

# The Strategic Geography of the Libyan Civil War

by [Michael Knights \(/experts/michael-knights\)](#)

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## ABOUT THE AUTHORS



[Michael Knights \(/experts/michael-knights\)](#)

Michael Knights is the Jill and Jay Bernstein Fellow of The Washington Institute, specializing in the military and security affairs of Iraq, Iran, and the Persian Gulf states. He is a co-founder of the Militia Spotlight platform, which offers in-depth analysis of developments related to the Iranian-backed militias in Iraq and Syria.



## Brief Analysis

*In PolicyWatch #1768 (<http://www.washingtoninstitute.org/templateC05.php?CID=3318>), Jeffrey White highlighted the possibility for a prolonged struggle in Libya's civil war due to the lack of offensive capability demonstrated by both sides. The following article explores the reasons why strategic geography in Libya reinforces the potential for stalemate and underlines the need for international intervention if the deadlock is to be broken.*

In the first ten days of fighting in Libya's civil war, both the regime and rebel forces have demonstrated an inability to dislodge their opponents from well-entrenched positions. Each side has been able to occupy key terrain that initially was either abandoned or unoccupied by enemy forces but unable to capture enemy-occupied ground. This scenario favors the regime of Muammar Qadhafi, which holds the all-important central position between rebel enclaves, providing the advantage of interior lines of communication, and has greater mobility through its control of air forces and air bases.

## Patterns of the Conflict

From February 20 to February 27, the Qadhafi regime experienced a widespread loss of control along the coastal belt, where most of Libya's cities and economic infrastructure are located. From February 28 onward, momentum tilted back toward the regime in four key areas:

- The regime initiated energetic security operations in Tripoli and the nearby industrial center of Zawiyah. The opposition-held town of Zawiyah -- significant for its proximity to Tripoli as well as its major oil refinery and two oil and gas export terminals -- is now surrounded by Qadhafi forces and has sustained numerous assaults since February 28, with opposition fighters narrowly maintaining their hold. When the coastal town of Sabratha was retaken by the regime on March 1, Zawiyah was cut off from Zuwarah, another opposition enclave to the west.
- Misratah, located to the east of Tripoli, is Libya's third-largest city and has resisted four major offensives by Qadhafi forces since February 21. The city is fully surrounded (except by sea), and regime attacks are escalating through artillery- and airstrikes targeting a ten- by fifteen-kilometer area held by the opposition.

- To the southwest of Tripoli, Qadhafi forces are gradually clearing the Nafusa Mountains, pushing simultaneously from the capital and the area around the Algerian border. Opposition forces are now squeezed into a hundred-kilometer corridor between Nalut and Zintan.
- In eastern Libya, opposition forces hold territory from the city of Marsa al-Burayqah eastward, although on March 1, regime forces recaptured the nearby town of Sidra and the port of Ras Lanuf, the location of Libya's largest oil refinery along with power and oil export facilities.

Opposition forces in western Libya may be unable to hold out if they do not receive support. And their morale may suffer as they realize that forces in eastern Libya cannot offer the support needed. For the part of opposition forces in the east, should they march on Tripoli -- by no means a certainty -- they will face a series of challenges. First, they will need to form an army capable of breaking through the regime outposts at Sidrah, more than a hundred kilometers away from their current position. Thereafter, they will be obliged to travel an additional 200 kilometers across open desert highway and to defeat Qadhafi forces in the regime heartland (and Qadhafi's tribal home) at Sirte. They may then be required to advance an extra 250 kilometers to link up with any surviving opposition forces in Misratah, followed by another 150 kilometers to fight a major battle to dislodge Qadhafi loyalists in Tripoli. This is an exceedingly tall order for a newly raised force lacking air cover, artillery, logistical support, or tank transporters capable of moving armored vehicles over long distances.

Although regime forces have demonstrated very limited combat strength where they have attacked opposition-held towns, the Qadhafi regime's central position and air mobility constitute definite advantages. As noted, the loyalist stronghold of Sirte stands as an obstacle between western and eastern opposition forces seeking to link up with each other. In addition, regime forces control a contiguous wedge of territory connecting their three main centers: Tripoli, Sirte, and Sebha -- the last of which is a southern desert city and air base where Qadhafi has strong familial connections. Sebha air base is also the main hub to which the regime flies mercenary reinforcements from sub-Saharan Africa. In addition, Qadhafi forces can utilize the regime's helicopters to move troops between fronts, resupply them, and drop them at key points behind opposition lines.

