

Effect Of Covid-19 In Oilfield Sector In Southern Region Of Africa.

¹Foka Tagne Jeanlin,²Jinal Patel, ³Ashish Nagar

^{1,2} Student, ³ Professor

Department of Petrochemical Technology,

PIAS, Parul University, Vadodara, India.

Abstract

The Coronavirus outbreak has disrupted the global industries in every sector. The immediate changes are also affecting the sectors immensely and affecting the global economy. Disruption of the economy can no longer be ignored as the breakdown is leading to a degradation in the lifestyle of people. The effect of the pandemic is seen in every sector across the world. The oil industry is experiencing major drawbacks as the pandemic prolongs. The industry is not only having a decline in the demand of fuel but also other energy resources. The fall in the oil prices which were reported in the year 2020 adds more to the difficulties faced by the petroleum sector. The oilfield sector in the southern part of Africa is much weakened with almost a total shutdown of all means of transport and the dependence at more than 98% on the importation of petroleum products. Also, the historic agreement to cut global oil production has implemented pressure on a global level. Like all the other continents, the whole of Africa and the southern region of Africa in particular (South Africa, Angola, Comoros, Botswana, Eswatini, Lesotho, Madagascar, Malawi) is suffering the roundups of this pandemic in the oilfield sector. The current article illustrates the effect of COVID-19 in oilfield sector in Southern region of Africa.

Key words: Covid-19, oilfield sector, Southern region of Africa, economy.

I. Introduction

In December 2019, a new disease appeared in China, more precisely in the province of Wuhan: the corona virus disease (Covid-19). This disease quickly spread around the world and was declared as pandemic by the World Health Organization in February 2020. To this end, this virus has caused many victims, paralyzed the whole world, and is still causing infections and many fatalities. It is causing a tremendous loss of lives and badly impacting the lifestyle of the people which is due to the sudden economic and social changes occurring. An instability is observed across the countries due to changes implicated by the authorities which is adversely affecting all the sectors. To face it, the countries through their leaders have taken decisions which include confinement and the closing of the borders. Public transportation as well as overseas travelling was restricted, a lockdown was imposed by most of the countries to stop the spread of corona virus. People were urged to stay home and the one who showed symptoms was quarantined. Social distancing and wearing masks were made mandatory after than at public places. Educational institutes, markets, parks, public gatherings, pubs, bars, etc were closed to avoid mass gathering of people which could lead to a vast spread of the disease. This decision affected almost all sectors of activity, including education, politics, sports and economics. The transport sector and the oil industry too were not spared. They were amongst the worst affected sectors due to the coronavirus outbreak. Due to very less transportation allowance and no overseas commutation, the transport sector experienced a huge loss in the initial months of 2020. Also, oil and fuel industry which is directly related to transport sector also had a downfall due to minimum fuel consumption during the initial phase of COVID-19. Furthermore, the price of a barrel of crude oil fell under dollar and is still at a low rate.

The whole of Africa and the southern region of Africa in particular (South Africa, Angola, Comoros, Botswana, Eswatini, Lesotho, Madagascar, Malawi) is suffering major drawbacks due to pandemic.

II. Discussion

The World Health Organization (WHO) has declared the corona virus disease 2019 (COVID-19) a pandemic. Cases of pneumonia of unknown cause were witnessed in the city of Wuhan, in Hubei province of China on in December 2019. As of January 2020, a previously unknown new virus was identified, which was responsible for the outbreak. It was subsequently named the 2019 novel corona virus. Till 31 January the toll of positive cases in Wuhan reached 9720 with 223 deaths. Initially the epi-center of the outbreak was Hubei province of Wuhan, but soon it rapidly started extending to the other parts of China. The citizens of other countries having the travel history of China started receiving positive cases. 106 confirmed cases were received in 19 other countries except China. This novel corona virus was named Coronavirus Disease 2019 (COVID-19) by WHO in February 2020 and it was declared as a pandemic. The virus is referred to as SARS-CoV-2 and the associated disease is COVID-19. Cumulatively nearly 27 million COVID-19 cases and 900,000 deaths have been reported till September 9, 2020. Over 1.8 million new cases and 37,000 deaths were reported in the first week September 2020. There is a 5% increase in the number of positive cases and a 2% decrease in the number of deaths compared to the last week of August 2020.

i. Coronavirus in Africa, specific case of southern African countries.

