

LIBYA: THREE POSSIBLE OUTCOMES AND THE ROLE OF GOVERNANCE, MONEY, GAS, AND OIL

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Anthony H. Cordesman
Arleigh A. Burke Chair in Strategy
acordesman@gmail.com

The use of armed force to intervene in Libya still has no clear, meaningful strategic objective. In fairness, it may be impossible to get a consensus in controversial cases, and even partial agreement may be better than none. Waiting for Qaddafi to win by default was scarcely a functional option. Seeking full international consensus around a well-defined and strategic goal was a recipe for paralysis, and acting without any effort at unity and international support almost ensures broad international opposition.

A “No Fly Zone” That Is, or is Not, Actually a “No Fly Zone”

The fact remains, however, that the UN resolution leaves the ultimate objective undefined, and the limits to the use of force confused. The first French strikes to enforce a “no fly zone” hit advancing Libyan ground forces that have nothing to do with how many of Qaddafi’s aircraft actually “fly.” Italy and France are feuding over command and prestige (and whether the mission should be performed) while Turkey opposes the mission and making it part of NATO.

The US is exercising de facto command because it has the special intelligence, targeting, and command and control assets needed to coordinate the effort, but is trying to minimize its visibility and is almost totally unconvincing in claiming that it will only use the “no fly zone” to protect civilians while simultaneously stating that it does not want violent regime change.

The Arab world has not only achieved its usual lack of functional unity, but those who did agree now seem to want to pretend that the use of force can somehow avoid civilians. As for those who abstained, China, Germany, and Russia do not seem natural bedfellows, and Russia’s top leaders have taken opposing views over the entire effort.

The end result is that every actor involved now seems to have a different perception of the purpose and limits to the use of force. While many almost certainly prefer an end to Qaddafi’s regime, no one as yet wants to talk about targeting Qaddafi, destroying his forces and their willingness to support him, or what conditions would end the “no fly zone” and use of force. There is equally little discussion of the rebels, their lack of unity, the inability to know the strength of given factions or what they want, and what it will take to give them the ability to either defend a given block of territory or drive Qaddafi from power.

Three Uncertain Outcomes with No Predictable “End Game” or “Steady State” Result

The end result is effectively a series of gambles by widely divided factions in which everyone involve waits to see which of three major outcomes occur:

- **Some combination of the forces involved in the no fly zone and the rebels drive Qaddafi from power.** A divided group of rebel factions, neutrals, and former Qaddafi loyalist with no experience in politics, democracy, and governance takes over with almost totally unpredictable effects.

Much will depend on how much the "no fly zone" goes beyond "no fly" to attacking Qaddafi's forces and power structure. The rebels so far have not had any major military defections in the form of entire units or some form of cohesive military force. They are divided, lack discipline and structure, and are both poorly supplied and untrained in using advanced weapons. They also lack clear support from major tribal factions outside the urban areas in the East. Unless they can build forces over time – with outside supply and training – or large numbers of pro-Qaddafi forces defect they can only come to power because the Qaddafi faction collapses from within or because the strikes conducted as part of the no fly effort have a much broader target base and impact. This effectively means using the UN Resolution as a cover, and not a mandate.

If this does happen, the rebel factions will inherit a poor, weirdly distorted economy and an eccentric to dysfunctional system of governance that is almost totally dependent on petroleum income and foreign investment and currency holdings. The CIA estimates that exports make up about 95% of Libya's export earnings, 25% of GDP, and 80% of government revenue. It also estimates that Libya had \$107.3 billion worth of gold and foreign exchange holding at the end of 2010, plus \$15.3 billion worth of foreign investments – compared to \$6.4 billion in foreign debt. This makes control of petroleum assets and foreign currency and investment holdings absolutely critical, particularly since food makes up an important component of Libyan imports.

- **The rebels prove too weak and disunited to stop Qaddafi from eventually outmaneuvering them and driving them from power.** "Mission confusion" is now even more of a risk than "mission creep." If the no fly zone is literally enforced as a "no fly zone," it is far from clear that the rebel factions can survive, much less win.

