African Union

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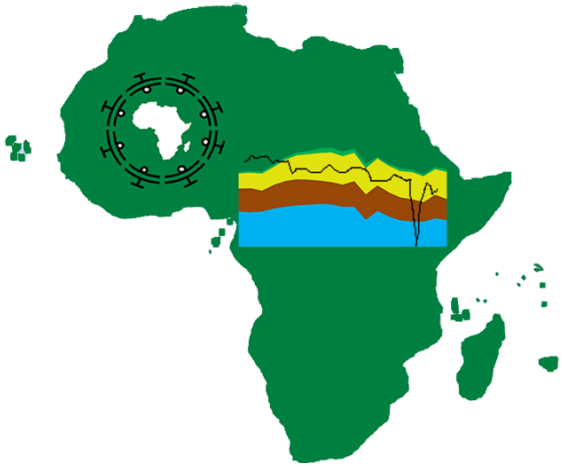
The impact of COVID-19 on African Oil Sector

A special report by AFREC on the implications on African Countries



May 2020

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SUMMARY AND RECOMMENDATIONS

The Coronavirus (COVID-19) is bringing unprecedented changes to the world. Its impact and the necessary response of governments will mean that the next one to two years at least will be very challenging for economic and social development in all countries of the world. One of the sectors that will see significant challenges is the oil sector, globally and in Africa.

For African crude oil exporting countries, the expected fall in demand means that exports of crude oil in 2020 will be down by at least 10% on average compared to recent years. Prices are also expected to fall. At $40/barrel or lower, the value of African oil exports could fall to levels last seen 20 years ago. These lower prices coupled with reduced output could see Africa's larger oil producers facing $20 billion or more of lost oil value in 2020. For consuming countries, the low per capita consumption of oil for transportation in many African countries will not significantly gain from lower prices which limited by low demand and a very likely limitation on storage.

The evolving situation provides a further opportunity for countries with an oil sector to explore:

- How economies can be diversified away from an reliance on oil;
- How to maximise the local value added of the whole oil chain including exploring the merits of:
    - Investment in refining facilities;
    - Increasing cross boarder trading between African countries and investment in its relevant infrastructure; and
    - Reducing oil demand in the power sector by expanding renewables.

All countries can take this opportunity to explore how to improve the efficiency of oil consumption; where possible, take the advantage of lower prices to see if fuel subsidies can be reduced or eliminated; and strengthen National Energy Information Systems to support decision making and investment at the national level.

INTRODUCTION

COVID-19 is having a dramatic impact on all countries of the world. It is causing the tragic loss of many lives, affecting the way many people live and work and causing social and economic change that is likely to have implications for many years to come. Government's actions to deal with the pandemic are changing all parts of the economy and life and one sector seeing dramatic change is the oil sector.

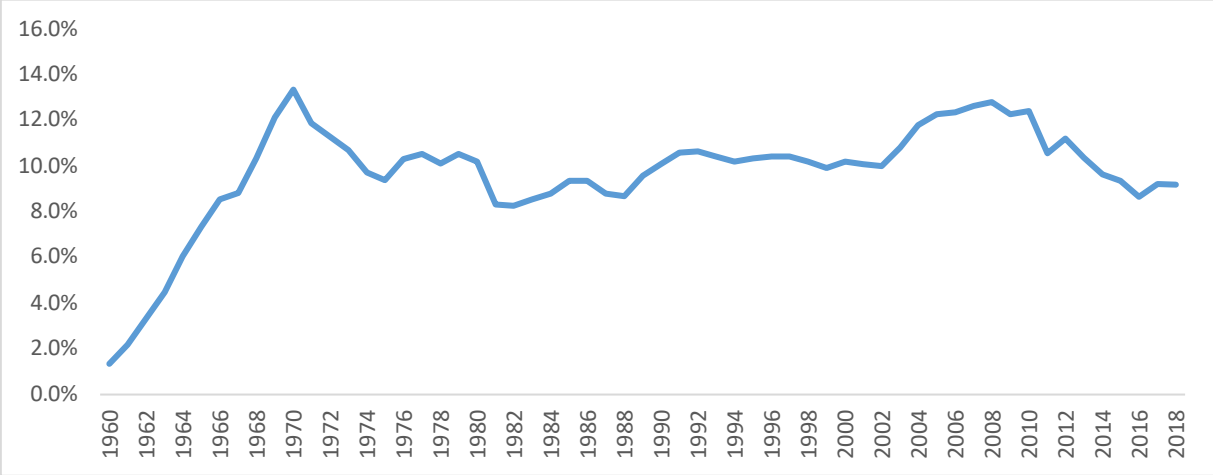
This report looks at the impact of the Covid 19 pandemic on production, revenue and demand across Africa. It does so by first examining the sector in Africa, before looking at the global economic situation and the response taken across the oil sector. It then considers the impact for Africa as a whole and for specific regions and example countries. It concludes with some possible opportunities as well as some challenges for the future.

The report uses high-level analysis to illustrate the potential impact of what might happen to oil production and consumption in Africa in 2020 and beyond. It does not make specific detailed predictions of what will happen in individual countries, nor will the identified actions and opportunities apply to all countries. The actions and recommendations proposed in this report need to be studied in details at a country level. The report aims to raise awareness to help facilitate the correct choice of action in all countries, now and in the longer term.

HISTORIC OIL PRODUCTION, TRADE AND DEMAND IN AFRICA

Africa has been producing oil for over 70 years and its output is still important globally. African countries currently account for around 9% of the total global output of Crude oil, down from the share of over 12% at the end of the last decade and the peak of over 13% in the late 1960's. Crude oil is produced in 20 African countries across all the five regions of Africa. However, this output is concentrated in five countries namely: Algeria; Angola; Nigeria; Egypt; and Libya, who between them account for over 80% of Africa's oil production.

Chart 1: Africa's share of global crude oil production



Data source: OPEC

Africa is a large and diverse continent of 55 countries, so the oil situation varies by country and region as indicted in the table 1 below. The majority of oil production occurs in the Central, North and Western regions, whilst the main consuming regions are the North, South and West. Specifically the West and the Eastern regions have nearly twice the proportion of consumption compared to refinery output and as a result, those two regions have the highest shares of petroleum product imports as a share of petroleum demand, at over 85%.

Across Africa, although 16 countries have refineries, the majority of African produced crude oil (75%) is exported and the majority of petroleum products used in Africa are imported. Indeed, Africa is alone in continents of the world as a net exporter of crude oil, but a net importer of petroleum products.

