Journal of Electrical Power & Energy Systems, 2022, 6(1), 1-16
https://www.hillpublisher.com/journals/jepes/
ISSN Online: 2576-053X
ISSN Print: 2576-0521

US Oil Companies Returning to Libya?

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How to cite this paper: Eugene Khartukov. (2022) US Oil Companies Returning to Libya? *Journal of Electrical Power & Energy Systems*, 6(1), 1-16.
DOI: 10.26855/jepes.2022.01.001

Received: November 18, 2021
Accepted: December 20, 2021
Published: January 18, 2022

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Abstract

The current status and recent history of the Libyan oil industry, roles in it of US oil companies and of anti-Gadaffi rebel military attacks on oil-producing facilities, refineries and sea ports are considered and analyzed. Other foreign oil businesses in Libya and national oil companies, oil production and refinery capacity, and output are also analyzed. Military control over major national oil-related facilities is scrutinized. A role of Russia is shown. Main oil fields and sedimentary basins are presented. The military confrontation in Libya is well documented. The article mainly concludes that as a result of the considerable negative impacts of the rebels' attacks as well as of the UNO and US sanctions, Libya's oil industry needs now huge investments to restore to normal levels.

Keywords

Crude oil, oil production, refining, companies, Libya, the USA, Russia

Libya is looking for U.S. oil companies to return to the oil-rich nation, according to Bloomberg.

Libya's oil minister Mohamed Aoun has said that he hopes U.S. companies will return to Libya, although Libya's oil infrastructure is in dire need of repairs and upgrades, the minister added [1].

Libya plans to allow foreign oil companies to invest once again in Libyan oil production in the coming months after a self-imposed moratorium in 2011, according to the statement released by Libya's National Oil Corporation (NOC). Speaking at an energy conference in London at the beginning of 2021, NOC chairman Mustafa Sanalla(h) said that "NOC-driven projects to expand oil production could create a virtuous circle of domestic economic stimulus and security" [2].

"We intend in the coming months to lift our self-imposed moratorium since 2011 on foreign investment in new projects to achieve the best national interest for the Libyan oil sector and for Libya as a state," Sanalla said in a statement.

Oil production in Libya reached 1.25 million barrels per day (b/d) by the end of 2017 and could reach 1.6 mln b/d by 2022, Sanalla noted, adding that, "After three years of blockades by the Petroleum Facilities Guards, all major oil export routes are now open".

Libya's economy depends primarily on the oil sector, which represents over 95 percent of export earnings. Moreover, the oil and gas sector accounts for about 60 percent of total GDP. Before the civil war in 2011, it was an important contributor to the global supply of light, sweet, low-sulfur crude oil, which Libya mostly exports to European markets.

Investment in oil production capacity is needed to build on the opportunity created after Libyan oil flows were unblocked.

"This can be an important foundation of stability in Libya if we build on it", Sanalla continued.

He said that the oil sector had suffered from chronic under-investment, and added that the country and the integrity of the NOC is the best guarantee there is that Libya will be preserved as a unitary state.

Libya is home to Africa's greatest oil reserves.

In March 2021, Libya announced its intention to increase oil production to 1.45 million bpd by the end of this (2021) year, 1.6 mln b/d within two years, and 2.1 mln b/d within four years.

But as of August 2021, production has remained mostly flat this year, sitting at 1.163 mln b/d after numerous setbacks along its path toward a production ramp up.

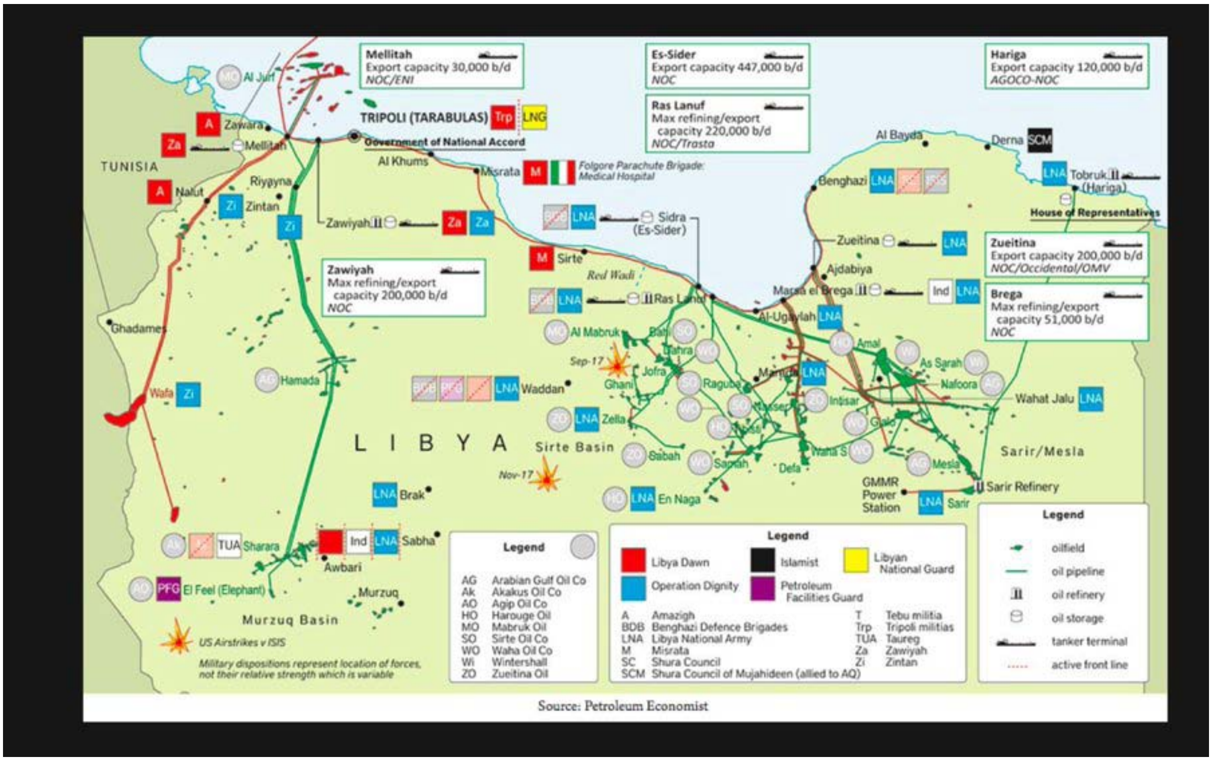
Those setbacks include protests and other security-related issues, including faction infighting and corroded pipelines that caused leaks. But budget constraints also have cut into production, derailing Libya's ambitious plans to increase production.

The budget gaps—which could be filled in part by U.S. oil companies coming onto the scene—could go a long way to spurring on their oil production plans.

For Libya, oil revenues are its almost exclusive foreign revenue stream. And in order to make ends meet, Libya would need to increase its oil production by 40% next year, with its central bank (CBL) in Tripoli calling this increase "imperative".

It's no wonder, then, that it is looking to U.S. oil companies as a way to increase its own production and pad its bottom line.

Libya's goal now is to convince foreign oil companies that it is stable enough to make Libya's vast oil riches worth their while, adding that there is still much territory to be explored (Fig. 1).



Source: https://twitter.com/reportinglibya/status [3]

Figure 1. Oil and Gas Libya Map (as of the start of 2019).