As of October 9, 2020, according to WHO, Africa has passed the milestone of 1,614,653 cumulative cases (CC), 1,332,450 cases of recovered, 39,422 death cases (DC) and 242,781 of active cases (AC). In the Southern Region of Africa, 733,926 cumulative cases including 18,582 deaths, 655,827 recoveries and 59,418 active cases. In view of these data, this part of the continent alone has more than half of infected cases of the corona virus. South Africa being the most affected country in the area in particular and Africa in general. Figure i shows COVID-19 cases in Africa vs COVID-19 cases in Southern Region of Africa. Figure ii specifically shows the cases of Coronavirus in Southern Region of Africa.

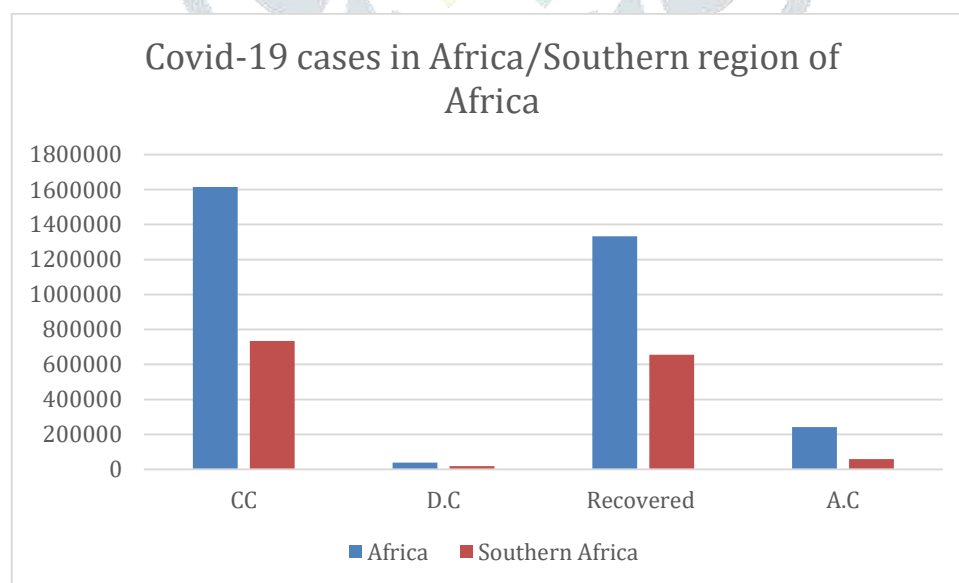


Figure i: COVID-19 cases in Africa/Southern Region of Africa.