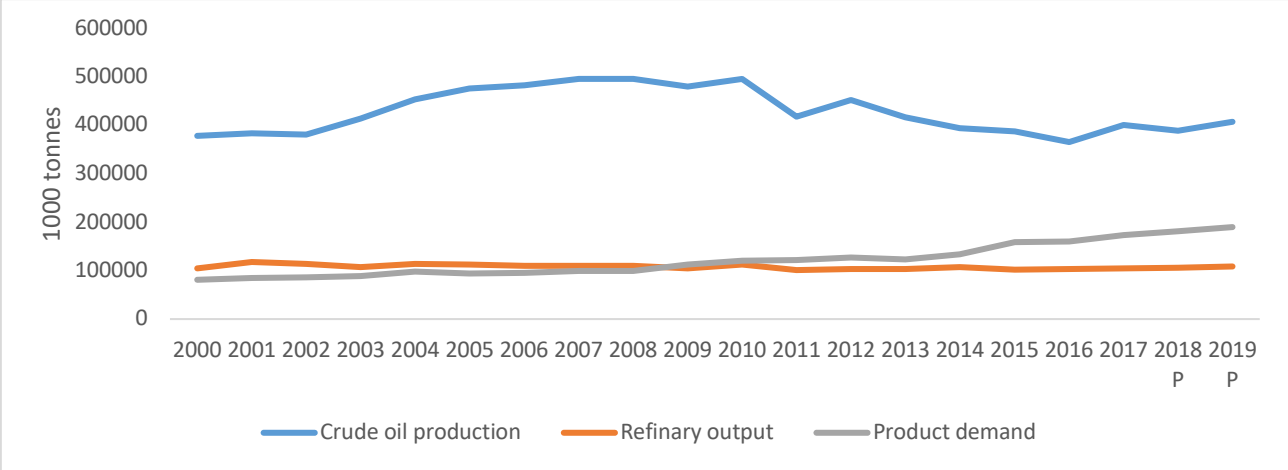
Table 1: Regional shares of oil production and use, and Transport use as share of total oil consumption 2018

Region	Crude oil production		Refinery output	Final consumption of oil products	Oil consumption in Industry	Oil consumption in transport	Transport use as share of total oil consumption
Central	35.4%		6.3%	4.6%	6.8%	4.7%	72%
Eastern	2.9%		4.9%	9.9%	14.1%	10.5%	74%
Northern	34.3%		57.6%	43.0%	42.9%	39.2%	64%
Southern	0.1%		22.2%	19.8%	19.1%	19.2%	68%
Western	27.3%		9.1%	22.6%	17.1%	25.7%	82%

Data Source: AFREC: Africa Energy Database

Three countries provide an illustration of the importance of oil to some African countries. The IMF reported that in 2018 the petroleum sector accounted for over 50% of gross domestic product (GDP) of Equatorial Guinea, 80% of government revenue and more than 94% of exports, with crude oil exports alone, $3.2 billion, accounting for 65% of exports. In the Republic of Congo, Government data shows that the petroleum industry accounted for an estimated 60% of the State budget, whilst in Algeria, which is also a significant gas producer, Algeria.com has reported 95% of exports, 52% of budget revenues and 25% of GDP are from hydrocarbons.

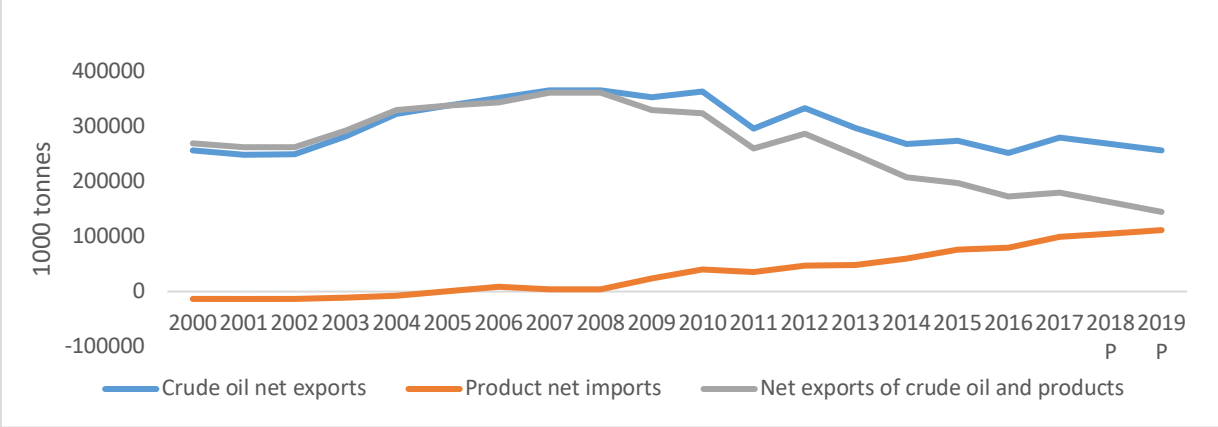
Chart 2: Oil production and demand in Africa



Data Source: AFREC: Africa Energy Database

Oil production across Africa reached a peak to date in 2010, with just under 500 million tonnes produced, however, over the past ten years, production has fallen to around 400 million tonnes in 2019. Over this period, the demand for petroleum products increased significantly, rising by 60% over the past 10 years. Therefore, with refinery output remaining constant at around 100 million tonnes, African countries are increasing their imports of petroleum products as shown in chart 3.

Chart 3: Africa's trade volume in crude oil and petroleum products

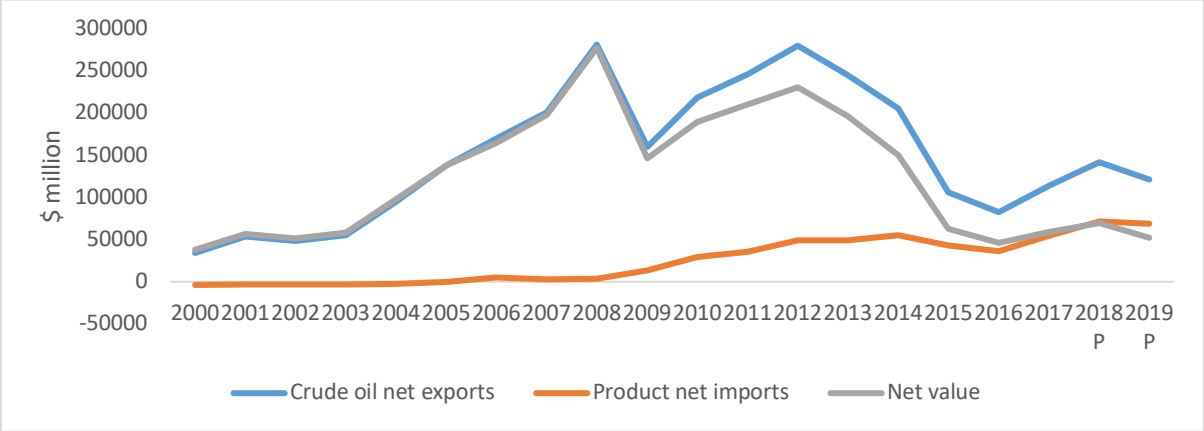


Data Source: AFREC: Africa Energy Database

Chart 4 shows the estimated revenue of export sales, the cost of imports and the net value (i.e. net export revenue – net import costs) of oil trade and thus provides an assessment of the value of oil trade to African countries. It is an approximation, calculated by applying annual average prices (as set out on page 22) to the trade volumes.