Libya has six main sedimentary basins (not to mention a part of Western Desert Basin, mostly located in Egypt):

- Sirt(e)
- Murzuk/Murzuq
- Offshore/Tripolitania (Jifarah and Jabal Nafusah)
- Cyrenica
- Kufra(h)
- Ghadamis/Hadama (Fig. 2)

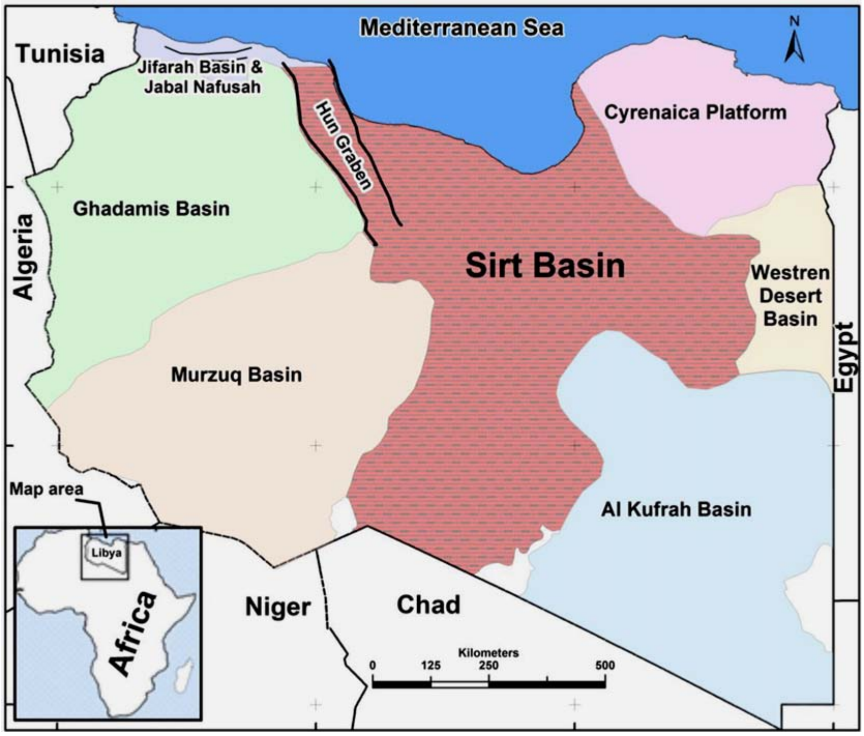


Figure 2. Sedimentary Basins of Libya.

Nearly 90 commercil oil fields are currently known in Libya, with the bulk of them discovered in the Sirt basin (Fig. 3). Still, operations at some of Libyan oil fields were negatively affected by attacks of the opposition forces and the withdrawl of foreign companies (see below).

Figure 3. Known Oil (and Gas) Fields in Libya.

FYI: On 17 December 2015, the Libyan Political Agreement, a United Nations-led initiative, signed on and the Government of National Accord (GNA), an interim government of Libya, was formed under the terms of the agreement, which was unanimously endorsed by the United Nations Security Council that welcomed the formation of a Presidency Council for Libya and recognized the Government of National Accord as the sole legitimate executive authority in Libya. On 31 December 2015, Chairman of the Libyan House of Representatives, Aguila Saleh Issa declared his support for the Libyan Political Agreement. The General National Congress has criticized the GNA on multiple fronts as biased in favor of its rival parliament the House of Representatives.

The Prime Minister of GNA, Fayez al-Sarraj, and six other members of the Presidential Council and proposed cabinet arrived in Tripoli on 30 March 2016. The following day, it was reported that GNA has taken control of the prime ministerial offices.

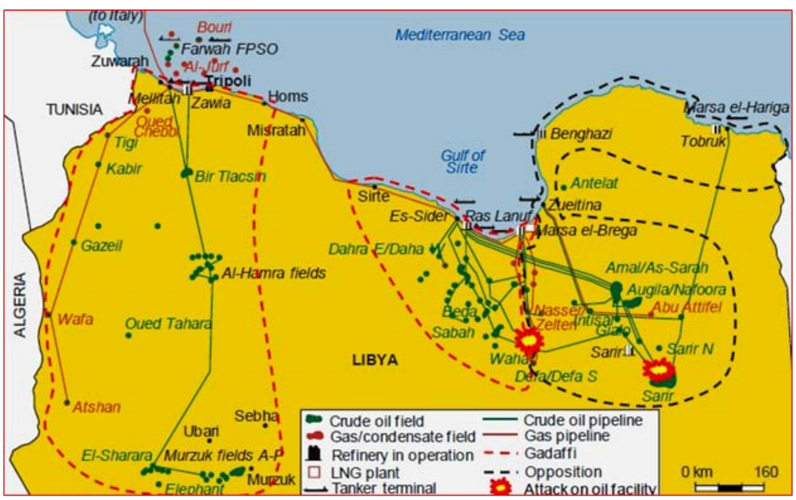
After March 2016, conflict between the two rival parliaments, the Libyan House of Representatives and the General National Congress (GNC), intensified. Despite previously supporting it, the Libyan House of Representatives withdrew its recognition of GNA by voting against it in the summer of 2016 and becoming their rival for governing the country. Despite being backed by only parts of the GNC and without formal approval from the Libyan House of Representatives, who called for new elections to be held by February 2018, the GNA was recognized, as of September 2020, by the United Nations as Libya's legitimate government.

From 2015 to 2016, GNA struggled to assert its authority and was largely unsuccessful in unifying Libya. The Government of National Accord's ultimate viability was uncertain given that the country remained greatly divided across political, tribal and ideological lines.

At the start of 2020, the Benghazi-based Libya National Army (LNA) led by rebel warlord Khalifa Haftar became locked in a power struggle with the GNA, resulting in a blockade of the country's eastern oil fields and ports—the blockade that was successful until September. All that time the nation's oil industry was actually paralized. But this was only the beginning of the Libyan armed confrontation.

The armed conflict between forces under the control of the country's deposed leader colonel Muammar Gaddafi, who has been in power since 1969, and the armed units of the National Transitional Council (NTC), supported by the United States, the League of Arab States, the European Union, other states and interstate organizations, reached its maximum. As the matter of fact, the conflict began with unrest in February 2011 following the overthrow of the authorities in neighboring Tunisia and Egypt and quickly took the form of a civil war, which formally started on February 15, 2011, and ended on October 23 of that year—that is actually last for less than 8.5 months. Muammar Gaddafi was captured and killed on 20 October 2011. M. Gaddafi was found hiding in a culvert west of Sirte after his convoys were attacked by NATO's aircraft. He was then captured by the NTC forces and brutally killed shortly afterwards.

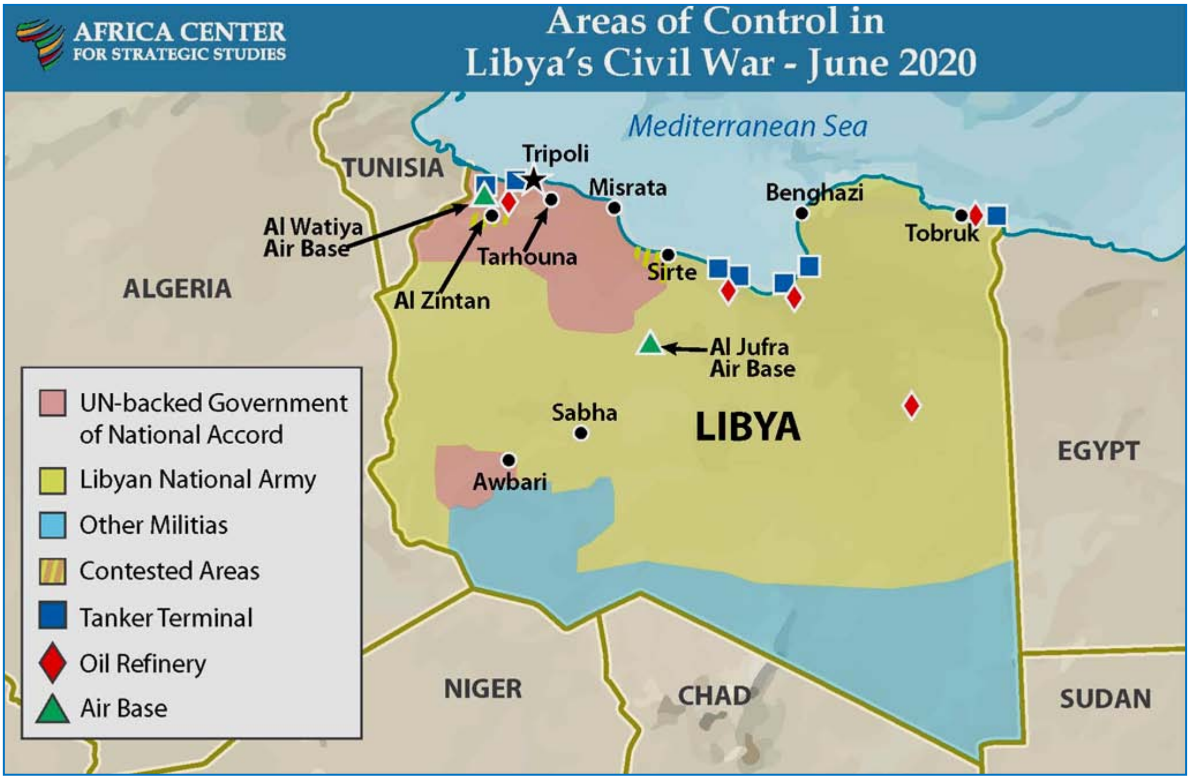
In particular, the military confrontation between Gadaffi and opposition forces may be examplified using a special study on Libya oil conducted by the International Energy Agency (IEA) in April 2011 (Fig. 4).