Qaddafi may well be able to use his small, but better equipped and discipline forces to win on the ground without the use of airpower, and the rebels seem somewhat more likely to collapse from a sudden panic or internal divisions than the pro-Qaddafi factions. They need outside trainers and arms, but may not have the unity or politics that will allow them to accept such aid and use it effectively even though the Qaddafi forces seem limited to small numbers of largely battalion sized forces, light infantry, and internal security forces.

Moreover, even if some kind of peacekeeping force, or political settlement is involved, Qaddafi may decide that revenge is dish best eaten cold and succeed in systematically undermining and dividing the rebel factions and bribing key tribal leaders. . More probably, he will lash out the moment (or moment before) he feels he can get away with it – a scenario that would either give him victory or force a "no fly zone --Mark II" effort of uncertain character and success.

- **There is no clear winner.** Libya divides for an unpredictable amount of time into two hostile zones with either a front or ceasefire line, and a political and economic struggle goes on with periodic episodes of violence. The end result is a constant internal and external struggle for influence, power, and money –one that is immediately tied to who controls what part of Libya's petroleum revenues.

All of the tensions revealed in the effort to get a UN resolution now become a source of constant division, as both sides attempt to win support. Investment and aid efforts become

open-ended risks, and some form of Libyan sponsorship of terrorism becomes a higher probability. Libya becomes locked in an internal arms race, seeking arms and aid from the outside, and outside powers compete for influence. This plays out in the midst of a much broader pattern of turmoil in the region, and particularly in Egypt and Tunisia.

Coping with Reality: The Role of Governance, Money, Gas, and Oil

Whatever happens, Libya will have to deal with months in which most its economy does not function and it loses much of its annual oil and gas revenues, where key facilities are damaged, the loss of foreign workers sharply reduces agricultural and industrial output, foreign oil companies and other entities are gone or do not fully operate, and an already dysfunctional government does not provide even its past level of services, security, and governance.

One of the most fragile structures of government in the Arab world will come under the combined pressures of civil war, physical destruction, and the loss of the petroleum income that partly compensated for an almost incredible level of disorganization and incompetence. At best, Libyans will lose many of the welfare service and benefits, and other basic government services that partly compensate for 30 years of failed economic policies and a system that created gross imbalances in income distribution while talking about egalitarian socialism.

To put this situation in context, CIA estimates that the other parts of Libya's economy, including the manufacturing and construction sectors, which account for around 20% of GDP, have expanded from processing mostly agricultural products to include the production of petrochemicals, iron, steel, and aluminum – although they are in some cases highly dependent on oil and gas to operate.

Moreover, the CIA notes that, "Climatic conditions and poor soils severely limit agricultural output, and Libya imports about 75% of its food. Libya's primary agricultural water source remains the Great Manmade River Project, but significant resources are being invested in desalinization research to meet growing water demands." This is a key consideration in country that the Agency estimates has around one-third of its 6.6 million population living at or below the national poverty line. (Oil wealth is relative. Libya's oil export income was only around \$5,400 per capita in 2010, and few Libyans saw much of the money.)

Put differently, unless one side collapses for military or political reasons, the control of petroleum exports and Libya's investments and holding of foreign currency money will be critical in buying food, arms, and soldiers – and in buying loyalty and popular support. It also will impact heavily on the most militant elements of a population where jobs and personal status are critical and which has a nationwide unemployment rate as high as 30% -- a figure that is much higher for young military-age males in a country where the median age is only 24.

Food, in fact, is already an issue. The UN World Food Program reported on March 21, 2011 that, “food prices in Libya had increased sharply in recent weeks, with the price of flour more than doubling, rice by 88 percent, vegetable oil by 58 percent and bread by over 110 percent. It was also reported that 95 percent of shops in areas like Zawiya, Misrata and Sirte were closed “ The WFP was already providing critical food supplies to refugees from the fighting and stated it was,

...expanding its food safety net programmes in Egypt and Tunisia to assist 180,000 people in communities hard hit by the loss of remittances previously being sent home by migrant workers in Libya. In Egypt we are making local purchases of 1,280 metric tons of rice, vegetable oil, and fortified date bars for distribution in the southern governorates of Assiut and Sohag – enough to feed 90,000 people for one month. In Tunisia, WFP is purchasing food locally for 280,000 people whose families have been affected by the recent turmoil.