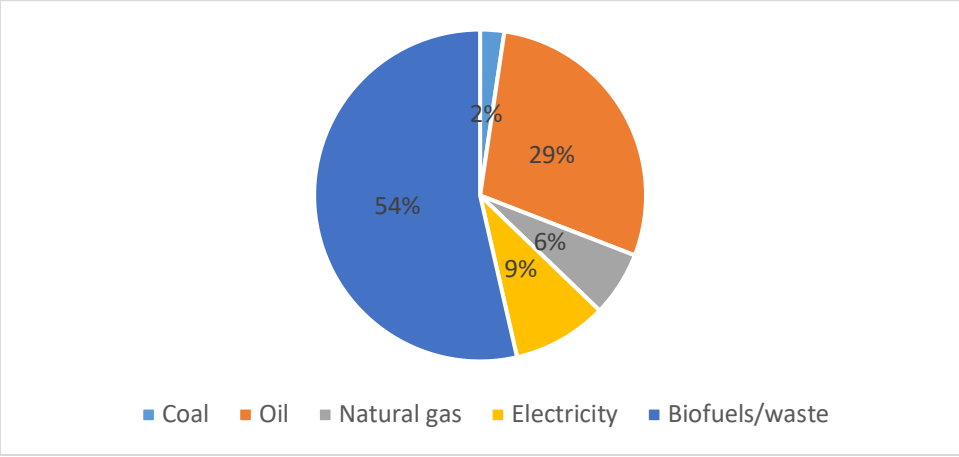
The calculated net value peaked at just over $275 billion in 2008, before falling as crude production (as thus exports) fell, before rising again to around $230 billion as oil prices rose in 2012. Subsequently oil production has levelled off at a lower rate and since 2018 prices have fallen, which combined with increased product import demand, has led to the net value falling to just over $50 billion in 2019.

Chart 4 Value of African Oil Trade



Africa's energy situation differs from other continents given its very high use of biofuels, mainly biomass (charcoal and firewood), which accounts for over 50% of final energy consumption in Africa (chart 5). As a result, other fuels contribute far less to final energy consumption in Africa than they do globally. For example, oil accounts for 29% of final energy consumed in Africa compared to the IEA's figure of 41% globally.

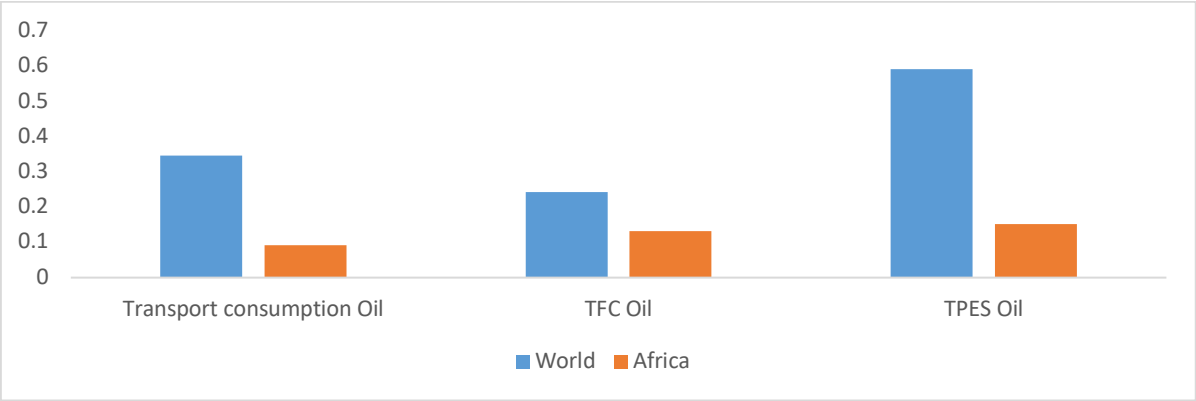
Chart 5: Final Energy Consumption, Africa, 2017



Data Source: AFREC: Africa Energy Balances

Just under 17 % of the global population lives in Africa. However, Africa accounts for around 9% of global final oil consumption, 4% of global oil use for transport and 3% of industry use of oil. This is reflected in chart 6, which shows per capita consumption of oil in Africa being around half the global level overall and about a quarter for transport. However, one area where Africa has a higher share than seen globally is petroleum product use for electricity generation, which is close to 9% in Africa, compared to around 3% globally.

Chart 6: Per capita consumption (toe/person) 2017



Data source: AFREC: Africa Energy Balances, IEA Key World Energy Statistics

COVID-19 AND THE GLOBAL ECONOMY

To help save lives and reduce the impact on the health service, many governments across the world have taken unprecedented action to restrict the movement of people. Measures taken include closing shops, restaurants, cinemas, stopping sporting activity, encouraging people to work from home where they can and temporarily halting many forms of manufacturing. This action, whilst needed, has resulted in a significant impact on the economy at a national and global level.

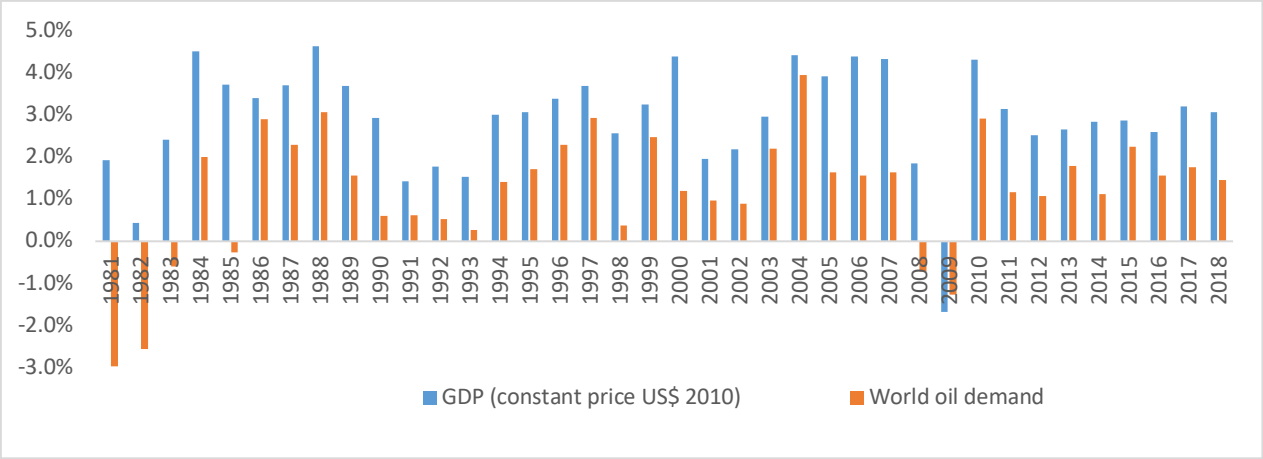
The IMF has suggested that the global GDP could fall by 3% in 2020, compared to estimates of around 2% growth before the outbreak of the pandemic. Evidence of the economic impact is now appearing with countries providing estimates of GDP during the first quarter of 2020. The US, the world's largest economy, fell at an annual rate of 4.8% in Q1 2020, according to official figures from the US Bureau of Economic Analysis, in a period that only saw restrictions at the end of the period. France, where restrictions have been in place since mid-March has reported a fall of 5.6% in Q1 2020 and in China, where restrictions were in place for much of the first quarter of 2020, the economy shrank by 6.8% in that period.