Source: https://crudeoilpeak.info/libya-oil-field-battle-lines [4]

Figure 4. Military Situation around Lybian Oil Fields and Sea Ports as of April 2011 (according to IEA).

Even after the formal end of Libya's Civil War and the inglorious death of the colonel Gaddafi, most of the country's territory remains in the mid of 2020 under military control of the self-proclaimed Libya National Army (LNA) of the rebel war-lord Khalifa Haftar, who is supported by Russia, Egypt and the UAE, (including 4 out of 5 Libyan oil refineries—*see below*, and eastern sea ports—Benghazi, Es-Sider, etc.—and Sirte and Sharara oil fields) as well as forces of other militias opposed to the official authorities (see above) (Fig. 5).



Source: Shifts in the Libyan Civil War https://africacenter.org/spotlight [5]

Figure 5. Areas of Military Control (as of June 2020).

According to BP's latest data, Libya's proven oil reserves are estimated at the end of 2020 at 48.4 bln bbl or 6.3 mlrd tonnes (almost 2.8% of the world's total) [6]. In turn, according to the US EIA and the *Oil and Gas Journal* (*OGJ*), Libya holds around 44 billion barrels of oil reserves, the largest in Africa [7]. Finally, the OPEC Secretariat estimates the country's proven oil reserves at the end of 2020 at 48,363 mln bbl or over 3.12% of the world's conventional oil (unfortunately, based on BP's unupdated reserve data) [8].

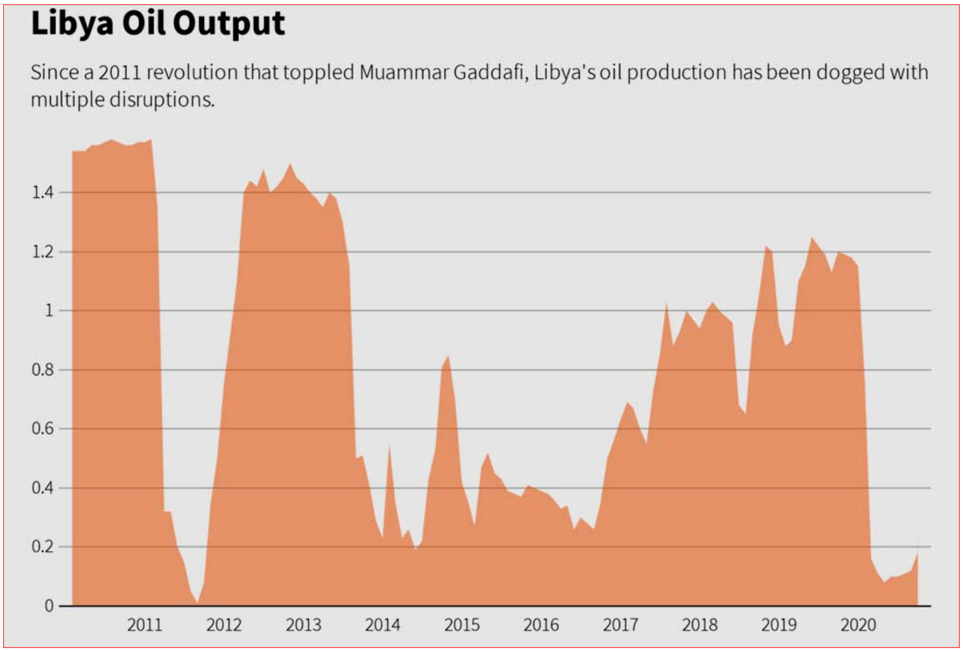
Oil was discovered in Libya in 1959, when the US Esso drilled in the Siritica region, which is essentially a northward extension of the Sahara Desert, the north central part of the country. It brought in a well flowing a hefty 17,500 barrels per day. Later in 1959 other oil wells were drilled in Siritica.

In 2019, Libyan oil production reached a level of 1.3-1.5 mln b/d and then (in 2020) sharply declined to only 0.4 mln b/d for political/military reasons (see below). It noteworthy that there is no reliable source of data on oil production in Libya and the data from different sources vary greatly (Table 1 and Figs. 6-7).

Table 1. Yearly Average Oil Production in Libya in 2016-2020, in kb/d

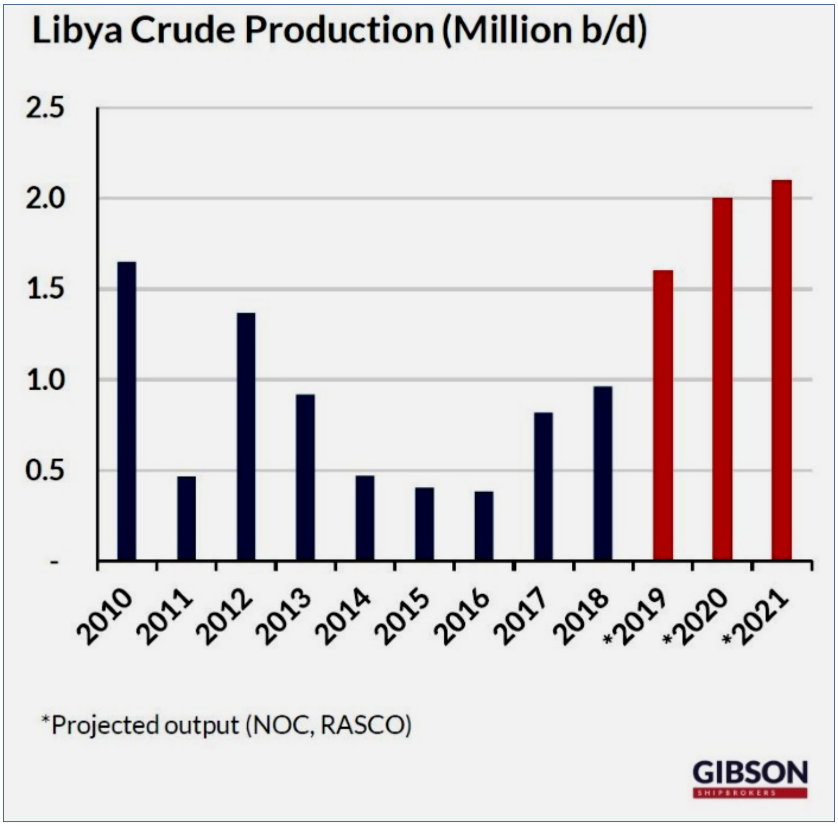
Source and type of data	2016	2017	2018	2019	2020
OPEC Secretariat, Crude Oil	3,318.0	1,831.6	1,347.2	1,486.6	389.3
BP, Crude Oil + Lease NGLs	412	929	1,165	1,306	390

Source: compiled by the author based on Daily crude oil production File:///C:/ Users/DELL/Desktop/ASB_2021 and BP Oil: Production in thousands of barrels per day [9-10].