...WFP has deployed experts on the ground on both sides of the border to coordinate and strengthen logistics and telecommunications for the whole humanitarian community as part of Special Operations costing US\$4 million. WFP logistics teams have investigated two potential supply routes to send more food and humanitarian assistance into Libya

WFP has launched a US\$39.2 million emergency programme (EMOP) to provide food assistance to more than one million people (1,060,000) in Libya, Egypt and Tunisia over a 3-month period.

Rather than living on “oil wealth,” Libya could quickly find itself in a major food crisis, as well as trying to cope with petroleum financed, import driven economy, where civilians suffered from material threats as well as the fighting.

The Struggle for Resources and Money

It is extremely difficult to determine how resources and money will affect the fighting or shape its aftermath. The political will of each side, and its capability to carry on the fighting, is now as unpredictable as its future military capabilities now that sanctions are in force. It is interesting, however, to speculate on how control of petroleum and money may affect the outcome.

The financial sanctions on Qaddafi could begin to bite fairly quickly as food stocks decline, he needs more arms, and he has to buy loyalty. But no one has yet indicated that the rebels will get control or a share Libya’s foreign accounts. Money will become critical if anything like a stalemate develops, and already presents problems for both sides. Unfortunately, at this point there is no clear picture of how many resources Qaddafi still controls, how effective the sanction are, or when or if the rebels can get access to at least some of Libya’s foreign accounts. Money will be critical – particularly to divided factions with no clear competence for governance or managing the economy, but there is not enough data to know what is happening and it is far easier to impose sanction than make them effective or decide how to use the money to protect the Libyan people and decide whether to finance the rebels.

The Struggle for Oil and Gas Resources and Revenues

As for petroleum resources and revenues, much may depend on who controls given oil and gas terminals and pipelines, and has the ability to use them to earn money. The US Energy Information Agency (EIA) estimated that Libya earned some \$40 billion in petroleum exports in 2010, and had substantial additional gas export revenues. (There are enough ports so they would not be a key issue in a stalemate.) Control of the coast is particularly important because this is both the area with most of the population and the area where oil and gas exports must leave from.

As the maps at the end of this report show, the key oil export terminals are spread along the coast from West to East. They go from a terminal near Zawiyah to the west of Tripoli, two terminals on the coast near Ras Lanuf, a terminal at Brega, a terminal at Aidabiya, and a terminal at Tobruk. At present, the rebels only have the terminal at Tobruk but they once had control of nearly all. (The proper names of the terminals are Es Sider, Marsa el-Brega, Tobruk, Ras Lanuf, Zawiyah, and Zueitina.)

Control of the fields and infrastructure will be equally important, but at this point it is simply not clear who – if anyone – is in charge. EIA reports that the major oil and gas fields include Al Jurf, Amal, Beda, Bouri, Bu Attifel, Defa-Waha, El Sharara, Elephant, Ghani, Gialo, Hofra, Intisar, Kabir, Mabruk, Murzuq, Nafuora, Nasser, NC-41, NC-186 fields, Omar, Sarah, Sarir, Wafa, Zella, Zenad, Zueitina. Many are in the East and the rebels would seem to have an advantage, but this is not yet clear.

The EIA reports that Libya has five refineries, with the following geography:

- the Ras Lanuf export refinery, completed in 1984 and located on the Gulf of Sirte, with a crude oil refining capacity of 220,000 bbl/d;
- the Az Zawiyah refinery, completed in 1974 and located in northwestern Libya, with crude processing capacity of 120,000 bbl/d;
- the Tobruk refinery, with crude capacity of 20,000 bbl/d;
- Sarir, a topping facility with 10,000 bbl/d of capacity; and
- Brega, the oldest refinery in Libya, located near Tobruk with crude capacity of 8,000 bbl/d.