The transport sector has been specifically hit by the measures taken, with more than hundred countries implementing some form of travel restrictions. Data from Flightradar24 indicates that globally around 75,000 fewer commercial flights were flying a day in April, which is around 75% below the normal level. Travel within countries is also being severely reduced. Currently data are limited to understand this impact, but the UK government has published data showing that car travel was down around 60% during April, but at times was 70% lower than normal, whilst rail and metro use in the UK were also down in April by more than 95%.

COVID-19 AND THE GLOBAL OIL INDUSTRY

Oil demand is much correlated with economic growth, as is illustrated by chart 7[1] below. As the economy shrinks so too does oil demand as is seen in the early 1980s, 1990s, and more significantly in the 2007 – 2009 financial crisis period. Therefore, as action to address the COVID-19 pandemic creates an economic slowdown, oil demand will fall, but given the additional action taken to reduce all transport use, the fall in oil demand that will happen over the next year or so will be very significant.

Chart 7: Annual percentage change in world oil demand and constant price GDP



Data source OPEC, World Bank

The size of the decline in oil demand is estimated by the IEA as 9.3 mb/d in its April Oil Market Report and as 6.9 md/d by OPEC in its April Monthly Oil Market Report (MOMR). The actual fall will only be known once official statistics are available during 2021. What is clear is that the fall, and from these estimates it could be around 10%, will be the biggest decline in global oil demand ever seen and will be larger than the total reduction

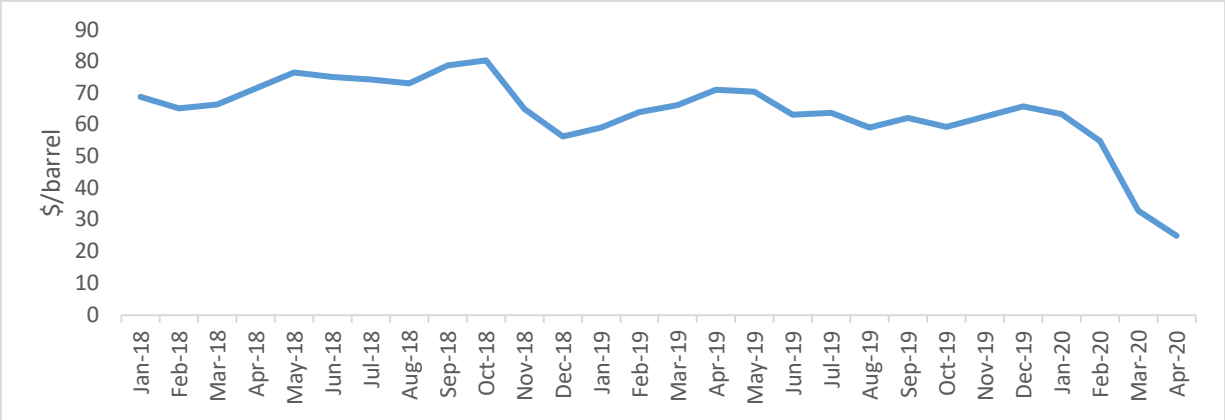
[1] The two series have a correlation coefficient of 0.997 which is close to prefect positive correlation

in demand seen throughout the financial crisis of 2007 -2009. For African crude oil exporting countries a 10% fall in global demand will mean that their exports of crude oil will be down by around 10% on average in 2020, especially as the majority of crude exports are for markets outside Africa where use and hence the fall in demand will be the greatest.

IMPACT OF COVID-19 ON OIL PRICES

Oil prices (Brent crude price is used here) were averaging around $64/barrel in 2019, down just over $6 on 2018 levels. In 2020, prices initially began to fall as the cooperation between Saudi Arabia and Russia on production levels ceased, but then started to fall dramatically as the full impact of the economic slowdown and reduced demand for oil became evident. Average prices fell to $30 in March and further to $25 in April. The outlook for the rest of the year and beyond is very uncertain and much will depend on how the pandemic develops and the extent to which economies can restart, but also on the action, described below that oil producers are taking. However, an average oil price for 2020 of $40 or even below is quite possible.

Chart 8: Brent Crude Price



Data source: World Bank

RESPONSE OF GLOBAL OIL PRODUCERS

In an effort to alleviate the current global oil market imbalance, OPEC and non-OPEC countries participating in the Declaration of Cooperation (DoC – sometimes known as OPEC+)[2] convened two extraordinary Ministerial Meetings, on 9 and 12 April 2020.

[2] African participants included the OPEC members as well as Sudan and South Sudan. More information on the DoC is available from www.opec.org/opec_web/en/publications/4580.htm

During these meetings, countries present, committed to achieve a stable oil market and agreed to reduce their overall crude oil production downwards by 9.7 mb/d, starting on 1 May 2020, for an initial period of two months. Following this, they agreed there would be a downward adjustment of 7.7 mb/d until the end of the year and by 5.8 mb/d until 30 April 2022. To put this agreement in context, the previous reduction agreed at a meeting on 6th December 2019 was for a reduction of 1.7 mb/d.

IMPLICATIONS FOR AFRICAN OIL PRODUCERS

The DoC agreed reductions covers the production of eight African oil producers: Algeria, Angola, the Republic of Congo, Equatorial Guinea, Gabon, Nigeria from OPEC as well as Sudan and South Sudan. Libya, though a member of OPEC, is understood to continue to be exempt from a reduction, as it re-builds its oil production.

A full assessment of the adjustments in production for individual countries is not yet available. Therefore, for this report the reduction in output is estimated, based on the agreed actions to achieve the previous 1.7 mb/d reduction and is set out in table 2 below.

Table 2: Estimated reduction in oil output in 2020 for African oil producers as part of the DoC agreement of 12 April 2020

Country	Reference Output (000, b/d)	Pledged Cut as part of 1.7 mb/d (000 b/d)	Estimated additional reduction to meet 2020 agreements May to December (000 b/d)	Estimated total reduction for 2020 (000 b/d)
Algeria	1057	-44	-215	-158
Angola	1528	-47	-229	-168
Congo	325	-14	-68	-50
Eq. Guinea	127	-5	-24	-18
Gabon	187	-8	-39	-29
Nigeria	1827	-74	-361	-265
South Sudan	132	-3	-15	-11
Sudan	74	-4	-20	-14
Total OPEC Africa	**5051**	**-192**	**-936**	**-688**
Total OPEC + Africa	**5257**	**-199**	**-970**	**-713**
Total OPEC	26314	-1168	-5694	-4185
Total OPEC+	43062	-1682	-8200	-6027

Based on these estimates, output from African countries who are part of the DoC agreement will fall by 13.6%[3] during 2020. Over the whole of 2020, the reductions equate to a fall in production of slightly over 260 million barrels of oil or around 35 million tonnes, around 9% of all of Africa's oil output in 2018.