Source: https://www.reuters.com/article/us-libya-oil-id [11]

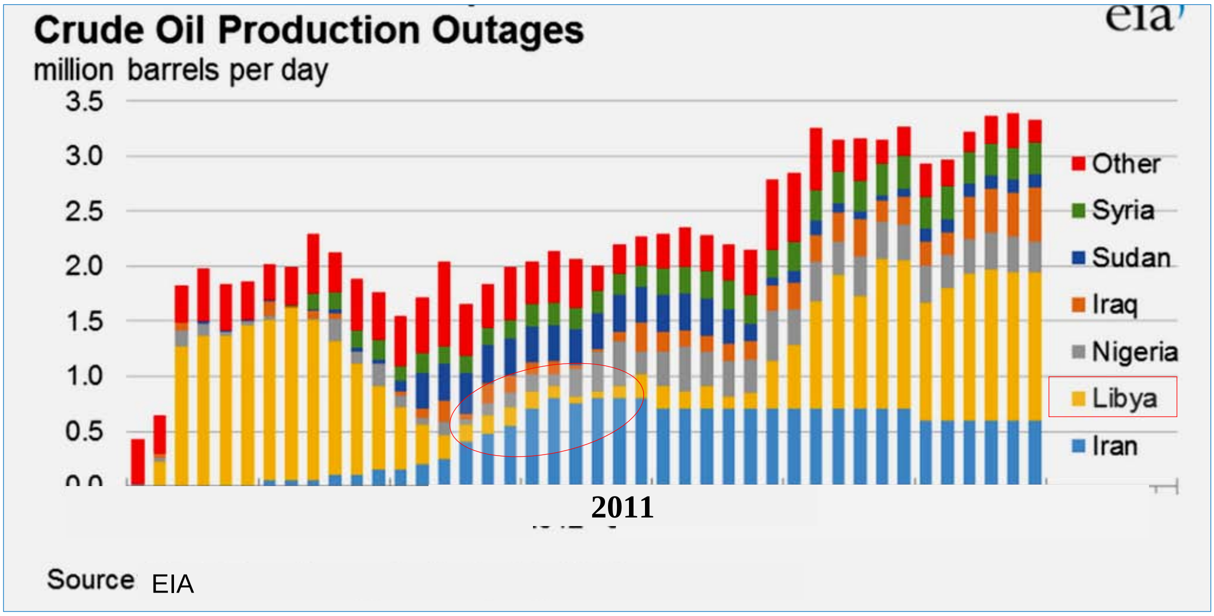
Figure 6. Monthly Average Crude Oil Production in Libya in 2011-2020 (according to Reuters), in mln b/d.



Source: https://yandex.ru/images/search? [12]

Figure 7. Annual Crude Oil Production in Libya in 2010-2021, in mln b/d.

Furthermore, Libyan oil production used to be quite ustable die to armed attacks of Libyan rebels on oil-producing facilities. Thus, for this reason, the first major cutback of the nation's oil output occurred in 2011-according to BP, down to 516 kb/d or by more that 71% from 2010 [10] (Fig. 8).

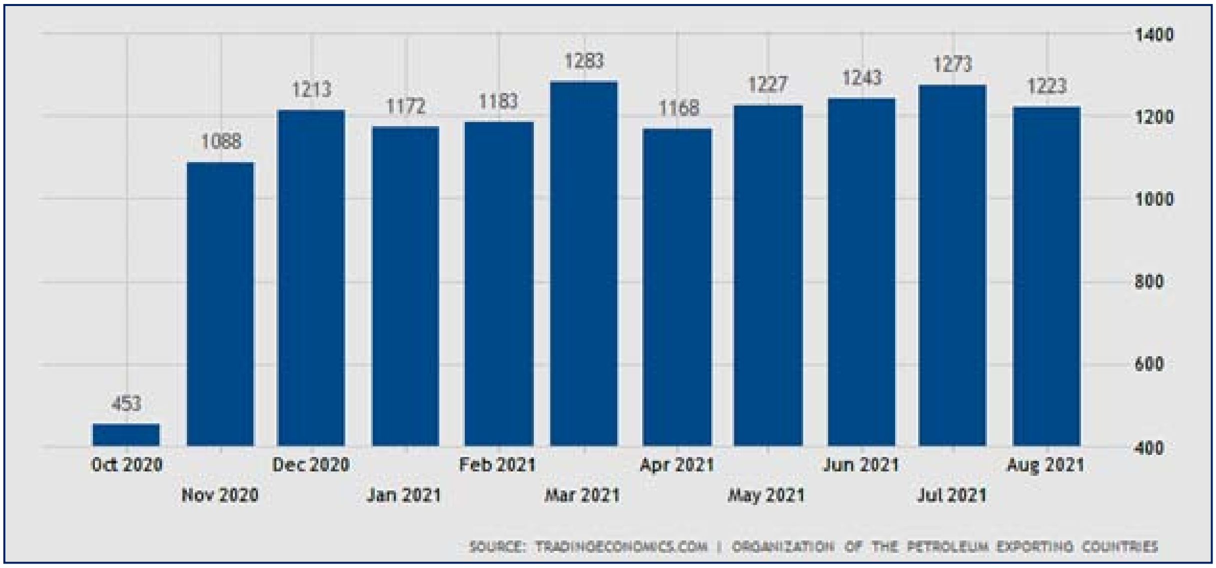


Source: https://www.vox.com [13]

Figure 8. World and Libyan Crude Oil Production Outages in 2008-2015, in mln b/d.

In 2020, Libya's oil production declined to unprecedented levels due to the continuous (until September) closure of the oil fields by the militias loyal to renegade Libyan General Khalifa Haftar and surreptitiously supported by Russia. On 17 January, Haftar's militias closed the major Az-Zawiyah seaport in the east, over claims that the revenues of the oil exports go to the National Unity Government which was backed by the international community (see above—FYI).

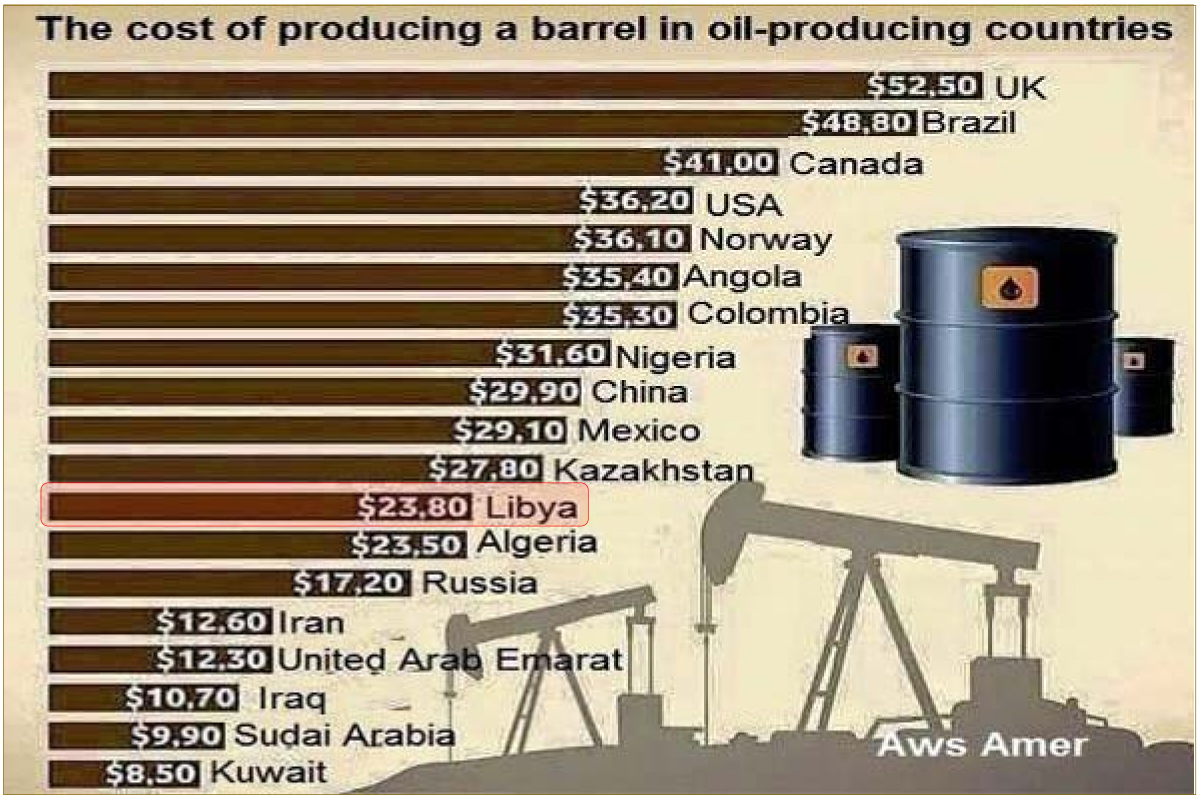
The started civil war negatively affected Libyan oil production in 2021 as well (Fig. 9).