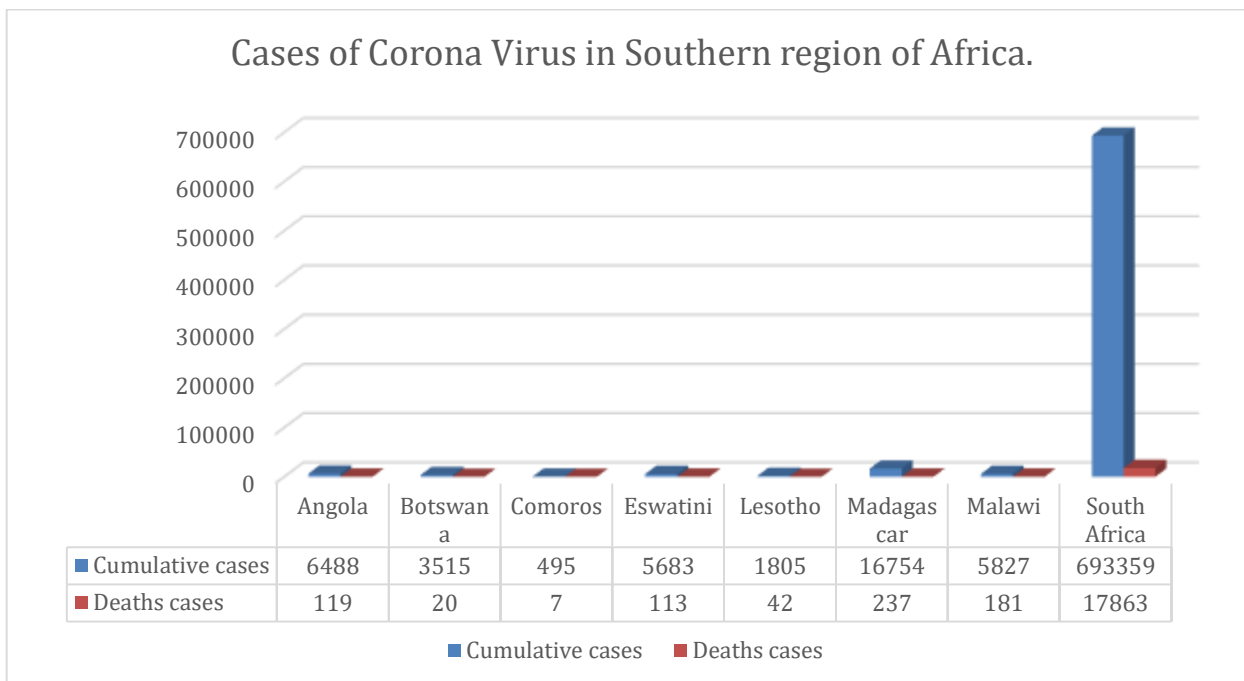


Figure ii : Cases of Coronavirus in Southern Region of Africa

ii. **Petroleum Sector in the southern Region of Africa before Covid-19**

1. **Petroleum production sectors.**

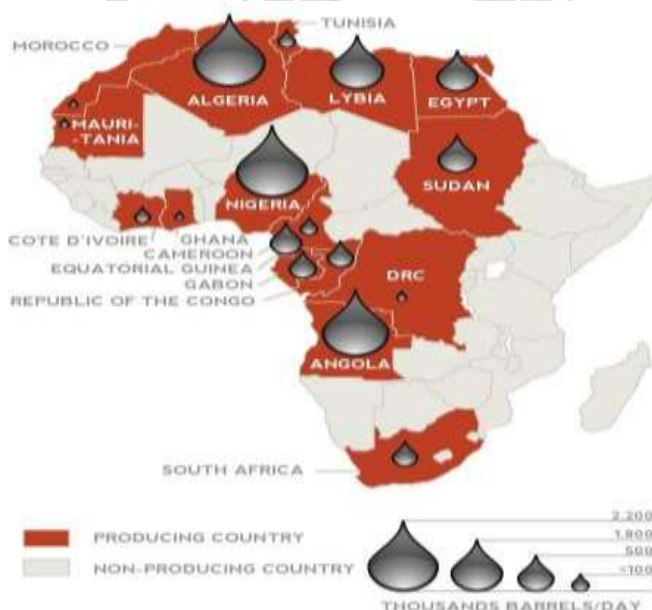


Figure iii : Petroleum Producing and Non-producing countries

The current pandemic has led to various implications in the global oil industry for different oil producers. Figure iii shows the Petroleum Producing and Non-Producing countries in southern Africa. Traditional and developed oil-producing countries are facing huge shocks in the global market. But their responses can be partially buffered through OPEC and other sovereign wealth funds. On the other hand, many producers in the south lacks such wealth buffers and suffer due to weak governance. Also, there is a limited diversification and limited capacity for the transportation of resources from alternative sources. For Petro-states like Angola, over 50% of exports are linked to oil and gas sector and the oil rents have become difficult to maintain stability. Angola, member of the Organization of Petroleum Exporting Countries (OPEC) is almost the only producer country in the Sub-Saharan zone of the continent. It is the second largest producer of crude oil in Africa after Nigeria. The country abounds in an important petroleum potential known for some time but little exploited because of the interminable civil war. The offshore zone near the enclave of Cabinda was the first to be exploited. This exploitation is operated by the company Chevron Texaco which produces approximately 500kbbbl/day, the exploitation being subdivided in "block". The country is also starting to do onshore

prospecting especially in Cabinda, something not easy with the war of the independentists in the area. Total company works in the exploitation of the oil fields in deep water of Pazflor. Which represents around 220,000 bbl/day. Onshore production in 1998 peaked at nearly 750kbbbl /day. Figure iv shows the Petroleum production in Angola in millions of ton per year.