African countries participating in the DoC account for around 80% of Africa's total oil production. For the others it is less clear what action they will take. Demand will be lower, as noted by around 10%, so countries who can may seek to reduce output to preserve value of the oil. Additionally in some countries, there may be production issues if workers cannot get to sites or supplies are not available, which could also affect main producer countries.

Data in the AFREC's Africa Energy database showed a provisional growth for all countries from 2018 to 2019. Given the global situation, any growth in 2020 would be extremely unlikely, if not impossible, and a return to the production levels seen in 2018 is more likely. That is the assumption taken here for African producers not part of the DoC, which together with the action of DoC countries is consistent with the assumed 10% decline in exports.

IMPLICATIONS FOR AFRICAN PETROLEUM PRODUCT IMPORTERS

AFREC's African Energy Database shows that in 2019 all African countries with the exception of Algeria, Cote d'Ivoire, Congo and Niger were net importers of petroleum products. As the prices of petroleum products fall in line with the price of crude there will be a small financial gain for importers. However, should global refinery output fall, for example maintenance work if brought forward whilst prices are low or of low prices lead to bringing forward planned closure, then product prices may well see smaller falls.

The extent to which countries can take advantage of lower prices will depend on the level of oil demand in the country and how that is impacted by measures to reduce the impact of COVID-19 and the country's ability to stock products, which for most countries will be limited.

[3] The calculated country percentage reductions have been applied to oil production data from the AFREC's Africa Energy Database for calculations in the rest of the report, taking 2018 (as a firmer figure) as the base.

Given the low use of oil in final consumption in most African countries, demand may not fall by the 10% predicted globally due to COVID-19 as perhaps there is less non-essential use of oil (for example transport for leisure). This point is reflected in the April OPEC MOMR that anticipates a 3% fall of demand in Africa in 2020, which is the figure used in this report for the fall in petroleum product demand and thus imports for 2020.

FINANCIAL IMPLICATIONS FOR AFRICAN OIL PRODUCERS IN 2020

Assessing the possible financial implications of the reduced demand and associated output requires an oil price for 2020. The average price for 2020 is unknown so this report uses three annual average prices per barrel for 2020: $55, $40 and $30. These prices are not predictions of what the average price will be, but aim to give a range of scenarios to help decision makers.

Taking an average of $40/bbl for crude oil and related average product price of $49/bbl (see page 22); chart 9 below extends the data shown in chart 4 to 2020 by applying a $40/bbl price estimate to the calculated export and import figures as described above. Chart 10 then shows some possible variations using $55, $40 and $30/bbl for the average crude oil price in 2020 and associated prices for petroleum products. At $40/bbl the net value of exports to African countries would around $31 billion, which would be is its lowest value for the past 20 years. This level would be less than half the level seen in 2018, and just over one tenth of the peak value seen in 2008.

Chart 9: Value of African Oil Trade, including 2020 estimate

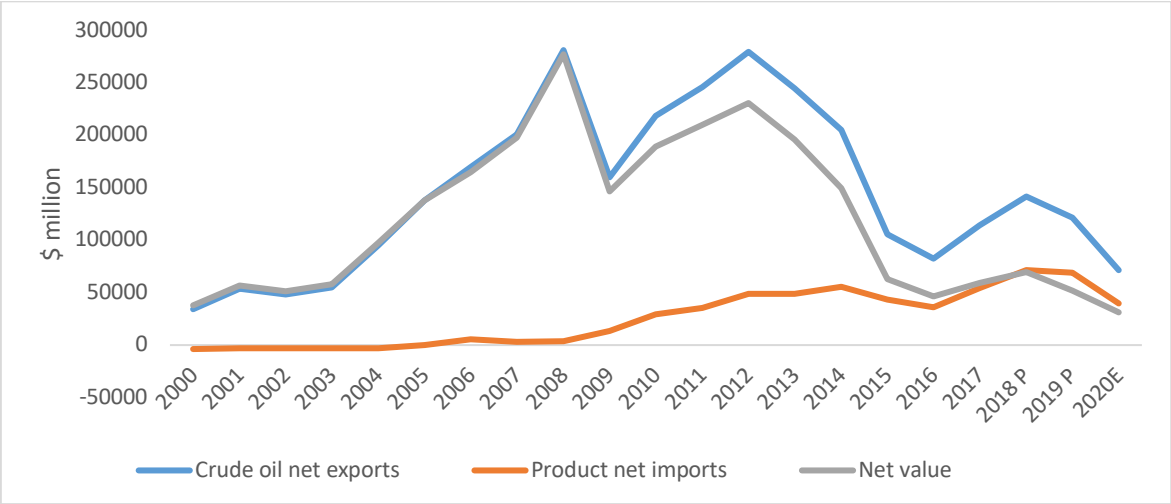
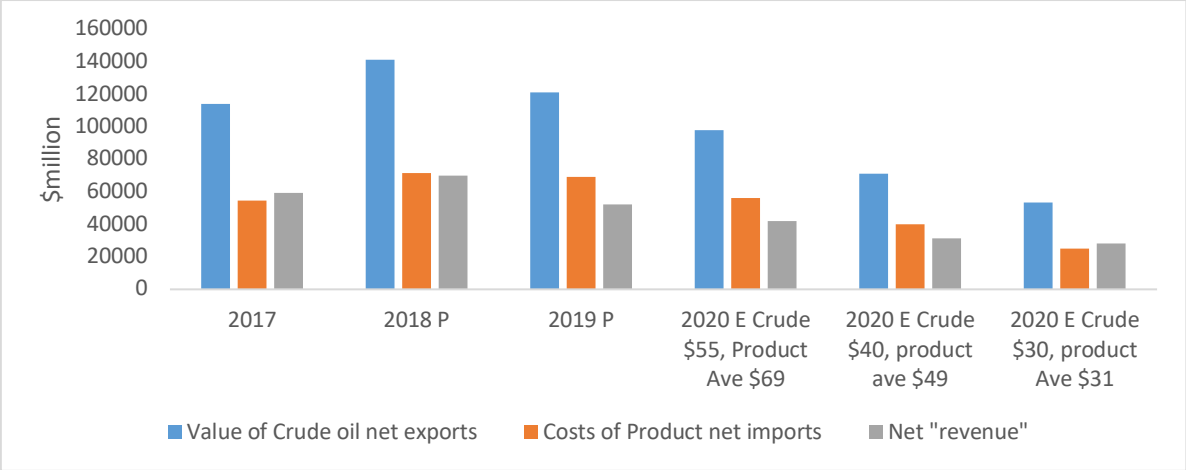
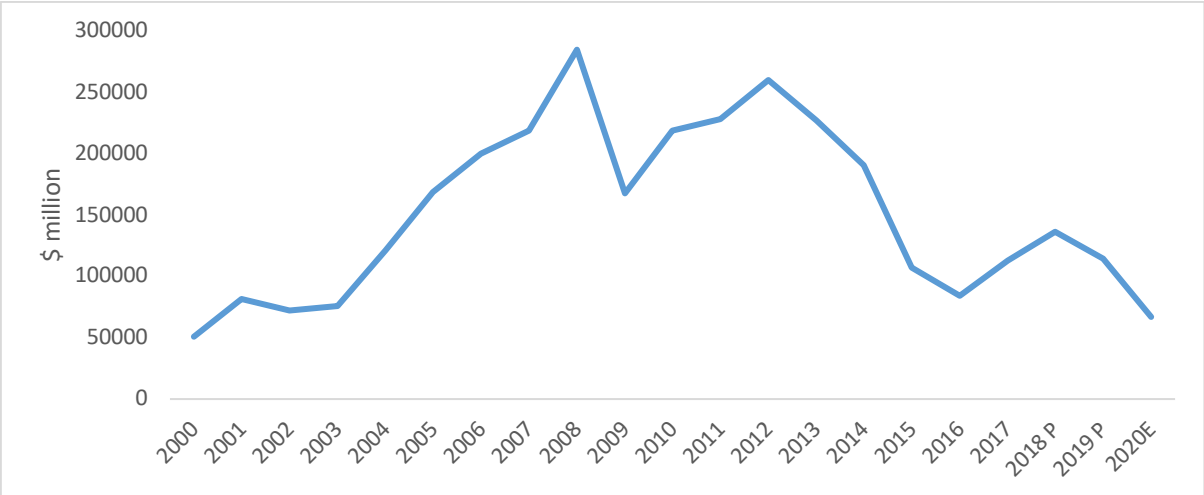