Source: https://tradingeconomics.com [14]

Figure 9. Monthly Crude Oil Production in Libya: October 2020-August 2021, in kb/d.

The average cost of producing Libyan crude is estimated at less than US$24 per barrel—lower than the average global of around US$31/bbl put by the famous Norwegian consultancy Rystad Energy (Fig. 10).



Source: https://twitter.com/thestreet/status/ 692691898675261440 [15]

Figure 10. Average Technical Costs of Producing a Barrel of Crude Oil by Country (according to Rystad Energy), in US$/bbl.

In the 2000s and up to 2011, foreign oil companies operating or holding a licence in Libya included BP, Chevron, CNPC, ENI, Marathon, Occidental, OMV, Repsol, Royal Dutch Shell, Statoil (now Equinor), Total, and Wintershall, with Chevron, Marathon Oil, and Occidental being from the States. When relation between the west and Tripoli seriously deteriorated and the civil war outbroke, most of foreign oil businesses (and all the US entities) left Libya but local petroleum companies (like Arabian Gulf Oil (AGOCO), Waha Oil, Sirte Oil, Oilinvest, Zawia Oil Refining, Hamada Pipeline, Jowfe Oil Technology, Brega Petroleum Marketing, Zuetina Oil (all of which were parts/ subsidiaries of National Oil Corporation (NOC or LiNOC), Oilibya, RASCO, and National Oil Corp. itself) stayed in the country. And some of them were working despite the known political issues.

Moreover, operations of the five US petroleum companies, which were producing Libyan oil in the 80s (Marathon, ConocoPhillips, Amerada Hess, Occidental and W.R. Grace), were actually all suspended by the trade embargo imposed on Libya by the Reagan administration in the late 80s.

The US oil companies, which were forced to leave Libya, may be replaced by bravier Russian colleagues (or rather competitors).

At the end of May 2021, Gazprom has again started producing oil in Libya as part of a joint venture with the Germany's Wintershall Dea. Production during that (2021) year was expected to grow about 1.5 times, from 43 to 62 b/d. Work resumed in 2020, in the fall, after 9 months of downtime caused by the hostilities. Now the entire infrastructure is being restored gradually. It is planned to carry out work at the fields to restore infrastructure and increase production. The JV has been already operating at Libyan oil fields for over 40 years. During thatis time, nine fields were commissioned. In Libya, for many a year there has been a settlement of the permanent conflict between the east and west of the country, and large-scale hostilities sometime fade out, then flare up with renewed vigor. It is believed that the Russian side supports the Libyan National Army, which is led by Marshal Haftar, and the West—the Government of National Accord.

The dual power in the country became a problem for the entire national (and the world's) oil industry— the operations of oil companies were regularly disrupted. Just to remind that Libya is in tenth place in the world in terms of oil reserves—more than 6 bln tonnes, and in the first one on the African continent. For Russia, Libya is still a very risky region, despite the attractiveness of the opportunity to work in such a region rich in minerals. It is unlikely that Russian companies will want to go to this country without appropriate guarantees. For example, due to the factors mentioned above, Russian companies have certain problems with the resumption of cooperation with the Government of National Accord of Libya. If there is a final victory of the Government of National Accord, Libya's oil assets may become the subject of a division of corporations between the EU and the United States, and the prospects for Russian companies will be very vague. In the best case, Gazprom will get crumbs from this table. However, if Haftar wins, the situation is likely to be an opposite. In addition, the probable sanctions against Libya in this case will further strengthen the Russian-Lidyan oil cooperation, following the example of Venezuela [16].

Still, in October 2021, Russia's Tatneft resumed operations in various Libyan fields, but not on all blocks, although the force majeure (rebels' attacks) continue(s) [17].

Tatneft worked in Libya from 2005 to 2014 and has left, when unbearable hostilities erupted in the country. The company had four production-sharing agreements signed there.

Crude oils discovered and produced in Libya are usually light and sweet. Thus, the main Libyan export crudes—the famous *Es Sider* (exported ex the same-name Mediterranian sea port), *Zuetina* (ex-Zueitina terminal) and *Brega* (ex-Brega terminal)—have API densities of 36.71°, 41.5°, and 42°API and sulfur content of 0.37, 0.31 and 0.22 wt.% respectively.

The Opec+ coalition's two largest producers, Saudi Arabia and Russia, may raise crude output to 9.6mn b/d in August 2021 and 9.704mn b/d in September. However, Libya (like Iran and Venezuela) is exempted from oil production regulations under the current deal. (Also, OPEC has freed Libya—as the country suffering from the civil war—from regulating its oil output within an OPEC-agreed national quota).

Libya took a major step toward reviving its battered oil industry by reopening its biggest field, presenting a new headache for OPEC+ as the alliance of major producers tries to curb global supplies.

The National Oil Corp., Libya's state energy company, lifted *force majeure* on the western deposit of Sharara and instructed its operator to resume production, according to a statement of October 4. The field will initially pump 40,000 barrels of crude a day, before reaching its capacity of almost 300,000 barrels next week, a person with knowledge of the situation said [18].

That would double overall output in Libya to around 600,000 barrels daily, said the person, who asked not to be identified because they aren't authorized to speak to media.

Crude from Sharara has begun reaching storage tanks at the port of Zawiya, another person said [18].

Libya's oil industry was shut down in January 2020 when the Benghazi-based Libya National Army (LNA) led by rebel commander Haftar became locked in a power struggle with the GNA, resulting in a blockade of the country's eastern oil fields and ports.

Sharara's reopening follows a truce in Libya's long-running civil war that's already led to many oil fields and ports in the east starting up after an almost total shutdown since January. And Libyan federal budget, almost completely "sitting" on petroleum revenues (see below), lost a lot of money. The central bank in Tripoli said that revenue for 2020 plummeted to $652 million from $7.04 billion in 2019.

Libya, the holder of Africa's largest crude reserves, has been torn by civil war since the ouster of late ruler Muammar Gaddafi in 2011.

Based in the capital Tripoli and currently led by Prime Minister Fayez al-Sarraj, the Government of National Accord (GNA) was founded in 2015 under a UN-led agreement.

Al-Sarraj's government has been battling Libyan warlord Khalifa Haftar's militias since April 2019 in a conflict that has claimed thousands of lives, but efforts for a long-term political settlement failed.

Libya's National Oil Corporation (NOC) is struggling to control oil fields, storage tanks, pumping stations, pipelines and ports, which have been damaged or corroded, and lacks the money to carry out repairs.

The reopening of the oil fields and ports since Sept. 18, after an eight-month hiatus, prompted resurgence in Libya's oil industry to the extent that daily crude oil production in the country surpassed 500,000 barrels from previous levels of as low as 100,000 barrels.

Tripoli's crude output saw a rapid rebound, reaching nearly 1.25 million barrels a day from almost a dead start in September, thanks to a tentative peace between rival military forces.

However, the country's output fell to around 1 million barrels daily in the wake of the Waha Oil Company's decision on Jan. 16 to shut the pipeline that takes crude to the eastern oil port of Es Sider, the country's biggest.

The NOC did not mention the nearby deposit of El-Feel (Elephant in Arabic). The 70,000-barrel-a-day field normally follows Sharara's shutdowns and restarts because it relies on electricity from its bigger neighbor to operate.

Libya is an OPEC+ member but it is exempt from the group's supply cuts, initiated in May as the coronavirus pandemic stifled economies and caused oil prices to tank. The alliance, led by Saudi Arabia and Russia, planned to ease the curbs by 2 mln b/d from the start of 2021.