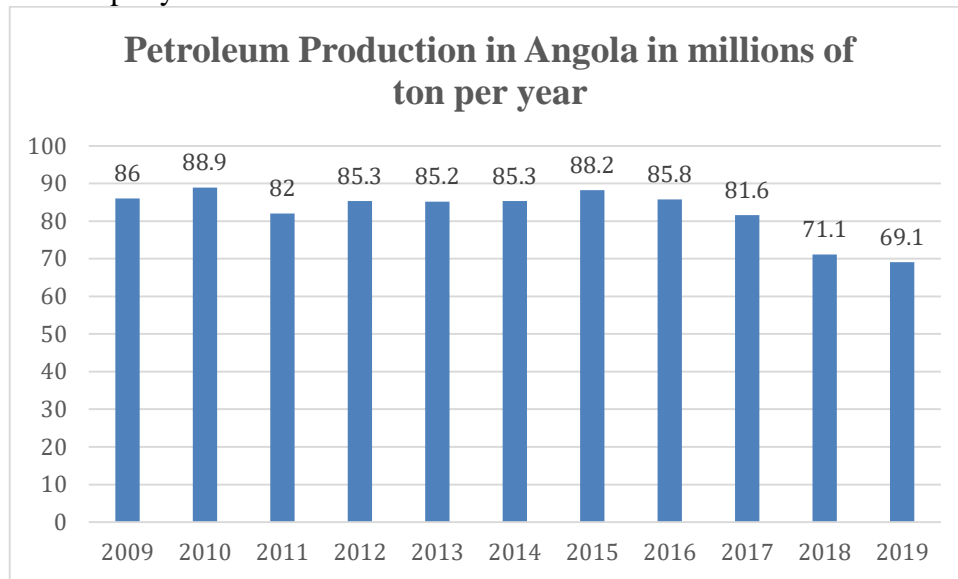


Figure iv: Petroleum Production in Angola in millions of ton per year

South Africa is the second producing country in the region with a very low production due to its poverty in petroleum reserves. However small quantities have been explored offshore (Mosselbay). The country's energy is more based on synthesis fuels(synfuels). It should be noted that Africa exports more than 76% of its crude oil. This is due to the lack of transformation structures almost absent on the continent.

2. Consumption of petroleum products in southern region of Africa before covid-19.

The African continent's Petroleum production is estimated at around 9% of all world production. This production varies according to the regions, the main production is found in the central region with Nigeria, in the Northern with Egypt and in the Western region. However, the major consumption of petroleum products is found in the Northern, Southern and Western regions. Given that the refining structures are very insufficient in Africa, the continent is therefore obliged to import petroleum products at around 85% in order to meet the demand. In the Southern region, Petroleum production is estimated at around 0.1% of the entire continent. Transformation into a refinery represents 23% of the continent. Transport consumes in total of 68% of petroleum products. Figure v illustrates the graph of the Petroleum production and consumption of petroleum products in the Southern region of African.