Chart 10: Value of African Oil Trade, 2017 to 2020 for 3 oil price scenarios for 2020



The analysis above is in current terms, but the situation perhaps becomes starker in real terms as shown in Chart 11 for export vales. At $40/bbl the real value of African crude oil exports in 2020 is estimated, in constant 2010 prices, at around $67 billion, which is 40% lower than in 2019, nearly 60% lower than the average of the past 20 years and a quarter of the peak value seen in 2008.

Chart 11: Net crude oil export revenue at constant 2010 prices under a $40 scenario for 2020



All African oil producers will see a significant downward revenue impact in 2020. This is illustrated in chart 12, which show the estimated loss of oil value by country calculated as the value of oil produced in 2019 less the value produced in 2020 for different annual average oil prices in 2020. The chart is shown in two parts to reflect the size of production. Country level data are presented in table 5 on page 23.

Of course, this will not be the direct loss to the country, as revenues received by countries will depend on actual exports, the tax and operating framework in each country, the mix of national and international businesses operating in the country and the variation in production costs amongst many other variables. Likewise, this analysis uses average prices rather than specific ones as would be possible at a country level. However, it aims to provide an estimate of revenue that will not be generated from exports or be available for governments for direct receipt, taxation or royalty payments.

Should oil prices could be 40/bbl or lower, this assessment indicates that Algeria, Angola and Nigeria could each be facing $20 billion or more lost oil value in 2020. Of this around $3 billion is likely to be lost export revenue, the actual realisation of the rest will depend on individual country laws, regulations and taxes.

Chart 12a Estimated oil value loss in 2020 compared to 2019, by oil price, larger oil producers

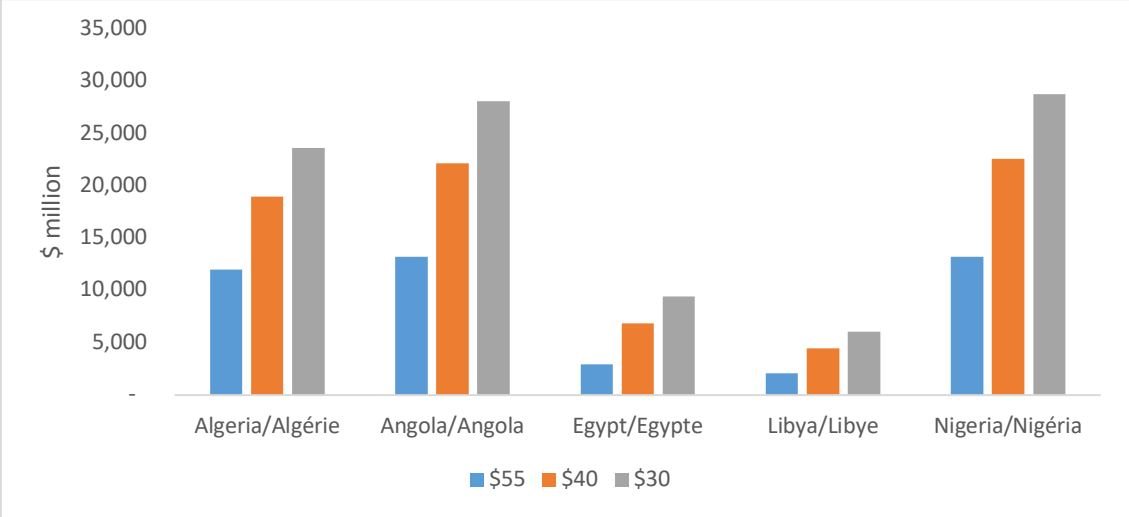
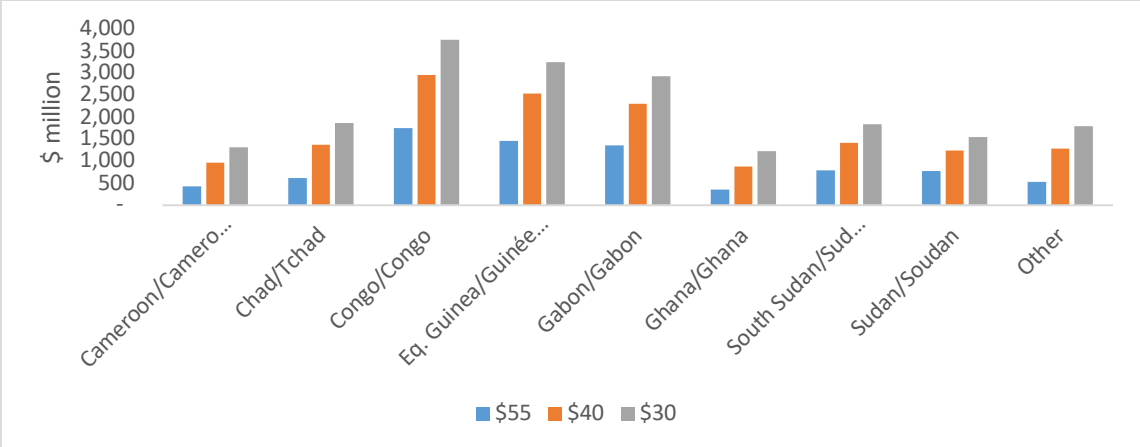


Chart 12b Estimated oil value loss in 2020 compared to 2019, by oil price, other oil producers



Few other estimates of the financial impact have been produced for countries. However, the Africa Centre for Energy Policy (ACEP) has predicted a significant fall in the Government of Ghana's projected revenue for the year 2020 of $824 million with prices of $40 compared to planned price of $63, which is close to the estimate provided here.