Yet with virus cases accelerating in many countries, the OPEC faced a difficult decision: benchmark Brent crude has more than doubled to around $42.25 a barrel since May 2020, but it is still down 36% that year. "The Libyan oil restart is gaining momentum faster than most people expected," said Bill Farren-Price, a director of the Austin-based energy analysis firm Enverus (fka Drillinginfo Inc.). The likelihood of more Libyan exports is "an additional headwind for OPEC at a time when it is already grappling with softer than expected demand as the second wave of COVID-19 inten-sifies" [19].

Still, the North African nation's energy infrastructure is crumbling after almost 10 years of conflict and chaos following the ouster of former dictator Muammar Qaddafi in 2011. Frequent shutdowns and a lack of nuts-and-bolts servicing have left pipelines corroding and storage tanks collapsing. The NOC's chairman Mustafa Sanalla(h), told Bloomberg in June 2020 it would cost more than $100 million to fix wellheads alone, limiting the nation's ability to ramp up production quickly.

Force majeure is a legal clause protecting a party that can't fulfill a contract for reasons beyond its control. Sharara is run as a joint venture between the NOC, France's Total SE, Spain's Repsol SA, Austria's OMV AG and Norway's Equinor ASA (formerly Statoil).

The NOC, based in the Libyan capital of Tripoli, said it reached a "gentlemen's agreement" with militias known as the Petroleum Facilities Guard who were active near Sharara. The militias are obliged to "end all obstacles" hindering operations at the field, the NOC said. That came after United Nations-sponsored talks this month in Egypt, which were partly about restoring security at Libya's oil facilities.

Libya was producing 1.2 million barrels a day last year. Khalifa Haftar, a Russian-backed commander who controls much of the east, blockaded ports and fields in mid-January as he attempted to unseat the UN-supported government in Tripoli. That caused output to slump to less than 100,000 barrels a day, most of it from offshore fields [19].

Libya will have to raise by 40 percent its oil production—its major and almost exclusive foreign revenue stream—next year, in 2022, in order to meet its expenditures and start restoring the economy crippled by 10 years of civil war, Central Bank governor Sadiq Al-Kabir told Bloomberg in an interview published on July 19.

The governor, Sadiq al-Kabir, also said he had no contact currently with the head of a parallel branch of the central bank in the east of the country, and that the rupture was entrenched by Libya's political divide.

Since 2014, Libya has been split between competing governments and military alliances based in Tripoli and the east, a division that has been reflected in key institutions including the central bank and the National Oil Corporation (NOC).

However, receipts from oil sales, Libya's main source of federal revenue, have continued to be processed by the central bank in Tripoli, home to the internationally-recognized government (Fig. 11).

As the nation's oil output fluctuated over the past five years, a large black mar-ket for foreign exchange developed, banks ran short of cash, and living standards dropped sharply.

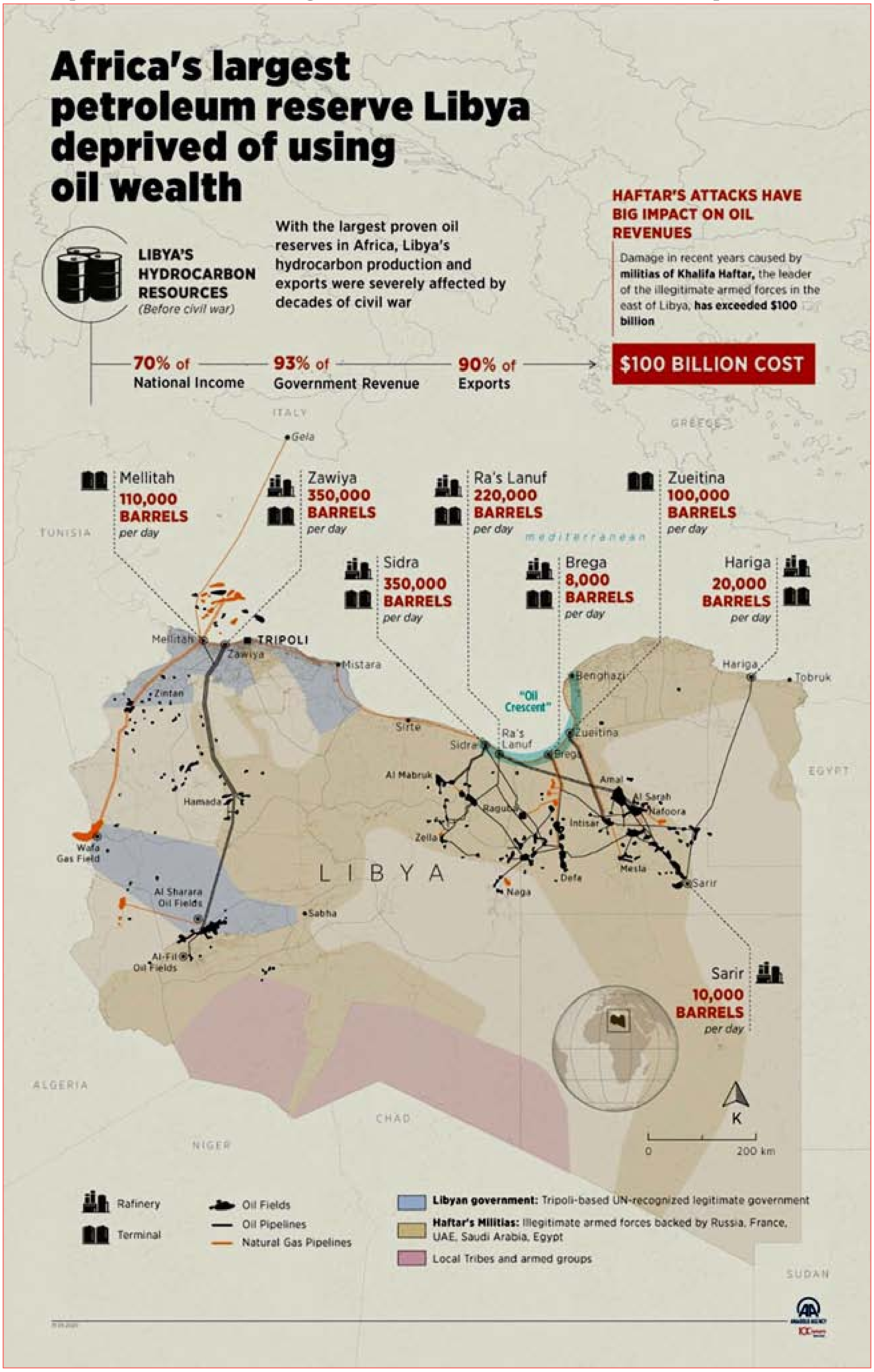
"It is of course imperative that production rates in 2022 have to go higher," said Central Bank governor Sadiq Al-Kabir about Libya's oil output, which is around 1.3 million b/d at present.

According to the central bank's governor, the OPEC member currently exempted from the OPEC+ cuts has to raise its oil production to 1.8 million bpd in 2022.

Such production levels, if stable, could generate $35 bln in oil revenues for Libya in 2022 if oil prices average $60 a barrel, Al-Kabir told Bloomberg on 6 August 2021 [21].

This 2021 year, amid relatively stable oil production (so far), Libya could generate $25 billion in oil revenues, the central bank's governor said. This would be a major improvement from the $3.6 billion the country received in

2020 when its oil exports were offline for eight months due to a blockade of its oil export terminals [21].



Source: Africa's largest petroleum reserve Libya deprived of using oil wealth https://www.aa.com.tr/en/info/infographic [20]

Figure 11. Libya's Hydocarbon Revenues in 2019.

Libya, however, could find it difficult to raise its oil production by that much.

The country could boost its oil production to 1.6 million bpd by the middle of 2022 if the industry has the necessary funding, Libya's Oil Minister Mohamed Oun told Italian news agency Agenzia Nova in an interview published in the late July [21]. At present, Libya has 5 oil refineries with their combined input capacity of some 380 kilobarrels of crude and/or condensate per day (Table 2 and Fig. 12).

In the middle of 2020, four of them, partly destroyed by rebels' armed attacks, were under control of Khalifa Haftar's illegal LNA (see above).