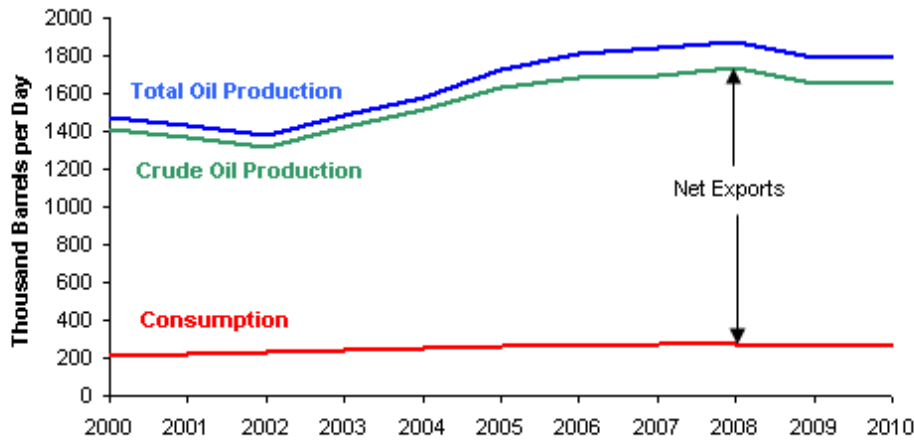
Libya also has refinery operations in Europe through its overseas oil retail arm, Tamoil. Through Tamoil, Libya is a direct producer and distributor of refined products in Italy, Germany, Switzerland, and Egypt.

Gas exports are as important as oil exports, and the EIA reports that Libya consumed 212 Bcf and exported 349 Bcf of natural gas to Europe in 2009: “The vast majority of this was exported by pipeline, with a small volume exported in the form of liquefied natural gas (LNG). Natural gas is piped from the Wafa concession and the offshore Bahr es Salam fields to Melitah, where it is treated for export. The 370-mile “Greenstream” underwater natural gas pipeline runs from Melitah to Gela in Sicily. From Sicily, the natural gas flows to the Italian mainland.”

The EIA also reports that, “Libya's LNG exports have remained low, largely due to technical limitations. Libya's LNG plant, at Marsa El Brega, was built in the late 1960s by Esso and has a nameplate capacity of about 125 Bcf per year. However, U.S. sanctions prevented Libya from obtaining necessary technology to separate out LPG from the natural gas, thereby limiting the plant's output by over half of capacity. In 2009, LNG exports increased slightly to 24.4 Bcf, all of which was exported to Spain.”

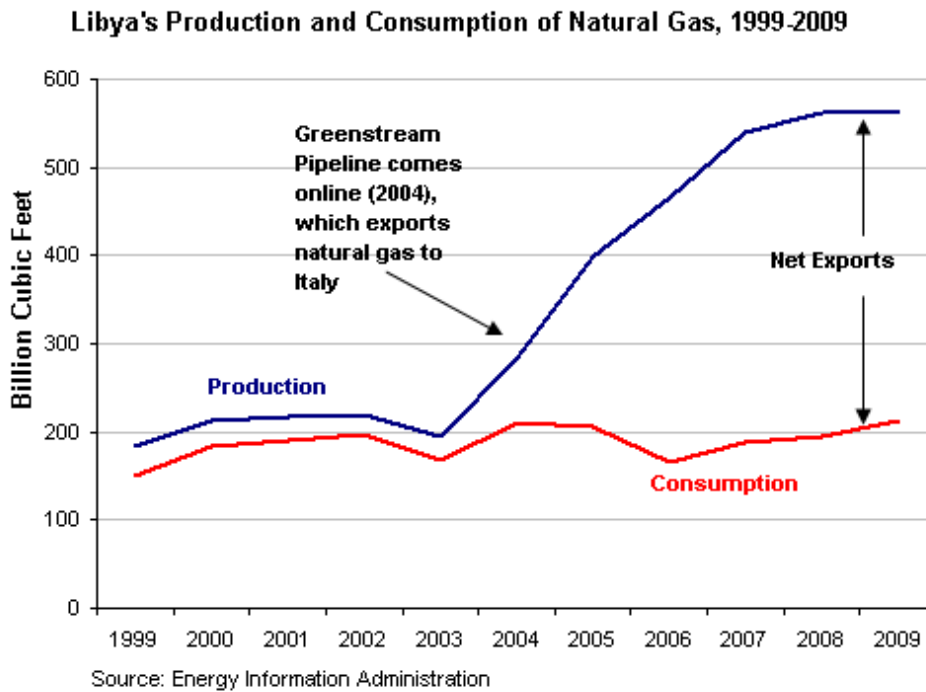
It is unclear how much these facilities have been affected by the fighting and political turmoil, but the EIA provided the estimates of Libyan oil and gas production before the civil conflict began which shown in the following charts:

Libya's Oil Production and Consumption, 2000-2010



Source: EIA

Note: 2010 is a preliminary estimate based on Jan-Nov available data



It is far from clear that either side can come close to these levels during the conflict or what would happen in a stalemate. Moreover, much would depend on which side got managers and technicians from the Libyan state oil company and foreign companies. The EIA reports that Libya's oil industry has been run by the state-owned National Oil Corporation (NOC). The NOC is responsible for implementing the Exploration and Production Sharing Agreements (EPSA) with international oil companies (IOCs). NOC is also responsible for field development and improvements as well as downstream activities.

At the same time, the IOCs operating in Libya work in exploration, production, transportation and refining and could play a major role on their own. The EIA reports that the IOCs that had operations in in Libya when the upheavals began include Eni, Total, Repsol YPF, StatoilHydro, Occidental, OMV, ConocoPhillips, Hess, Marathon, Shell, BP, ExxonMobil and others.

Maps of these facilities are shown at the end of this report. They show that the gas fields and pipeline are in areas the rebels had influence in but Qaddafi may now control. The bulk of the oil fields and pipelines are in central areas that rebels once controlled, but where Qaddafi now has troops. They also show that the same fields serve the pipelines to Tobruk (rebel) and areas Qaddafi now occupies.

Governance and the Aftermath

No one can predict the outcome, but some outcomes do seem clear:

If Qaddafi wins, the international community will have to confront both the political and economic consequences as he lashes out against real and perceived enemies and makes key decisions as to how to allocate resources – decision that are likely to even further distort his past structure of governance and for managing the Libyan economy. Then the problem for Libya’s civilians will scarcely end with the fighting. It will last for years as Qaddafi uses the nation’s wealth and petroleum income to punish and reward in ways that are almost certain to follow a long history of eccentric, dysfunctional decisions that have crippled Libya’s development for decades.

Qaddafi is also almost certain to pick new “winners” and “losers” in terms of foreign contractors and IOCs, and manipulate investments and contracts as political weapons and leverage points. More generally, he may shift funds back into financing international terrorist and extremist movements – if carefully and through various covers – as a means of taking revenge.

If the rebels win, all bets are off until it is clear who actually governs and how well they can govern. To blunt, it is far too easy to call for democracy and elections and ignore the fact that groups with no experience in practical politics, governance, and economics may well prove unable to work together and fail to govern. Western success in representative government does not depend on elections per se.

Success in representative governance depends on experience, relatively stable political parties that are pragmatic enough to compromise and cooperate. It depends on functional checks and balances within government and a rule of law. It depends on operating within a functional, well-staffed and competent structure of governance, and it depends on the political system working within the context of an economy that serves the broad interest of the people while being able to operate effectively within the limits imposed by government.

There is no way to determine at this point how today’s rebels will become a government, what they will stand for, and what they will seek to do. Libya will not be easy to rule, as it has never been a very cohesive country. Before Qaddafi took power the country was a loose federation of 3 autonomous provinces ruled by a weak King. The eastern region has a history of opposition to Qaddafi, and it is unclear how much support the rebels have outside of the eastern region. The country is rife with often-feuding tribal and other local power brokers, and it is entirely unclear which side many of them are on, let alone how they would interact with a victorious rebel movement.