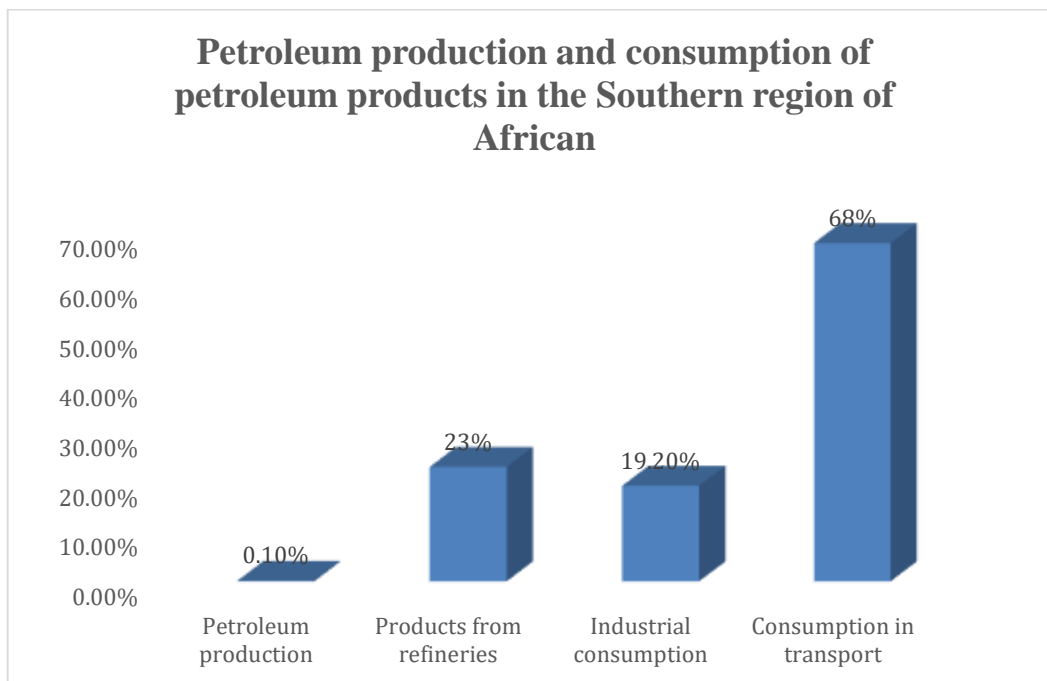


Figure v : Petroleum production and consumption of petroleum products in the Southern region of African

iii. Effect of covid-19 in the Petroleum sector in the southern region of Africa.

1. Production sector.

To cope with the spread of the Corona virus, countries have taken the decision to close borders and proceed with confinement. These decisions implied the stopping of transport traffic (planes, boat, trains and vehicles). The direct consequence in the Petroleum Sector was the drastic decrease in the consumption of petroleum products and therefore drop in the demand for crude oil on the world market. There was a 10% decrease in demand for African crude oil exporting countries in April 2020. In 2019, the price of crude oil was around \$64/barrel. In 2020, the price started to fall due to a disagreement between Saudi Arabia and Russia on the production then with the dizzying drop in demand in the market due to covid-19. In March 2020 the price drops to \$30 then \$25 in April (Brent price used). According to OPEC data, Petroleum production has declined in Africa, especially in Angola. This can be explained by regression in demand on the market but also by the dispute between Saudi Arabia, member of the OPEC, and Russia.