Table 2. Libyan Existing Oil Refineries (as of January 2021)

Name	**Location** (city or near)	**Operator** (1)	**Year of Comission**	**Installed Primary Capacity** (2), kb/d
Ra's Lanuf	Ra's Lanuf	–	1984	220
Zawiya	Tripoli	NOC	1975	120
Tobruk	Marsa El-Hariga	–	1971	20
El-Brega	Marsa El-Brega	–	1961	10/8
Sarir	Sarir	–	1989	10
Total	**Libya**	**–**	**1961-1989**	**380/378**

(1) Only for the refineries not controlled by LNA. (2) Not accounting for the damage from the rebels; as of the start of 2021

Source: Compiled by the author based mainly on File:///C:/ Users/DELL/Desktop/ASB_2021 and https://en.wikipedia. org/wiki/List_of_oil_refineries#Libya [22-23]

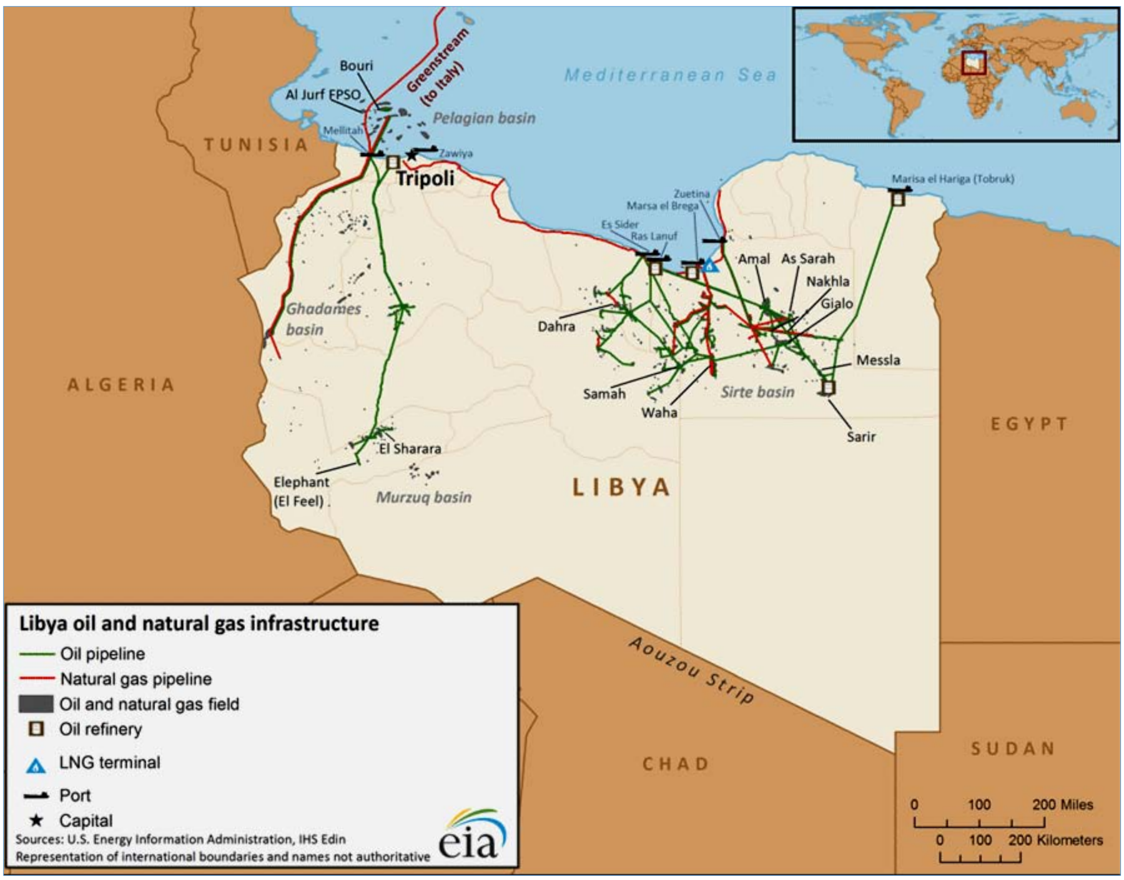


Figure 12. Libyan Petroleum Infrastructure (Fields, Pipelines, Refineries, and Ports) as of the Start of 2021.

So, at present, primary distillation capacity of all 5 Libyan oil refineres is close to 380 kb/d or over 3% of total refinery capacity in the OPEC countries (but this is without account for the damage from anti-Gaddafi rebels' attacks, which is difficult to estimate) [23].

In 2020, refinery production in Libya stood at estimated 80,000 kb/d (consisting mainly (11 kb/d) of heavy fuel oil) [24]. This means that the country's oil refining plants were utilized, as estimated by the GAPMER, on the average for less than 23% (or, surely, somewhat higher with account for the rebels' damage). Quite a modest level of the indicator for oil refining but one should bear in mind that—due to the rebels' military activity and the civil war the feeding oil production has lowered in Libya since 2010 for more than four times (!) (from 1.65 mln b/d in 2010 down to less 0.4 mln b/d in 2020) (see above). As a result, in the late August 2011, all the five oil refineries, which suffered from a severe lack of feed, were stopped for some time and for a radical reconstruction—as all the plants were quite obsolent.

Libya's oil-refining sector has been hit hard not only by the anti-Gaddafi rebel forces but by UN sanctions imposed by the international organization since 1992, especially by the UNO Resolution No. 883 of November 1, 1993, which prohibited the country from importing oil-processing equipment. Libya is looking now for ways to extensively renovate the entire refining system with the specific goal of increasing the production of gasoline and other light products (such as aircraft fuel). Talks on additional refining capacity in Libya date back to 2013. Possible projects include a new refinery with a capacity of 200 kb/d in Sebha, which will process crude oil near the Murzuq field in the southwest of Libya, as well as an export refinery in Misurata(h) with the same input capacity [25].

In the late September 2021, Libya has formalized its plans to build the South Refinery, intended to resolve fuel shortages and unemployment in the country's south. Abdul Hamid Dbeibe(h) (Abdulhamid Al-Dabaiba), Libyan prime minister since 15 March 2021, has signed a decree on the refinery near the Sharara field, authorising National Oil Corp. (NOC), which has been working on the project plans since 2017, to contract work directly and to finance the construction project.

According to local reports, NOC expects the refinery to cost $500-600 mln, and the plant should start operations within 3 years.

Mustafa Sanalla(h), NOC's chairman, welcomed the support from the cabinet, saying that "the approval of the Council of Ministers to establish the first refinery in southern Libya is the first step in the development of this vital sector" [26].

In the late April 2021, it was officially revealed in Tripoli that the government was studying the construction of oil refineries in various regions through local and foreign Public Private Partnership (PPP) ventures [27].

It will be recalled, however, that the plan to build new regional refineries is not new. On 30 October 2013, the then Prime Minister Ali Zeidan (former, interim Prime Minister of Libya, appointed by the General National Congress on 14 October 2012) announced that a decision had been taken by his government to build two new oil refineries in the east and in the south—near the Mazruq and the Sharara oil fields.

These areas were badly damaged during the recent clashes, but now the authorities see no obstacles to start refining oil there again. Zeidan told reporters that the government had previously planned to process about 300,000 barrels of oil a day at a refinery in Tobruk in the east, where rebels blockaded Hariga port for two months at the start of 2021.

The larger of the two refineries with a capacity of 300,000 barrels would be built in Tobruk while the smaller one with a 50,000 b/d input capacity would be in the southern town of Ubari. Zeidan had stressed that these would be to produce fuel for local consumption.