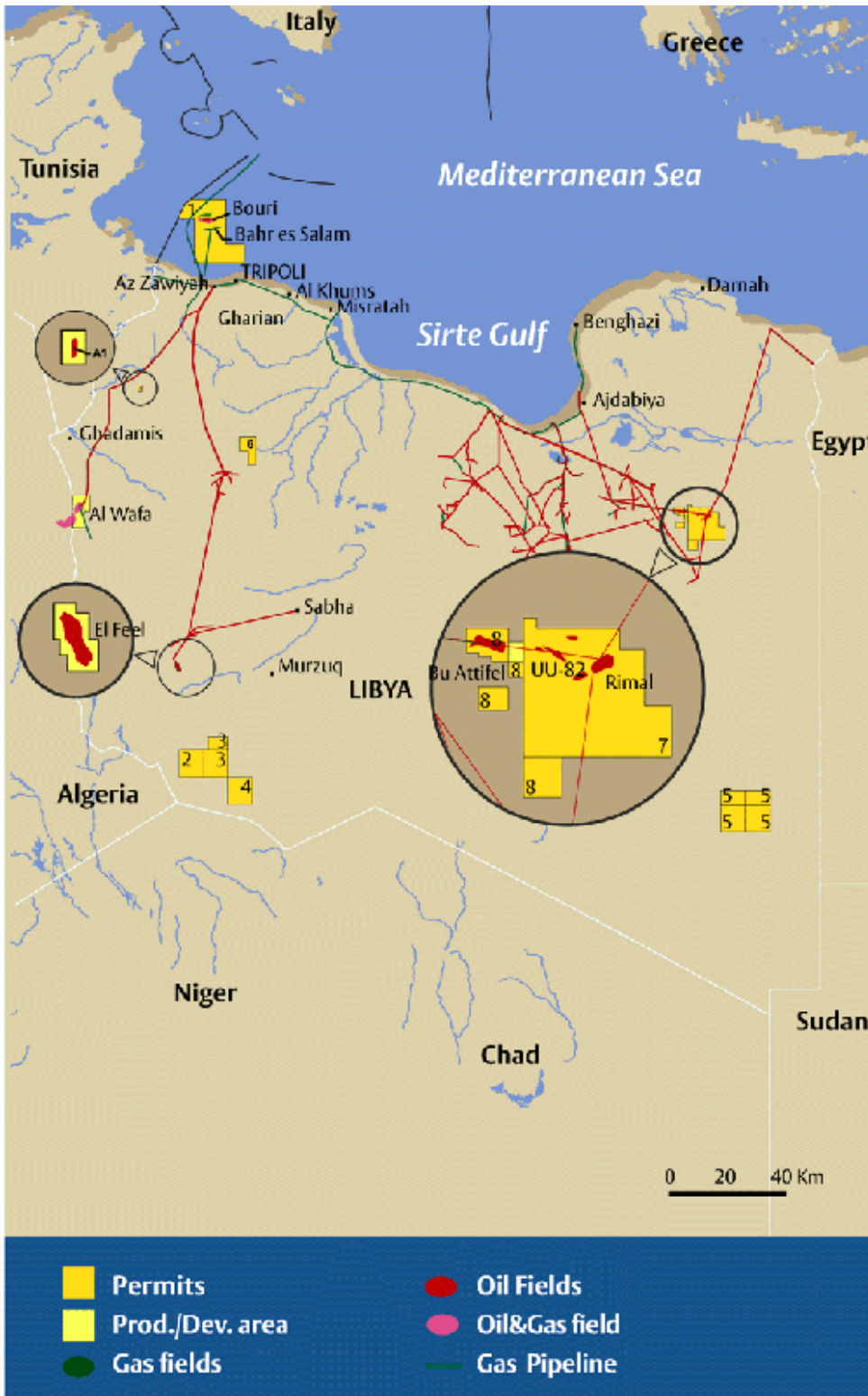
At a minimum, any form of success means they will have to make the existing petro-economy work while they make key decisions as to how to modernize and reform almost every aspect of the rest of the Libyan economy and structure of governance.