SELECTED COUNTRY CASE STUDIES

Significant oil based economies - Equatorial Guinea

Given the analysis above, oil-producing countries will face a significant loss of revenue in 2020. This will be felt more for countries where oil is a major part of the economy and especially where all reliance in on crude oil production and exports. One example country for which 2020 and beyond will be a very difficult period is Equatorial Guinea.

Equatorial Guinea is the largest oil producer in Africa without its own refinery, and so relies on crude production and exports for all of its oil based revenue. As noted on page 5 the oil industry accounted for at least around half of gross domestic product (GDP) and the majority of exports. The AFDB have reported that real GDP is estimated to have shrunk by 4.1% in 2019 after falling by 6.1% in 2018 due to reduced activity and prices in the oil sector. As such a potential value of oil loss of up to $2.5 billion (see table 5 page 23) reflecting lower output and lower prices, will be very significant and could see GDP being back (in real terms) to levels of 15 years ago. That full amount is unlikely to be directly lost, but, assuming Equatorial Guinea's exports see no further reduction than the expected overall 10% fall it would see a direct loss of around $300 million in export revenue. In the short-term, there will be limited opportunity to avoid a serious economic decline in 2020. However, where possible, countries like Equatorial Guinea with economies largely based around oil should continue to look at ways of diversifying their economy.

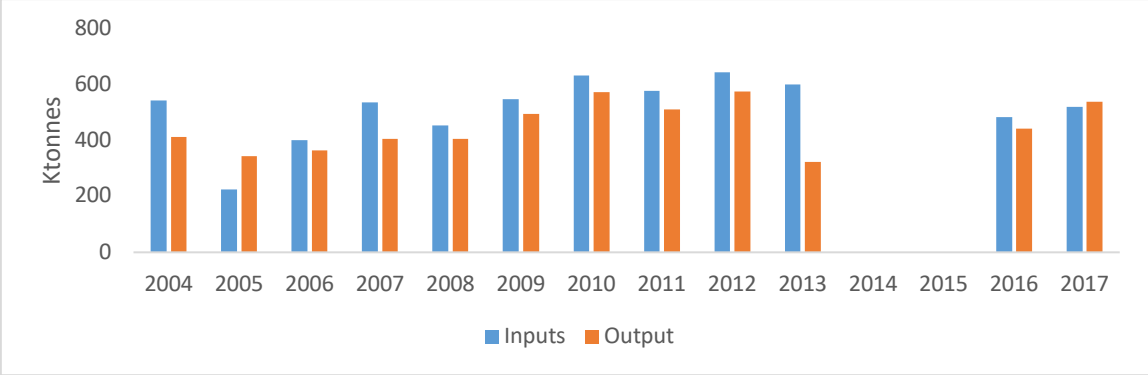
More mixed economies, with some oil/product output – Zambia

Countries that have a very limited opportunity to reduce the impact of the economic downturn will be few, but perhaps those with refining capacity that are not also significant oil producers and thus exporters might just do so in a limited way. Senegal is one example and Zambia another.

Zambia imports crude oil to the Indeni refinery for processing which, with imports, provides fuel for local demand, with a small amount of product being exported. Chart 13 indicates that there may be scope, if economically viable, for a limited increase (to levels

used in 2010 and 2012) in throughput in the country's refinery. If viable, this would increase the ability to purchase cheap crude oil and create product for internal use (and thus reduce import needs) or perhaps less likely export and thus create some limited additional value for the country. For countries that can, looking to maximise operation of their own refineries to keep more of the value added in country may create some small benefit.

Chart 13: Refinery operations Indeni refinery, Zambia



Data Source: Compendium of Environmental Statistics, Zambia Statistical Agency and Zambia Energy Regulatory Board

The need to look at enhancing domestic refining has been reflected in the policies of major oil exporters, for example in Nigeria where imports of products account for the majority of local consumption The Federal Government of Nigeria has launched initiatives to support the establishment of private mini (modular) refineries. One of the initiatives is" Big Win 4" of the "7 Big Wins" Initiative (2015 – 2019) which focuses on expansion of domestic refining capacity and rehabilitation of existing refineries. In addition the National Gas Policy which was approved by the Federal Executive Council in June 2017 coupled with the National Petroleum policy of the 19th July 2017 aim to provide the framework for creation of a strong refining hub in Nigeria.

Non-oil economies - African small Island States

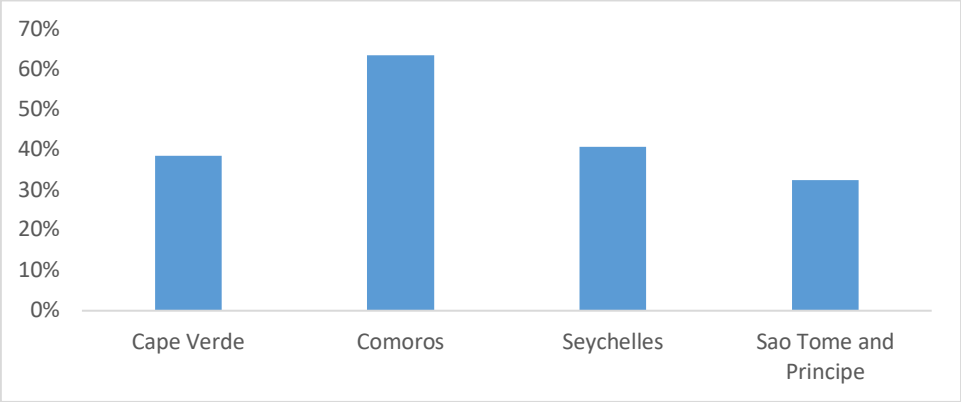
The majority of Africa countries, 35, have no petroleum industry and simply import product for final consumption. As shown above (chart 6) oil consumption per capita use for transportation is low in many African countries so any gain from lower prices will be limited by low demand and a very likely limitation on storage.

Around 20 countries have oil-fired electricity generation as their main source of power or the largest (and only) source of fossil fuel used for electricity generation (the main exception is in Southern Africa, where coal is the major fossil fuel). These countries will

see a reduction in the cost of imported fuel, but to some the full price fall may not be realised due to additional transports costa and associated margins. One specific example of this is the smaller Island States of Africa, where the shipping and distribution costs may mean that they do not receive the full lower price fall seen elsewhere.