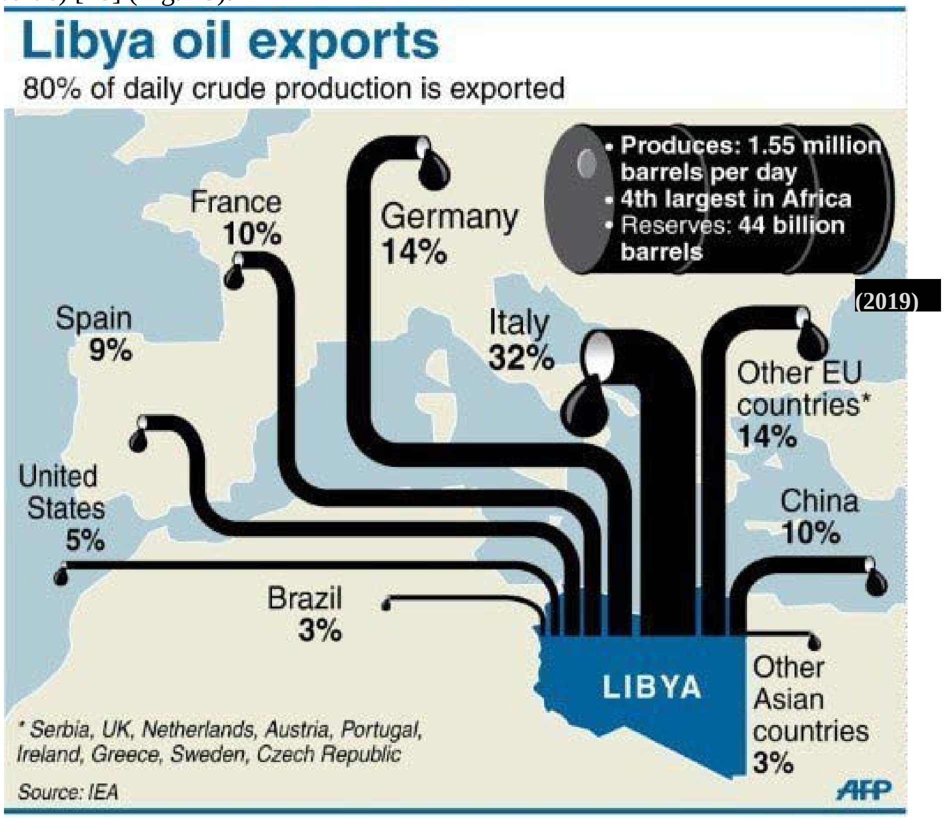
Building new refineries would tick many boxes. It is one of the easiest and obvious means of diversification of incomes and reducing the cost of imports such as refined fuel products.

Libya needs to develop its downstream capacity in order to take advantage of its natural local advantages would help the economy and diversification.

The announcement by Zeidan that the Ubari refinery would have a capacity of only 50,000 barrels, however seemed at odds with expert views that refineries need to be of a capacity of at least 300,000 to make them commercially competitive [27]. As a result, the government has chosen the 300,000 input capacity for the southern refinery as well (see above).

Crude oil—the main export item of Libyan trade (up to 90% of exports' value), which is exported mainly to Europe (up to 80% by value, mostly to Italy, Germany, France, and Spain), the USA (5-8% in recent years), and the

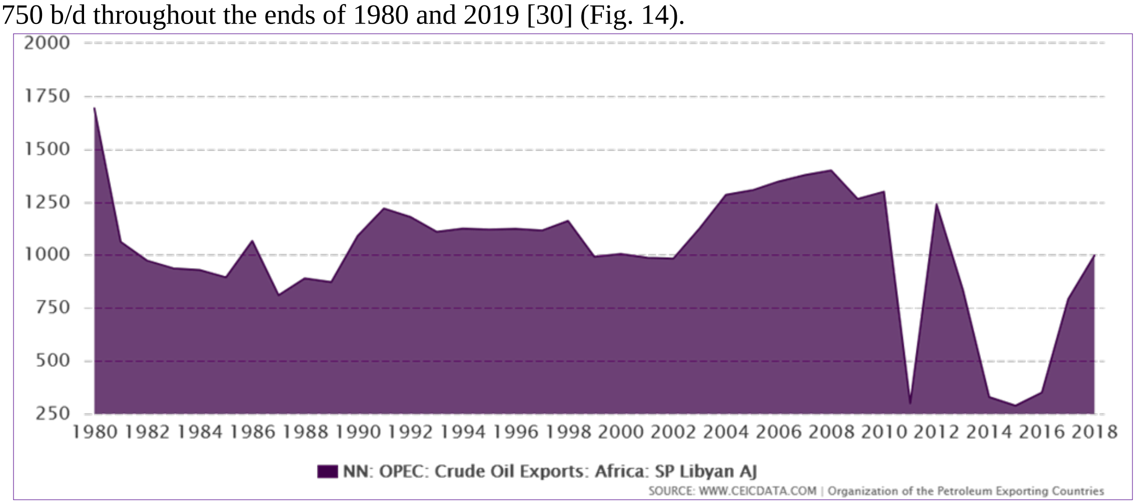
PRC (9-11% by value) [28] (Fig. 13).



Source: https://www.danaalthani.com [29]

Figure 13. Main Destinations of Libyan Oil Exports in 2020, in % of value.

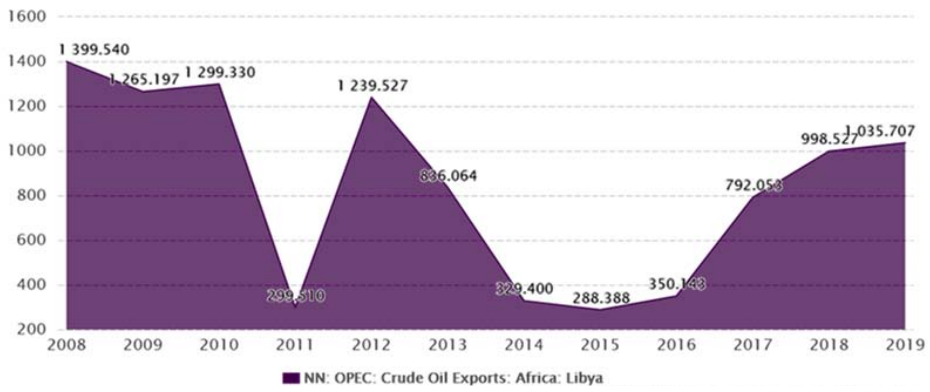
In December 2019, Libyan Exports of crude oil have reached 1,035.707 b/d. This records an over 3.7% of increase from the previous year's number of 998.527 b/d for December 2018, and compares with an overage of 1,064.750 b/d throughout the ends of 1980 and 2019 [30] (Fig. 14).



Source: https://www.ceicdata.com/en/indicator/libya/crude-oil-exports [30]

Figure 14. Exports of Crude Oil from Libya in 1980-2018, in b/d (OPEC data for December of each year).

The recent annual minimum (288.4 kb/d) and the maximum (nearly 1.4 mln b/d) were attained in 2015 and 2008 respctively (Fig. 15).



Source: https://www.ceicdata.com/en/indicator/libya [31]

Figure 15. Libya's Annual Exports of Crude Oil in 2008-2019, in b/d (according to CEIC/OPEC).

The US dollar value of Libya's annual crude oil and refined oil products exports looked, according to OPEC data, as follows (in mln dollar): 2016—9,313, 2017—15,536, 2018—25,386, 2019—24,197, and 2020—only 5,711 [32].

At the same time, due to the quite unstable and insufficient refinery output, Libya has to import petroleum products (in kb/d): 107.9 in 2016 and 147.4 in 2020 [33], mainly from the neighbouring Italy.

Energy Capital & Power (ECP, formerly Africa Oil & Power) is excited to announce the launch of the first-ever Libya Energy & Economic Summit (November 22-23, 2021), following the official endorsement of the Office of the Prime Minister and resolute commitment from the government to revitalizing the national hydro-carbons sector.

The Libya Energy & Economic Summit 2021 represents the first international energy event in Tripoli in almost a decade, as the North African producer seeks to revive its oil and gas industry and boost oil output on the back of more peaceful and stable conditions in the country. The Office of the Prime Minister of Libya, H.E. Abdul Hamid Dbeibe(h), has granted an official endorsement of the event that seeks to drive foreign capital, technology and expertise into the country's energy sector, utilizing sectoral revitalization as a catalyst for broader social and economic growth.

Talking the foreseeable prospects of Libyan oil production, it is noteworthy that, despite the official end of the civil war (see above), political situation in the country remains very unstable and we have naturally failed to find any special outlooks on Libyan oil, both short and long-term predictions of which are virtually impossible.

Súmma súmmarúm, as a result of the considerable negative impacts of the rebels' attacks as well as of the UNO and US sanctions, Libya's oil industry needs now huge investments to restore.

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