The rebels also may be as interested in revenge and adding to their power as Qaddafi. They too may manipulate foreign investment, contracts, and IOCs. They

may not have the wisdom to keep Libya's current petroleum system working until real reform is possible. They will have to include the tribal structure of Libya and not just the rebel urban faction on the coast, and may also have to accommodate major elements in the Libyan military. Going from zero politics to "democracy" is a recipe for crisis at the best of times, and this time, it is the rebels that will inherit the wind.

If some form of stalemate follows, the end result is likely to be the worst of both worlds as all sides jockey for political advantage, try to use resources to support their side of the fighting and build up military forces, and outside governments and investors try to exploit the situation to their own advantage. The only good side would be that the rebels would be forced to gain experience in politics, economics, and governance – although this may scarcely be the kind of experience that leads to an effective outcome.

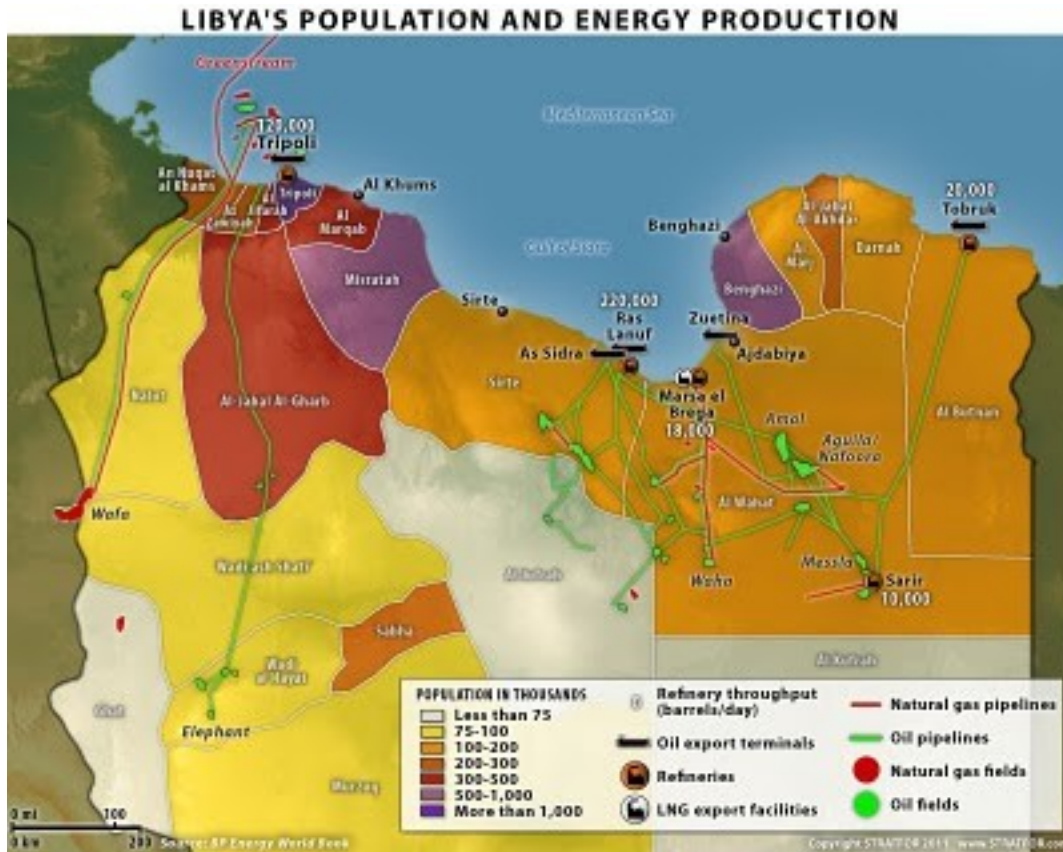
The practical problem will be that no real reform will be possible, there will be no stable or clear future that will inspire effective outside investment, and Libya's people will live in a divided dysfunctional country as long as the stalemate lasts. The violence may be minimal, but violence is only one side of the human problems that will last as long and control of Libya is contested.