## Strategic Assets

If we were to freeze the situation today, control of strategic assets between regime forces and the opposition would resemble a patchwork quilt, as follows:

- *Air fields.* The regime has mounted most of its airstrikes against eastern Libya from Ghurdabiya-Sirte Air Base in Sirte. In the west, strike missions are flown from Mitiga Air Base in Tripoli. The regime also maintains full use of two remote desert air bases, Uqba Ibn Nafi and Ghadames, that are effectively out of reach of opposition forces but within striking distance of potential targets. The regime controls seven other small air bases as well.
- *Military depots.* The opposition has captured significant arms depots in eastern Libya, notably in Benghazi, al-Bayda, and Ajdabiya, prompting the regime to conduct seventeen air raids aimed at destroying these sites (at the time of this writing), all of them unsuccessful to date. Opposition forces have not had similar success in western Libya, however, where they have not apparently liberated large depots. As a result, their ammunition -- typically garnered by units in small amounts before they defected to the opposition -- may soon run short.
- *Refineries.* Fuel products are necessary to keep society and military forces running. At present, the opposition controls three refineries in eastern Libya capable of processing 40,000 barrels of oil per day (bpd) but no refineries in western Libya. (The Zawiyah refinery, capable of producing 120,000 bpd, is held by the government.) With its recapture of Sidrah on March 1, the government controls the 220,000-bpd refinery there

as well, giving it control of 89 percent of Libya's overall capacity. Though staffing of the refineries may be disrupted, the sites have large on-site oil reserves and, according to scattered press reports, appear to be in operation.

- *Oil fields.* Setting aside gas facilities in western Libya, which are currently shut down, most of Libya's oil fields are located in the eastern deserts and currently either controlled by the opposition or of indeterminate status. Oil tankers docking at Tobruk and Benghazi continue to be loaded with oil sold before the uprising. The opposition-controlled Arabian Gas and Oil Company (AGOC) (based in Benghazi) has continued making shipments both to signal its openness to doing business with the outside world and to delay addressing the technical challenge posed by having to completely shut off oil production as storage tanks become full. (This shut-off will probably occur in late March anyway.) AGOC is now seeking to establish itself as a legal marketing body for Libyan oil, a status that would allow it to receive payment for future oil purchases rather than having the monies accrue in regime bank accounts (which may themselves be frozen).

## Implications for U.S. Policy

**A**ssuming Qadhafi's power base in the Tripoli-Sirte-Sebha triangle does not collapse, the military tide may continue to turn against opposition forces in western Libya, possibly leading to the fall of the region's three opposition enclaves. Yet as long as opposition morale and unity hold together, eastern Libya may well remain under opposition control and the opposition may be able to fend off regime attacks. The much-discussed options of no-fly zones and no-drive zones would clearly limit many of the comparative strengths of the Qadhafi regime. However, if the United States and its allies truly seek to end the conflict decisively by assisting in Qadhafi's overthrow, they may, in effect, have to become full-fledged combatants in order to deliver supplies to the western enclaves or to boost the offensive power of the eastern opposition forces through providing international air assets or launching airstrikes.

Before a military impasse becomes inevitable, a chance may still exist to crack the morale of regime forces through nonviolent means. Such an effort, however, would require energetic information operations to be launched immediately, potentially linked to a convincing threat by the international community to use force. The Qadhafi regime has attempted repeatedly to destroy opposition media stations through aerial bombing. Thus, there may be potential value in supporting opposition leaders' radio and television broadcasting capabilities in the western enclaves and eastern Libya to help enhance morale, while interfering with regime transmissions. Further, the uprising could be strengthened by U.S. or international recognition of the opposition as a legal interim government, with full rights to market oil products.

*Michael Knights is a Lafer fellow in The Washington Institute's Military and Security Studies Program.* ♦

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