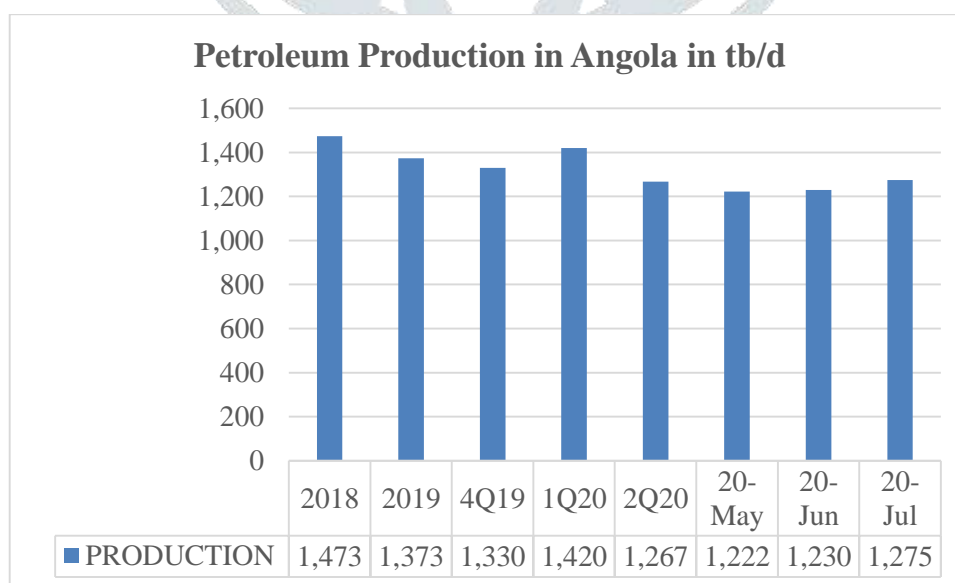


Figure iii : Petroleum Production in Angola in tb/d

The production reduction is also due to the fact that OPEC and non-OPEC has decided (in the Declaration of Cooperation) to stabilized oil market by reducing the production rate. The disruption of the production sector

and the incurred loss of the export earnings have potentially developed trajectories for the country. Figure vi shows the Petroleum Production in Angola in tb/d.

iv. Effect of Covid-19 on Consumption of petroleum products in southern region of Africa.

With the shutdown of means of transport due to the corona virus, the consumption of petroleum products has decreased, therefore imports also have declined since most of these countries are importers. The refineries on the continent are therefore out of production or under maintenance. We can name:

- The Engen refinery at Durban in South Africa that shut down temporarily since March 2020 due to the lower demand for petroleum products during lockdown.
- Sasol's refinery in South Africa reduce the production rate at 25% since the demand has decreased and due to the reduction of the number of workers in the workplace.
- Angola's oil ministry has postponed the announcement of the winner of the Soyo refinery tender due to measure taken for corona virus.

III. Conclusion

- Covid-19 which started in China has spread around the world and caused the death of many people. This situation has pushed the world to confinement and the closure of borders. In the south of the African continent, the effects of the halt in transport traffic were immediate.
- Angola, member of OPEC and almost the only petroleum producing country in the south of the continent, has seen its production decrease. As the consumption of petroleum products has also decreased, the existing refineries in the southern zone have either to stop or reduce production; this was the case in South Africa, the country with the most refineries in the region.
- According to the World Bank, losses in the oil sector in Africa in general and in the southern region in particular amount to billions of dollars in less than 6 months. To face this situation, OPEC countries members, including Angola at the end of the extraordinary meetings of April 9 and 12, 2020, have taken the resolution to reduce the Petroleum production by 9.7mb/d from May 2020 and over a period of 2 months. Thereafter, the drop in production must continue by 7.7mb/d until the end of the year and 5.8mb/d until April 2022.

IV. Acknowledgement

Authors would like to convey their sincere thanks to the Parul University. Authors would like to thank to HOD, Chemistry for her constant encouragement. Authors would like to convey their gratitude to the principal of PIT and PIAS for his efforts and encouragement.

V. References

- 1- Africa Union , AFREC: Africa Energy commission38601-doc-afrec_report-_covid-19_and_its_impact_on_african_oil_markets-_final_27-05-2020
- 2- Angola starts exporting liquefied natural gas" [archive], on Au comptoirangolais, June 17, 2013 (accessed July 21, 2016
- 3- « BP Statistical Review of World Energy 2013 » [archive] [PDF], sur <https://www.bp.com/> [archive], juin 2013, p. 8-10
- 4- " https://fr.wikipedia.org/wiki/Liste_des_pays_par_production_de_p%C3%A9trole
- 5- OPEC Monthly Oil Market report (MOMR)- August 2020 https://www.opec.org/opec_web/en/publications/338.htm
- 6- OPEC Monthly Oil Market Report (MOMR) www.opec.org/opec_web/en/publications/338.htm
- 7- "Total starts operating a giant deep-water oil field in Angola" [archive], Le Monde, August 26, 2011.
- 8- World Bank <https://data.worldbank.org/indicator/> www.worldbank.org/en/country/algeria/publication/economic-brief-july-2016 www.indexmundi.com/commodities/?commodity=crude-oil&months=60