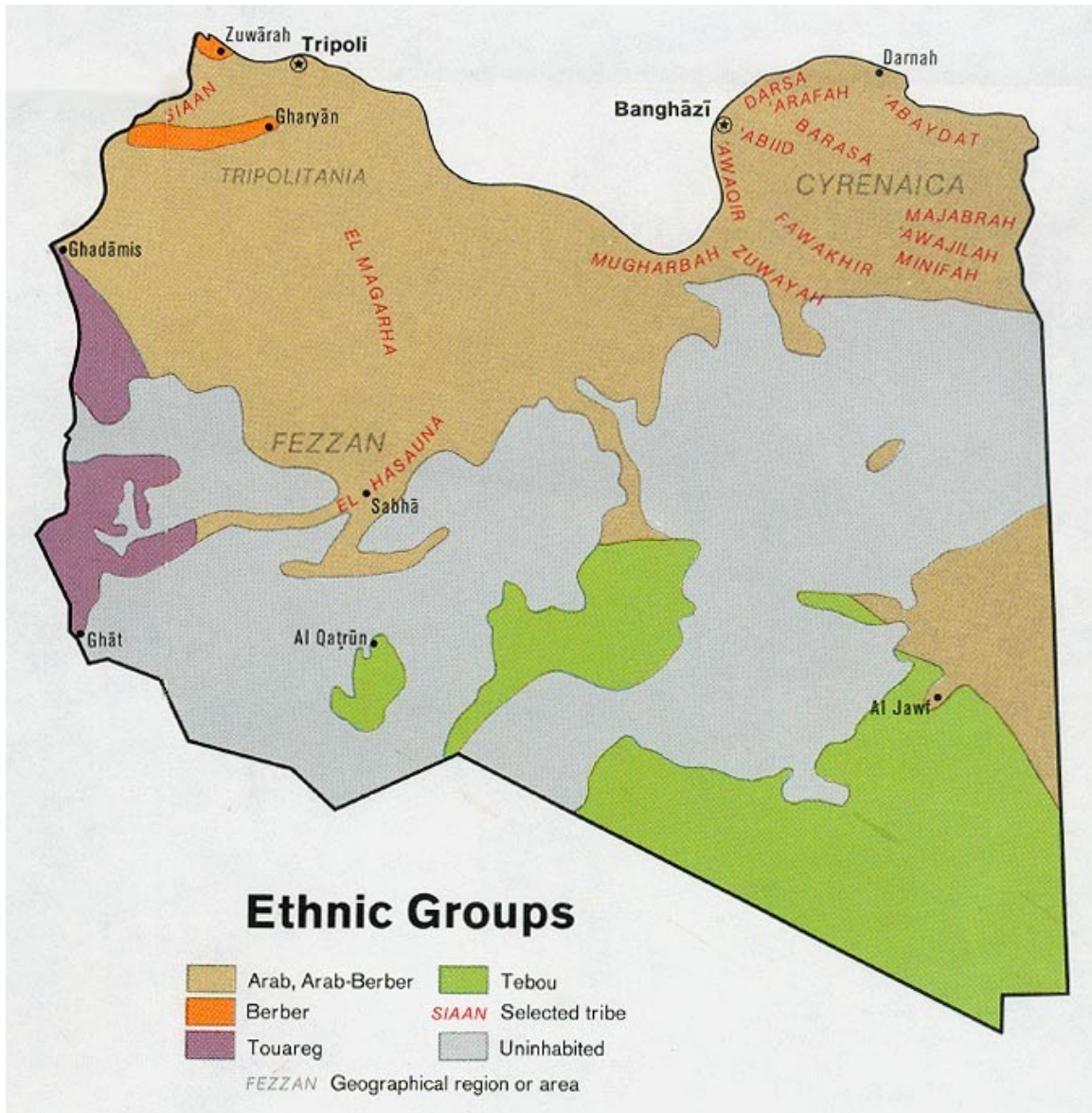
Al Massara Libyan Oil Services: <http://www.almassara.com/map-of-oil-and-gas-fields-in-libya.html>



Source: Arthur Bygniew, <http://arthurzbygniew.blogspot.com/2011/02/libya-oil-map.html>



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Source: Perry-Castañeda Library Map Collection. Accessed March 22, 2011.

<http://www.lib.utexas.edu/maps/thematic.html>