Islands states, whose economies are based on tourism, will face a very challenging time in 2020, for example in the Seychelles over half of GDP and a quarter of jobs are linked to tourism. However, they also have abundant renewable resources that could be developed to reduce dependence on oil as part of the country's energy transition. Looking to explore this now, when oil prices are lower may seem counterintuitive, but against an average oil price of the past decade of around $80/bbl the situation may change. Therefore, if any revenue saved from oil purchases at lower prices can be used to explore alternative sources of fuel for generation it could help islands, or countries in Africa relying on oil-fired generation, to cope better in the future, when at some point oil prices rise again. Equally, there may be scope to look at the efficiency of generation; with currently up to 60% of the imported oil's energy "lost" through power station efficiency, as shown in the chart below.

Chart 14: Oil fired electricity generation efficiency, selected African Island States



Data source: AFREC, Africa Energy Balances

OUTLOOK TO 2021 AND BEYOND

Looking beyond 2020 for the global oil sector in general and African oil sector in particular are very uncertain. How the COVID-19 pandemic evolves is unknown and so the speed of recovery of global economy is very hard to predict, although hope of a quick bounce back seem to be diminishing. Likewise, the oil sector will evolve, refineries may close or operations to produce oil might change. What is known is currently additional oil production cuts into 2021 have been agreed by DoC countries at a combined level of

5.8mb/d, whilst smaller than the 2020 output reductions, is still over 3 times the adjustment to rebalance the market as was agreed before COVID-19.

It therefore looks likely that 2021 will be very different from 2019, but understanding how and what that means at a continental or country level is complex. Countries that actively choose to explore options and assess how they are equipped to deal with the challenges may ultimately be those who recover and develop in the best way.

RECOMMENDATIONS

The next one to two years will be very challenging for all countries of the world. However, the situation may provide an opportunity for change. The evolving situation provides a further opportunity for countries with an oil sector to explore such as:

- How economies can be diversified away from an reliance on oil;
- How to maximise the local value added of the whole oil chain by exploring where relevant
    - investment in refining facilities;
    - increasing cross boarder trading and investment in its relevant infrastructure; and
    - reducing oil demand in the power sector by expanding renewables.

These points are perhaps more suited to some countries rather than all. However, there are two points that should apply to all countries.

- The first is to continue (or start) efforts to improve energy efficiency of the use of petroleum products (and indeed more generally). With nearly all African country being net importers of finished product, measures to improve the efficiency of use and thus recue import demand and lower the purchasing fuel will provide benefits.
- The second is to explore the possibility to reduce or remove oil products subsidies and oil based electricity generated taking the opportunity of lower prices, which may continue beyond 2021. The Department of Petroleum Resources of Nigeria reflected upon the situation in its 2018 Annual report, noting, “The pump prices of these products except Automotive Gas Oil (Diesel) are subsidized by the government. It is believed that the Federal Government of Nigeria spends over 200 billion Naira every year to subsidized petroleum products. These monies would have been used to provide infrastructure or provide better quality education or health facilities”.

It is also recommended that the African countries should strengthen or, if needed, establish a dedicated National Energy Information System in order to collect and analysis the energy data and energy efficiency indicators for all sectors. This will support decision making and investment at the national level to meet the aspirations of the agenda 2063 of African Union and the sustainable development goals (SDG) of the United Nations as per the African charter of statistics adopted by the Heads of State and Government of the African Union summit held in Addis Ababa, Ethiopia, in February 2009.

TABLES

Oil prices

Table 3: Historic oil prices ($/barrel)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Crude oil (Brent)	18.1	29.2	26.1	26.4	39.9	55.2	65.5	74.4	104.2	61.4
Average product import price	35.4	30.9	29.9	36.2	49.0	69.2	81.1	88.6	117.6	71.1

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Crude oil (Brent)	81.4	112.4	113.5	111.4	103.4	52.3	44.3	55.2	71.5	64.0
Average product import price	90.4	124.5	129.7	125.1	114.7	70.6	56.8	68.6	84.9	77.4

Crude oil is Brent, CIF basis. Product prices are a weighted average based on African imports of petroleum products. Sources: EIA, World Bank, IEA

Table 4: Average 2020 Oil price variants used for analysis ($/barrel)

Crude oil	55	40	30
Average product import price	68.6	49.0	30.9

Table 5: Estimated oil value loss in 2020 compared to 2019 by country and oil price ($million)

Oil Price	**$55**	**$40**	**$30**
Algeria/Algérie	11,994	18,954	23,594
Angola/Angola	13,198	22,104	28,041
Egypt/Egypte	2,919	6,824	9,428
Libya/Libye	2,068	4,457	6,050
Nigeria/Nigéria	13,229	22,537	28,743
Cameroon/Cameroun	425	964	1,323
Chad/Tchad	620	1,369	1,868
Congo/Congo	1,750	2,959	3,764
Eq. Guinea/Guinée Eq.	1,466	2,535	3,248
Gabon/Gabon	1,360	2,307	2,938
Ghana/Ghana	362	883	1,230
South Sudan/Sud Soudan	789	1,421	1,842
Sudan/Soudan	781	1,242	1,549
Other	536	1,294	1,800
Total	51,496	89,850	115,420

The report has been produced to help African countries understand the situation, which may assist them in taking action. It is a summary report and more detailed analysis will be needed at individual country level, to help this the report uses freely available data and sources to assist country level analysis.

The report uses AFREC's Africa Energy Database as the main source of information for Africa. This reflects the work underway across African countries to enhance their energy data. This work needs to continue under AFREC's African Energy Information System (AEIS) programme and be supported by governments to ensure that all African countries have the data they need to plan and respond to national and international events.

Comments on the report are welcome and can be sent to:
afrec@africa-union.org

Thanks go to the statisticians in all African countries working to produce the energy data that we based this report on and colleagues across African institutions for their comments. Any mistakes or misinterpretation, are of course unintended by AFREC.

About the African Energy Commission (AFREC)

AFREC is a specialized agency of the African Union (AU), under the Commission for Infrastructure and Energy that is in charge of coordinating, harmonizing, protecting, conserving, rational exploitation, commercializing and integrating energy resources on the African continent.

AFREC was created by African Heads of States and Governments' decision of 37th Summit of the Organization of African Unity (OAU) in 2001 in Lusaka, Zambia and was launched by the African Union Ministers in charge of energy in 2008 in Algiers, Algeria. Some of AFREC's mandates include the following among other energy related issues as stated on the AFREC convention: (1) Developing policies, strategies, research and plans based on Member states, sub-regional, regional and continental development priorities and recommend their implementation; (2) Designing, creating and updating an energy continental database and facilitate the rapid dissemination of information and exchange of information among Member States, sub-regional, regional and continental institutions; (3)Providing technical support, mobilize financial and technical support, while providing capacity building to the Member States, sub-regional, regional and continental institution in the energy sector.

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