil – and the gas, and the coal – in the soil will have major consequences for a number of actors. It is critical to commission studies that assess the long-term winners and losers of decarbonisation of Africa. Should outsiders seek to reduce or compensate these lost opportunities? Their representatives have repeatedly answered that question in the affirmative. Nigeria, Venezuela and a number of Gulf states have requested compensation for ‘adverse economic impacts’ arising from decarbonisation (Depledge 2008). Saudi Arabia, often the self-appointed representative of oil exporters, has complained that a global shift away from fossil fuels will seriously set back the economic interests of oil exporters, and has argued that, rather than placing the economic burden of climate mitigation onto the shoulders of citizens in exporting countries, the world ought to help them find alternative sources of income (Mouawad and Revkin 2009).

To the AU in light of the Green Recovery Action plan

- v. Securing political buy-in for the transition beyond carbon may require outsiders to take such claims seriously. ‘Only a global climate deal that compensates losers,’ it has been argued, ‘can impose strict limits on the use of fossil fuels in the long term’ (Jakob and Hilaire 2015). The UNFCCC accordingly indicates that Parties shall give ‘full consideration’ to the impact of mitigation measures on countries ‘whose economies are highly dependent on income generated from the production, processing and export of fossil fuels<sup>23</sup>.

African countries, therefore, must be aware of the threats discussed in this paper and respond accordingly through among others embracing more regional cooperation to finance crucial fossil fuel projects in their countries; setting up strategies that embrace renewable energy; investing more in research and technology on the continent; adjusting the institutional and regulatory frameworks to be able to respond to these global developments in energy transitions.

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