

The First 21st Century *Water War*

by J. M. Landreth

If the wars of this century were fought over oil, the wars of the next century will be fought over water — unless we change our approach to managing this precious and vital resource.

— Ismail Serageldin, 1995

Dr. Ismail Serageldin, founding director of Bibliotheca Alexandria, forecasted in 1995 that wars in the 21st century would be fought over water rather than oil. While an increasing number of countries are experiencing fresh water shortages, Serageldin's prophesy may first come true in his native country, Egypt.

Egypt's history and modern-day economy inextricably link to a healthy Nile River. However, large dam construction in upstream Ethiopia may soon jeopardize the strength of the Nile in Egypt. The case of the Grand Ethiopian Renaissance Dam (GERD) provides a window into the future and is instructive for the international community on the evolving nature of water insecurity. If the U.S. wishes to aid in the peaceful resolution of the GERD issue, then the U.S. must martial a truly interagency approach since the Nile bridges many of the geographic seams that divide U.S. military, intelligence, and diplomatic institutions. The U.S.'s approach towards the GERD must leverage the existing network of allies and regional partners, not conflict with existing or create new kinetic conflicts and harmonize with the U.S.'s strategy towards the Great Power Competition.

In each section of this article, I outline various concerns and potential areas of contention, providing recommendations to alleviate these problems. A complete listing of recommendations can be found at the end of this article.

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Framing the Issue of the Grand Ethiopian Renaissance Dam

While Egypt's attention was dominated by domestic issues related to the Arab Spring, in 2011 Ethiopia began construction of the GERD. When completed the dam will supply 6.45 gigawatts of electrical generation capacity—the largest hydroelectric power plant in Africa. The GERD will be filled by the Blue Nile, one of two rivers upstream of Egypt's Nile River. In order for Ethiopia to receive a timely return on investment on the GERD, the dam operator is economically incentivized to fill the dam as fast as possible—a multi-year task on the most aggressive track.

However, if the Ethiopian's impound rate of the Blue Nile exceeds 15% of total volumetric flow, then the detrimental impacts to fresh water in Sudan and Egypt will be significant.¹ Such a loss in fresh water flow would have devastating consequences to agriculture, fresh water access, waste water treatment, fisheries, and other adjacent industries.

Additionally, the Nile River spreads across a huge delta as it enters the Mediterranean. The Nile River Delta depends on a certain amount of freshwater flow to maintain a balance with the saline Mediterranean. If fresh water flow dramatically diminishes, then seawater will encroach upon the delta. The salination of the delta could have disastrous and largely irreparable consequences upon the delta's biome, which would further harm Egypt's economy.

While the current Egyptian administration is diplomatically engaging with Ethiopia, past leaders and security officials have threatened Ethiopia with war over the GERD.² Additionally, even if Egypt and Ethiopia can come to a diplomatic solution over the Nile's impoundment rate to fill the GERD, Sudan's fragile security situation could deteriorate further and create conditions that nullify prior diplomatic efforts.

Leverage Existing Network of U.S. Allies and Regional Partners

The Nile River: Straddling the Seams

While the United State maintains multiple cabinet-level agencies engaged in international affairs, the U.S. Department of Defense possesses the largest budget and most personnel. Additionally, it has robust liaison channels with the intelligence community. Also, due to long term security challenges within the near east, the Department of Defense arguably has an outsized role in developing U.S. strategy for the region.

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While the GERD does not currently represent a security threat for the U.S., the conflict that could evolve would likely obligate Defense resources. Regardless of whether Department of Defense receives designation as the lead agency for implementation of U.S. policy towards the coming crisis, the following analysis provides a framework for Department of Defense and the interagency's resource planning efforts for the GERD and provides context for many of the critical security issues that define the region.

The U.S. military engages the globe via geographic combatant commands. The Nile River bridges the seams between three combatant commands: U.S. Africa Command (AFRICOM), U.S. Central Command (CENTCOM) and U.S. European Command (EUCOM). Additionally, the GERD issue directly affects the equities of the U.S. Indo-Pacific Command. In addition to geographic combatant commands, the U.S. military maintains functional combatant commands that provide specific capabilities

to the geographic combatant commands. U.S. Transportation Command, Special Operations Command, and Cyber Command would likely receive orders to support any U.S. military engagement surrounding the GERD.

Recommendations

R1. Office of the Secretary of Defense: Coordinate with the Joint Staff to designate supported and supporting combatant commands. Designate AFRICOM as supported and other combatant commands supporting due to the percentage of landmass and population effected.

R2. AFRICOM and CENTCOM: Convene an initial planning conference and recurring planning efforts between “Plans, Policy, and Strategy” directorates. EUCOM, U.S. Indo-Pacific Command, and relevant functional combatant commands should provide liaison officers for planning and awareness.

Any type of conflict in Ethiopia, Africa’s second most populous country, would be highly destabilizing for the continent as a whole.

Ethiopia, AFRICOM and Restless Neighbors

A growing Ethiopia requires the same basic resources every modernizing state requires: reliable electricity, food security, and peace. To address its electrical generation capacity and bolster its agricultural sector, in 2011 Ethiopia commenced construction of the GERD. While Ethiopia ranks poorly economically, Ethiopian sources and the United Nations state that domestic taxes and individual pledges are providing the needed \$4.8 billion in financing for the project.³ While a positive asset for Ethiopia, the GERD has the potential to destabilize the region by disrupting water access to Sudan’s and Egypt’s combined population of 140 million people.

AFRICOM wants a stable and prosperous Ethiopia. Ethiopia’s large population (105 million) and proximity to bases in Djibouti make Ethiopia’s stability a priority for AFRICOM. Any type of conflict in Ethiopia, Africa’s second most populous country, would be highly destabilizing for the continent as a whole. While Africa is no stranger to violent conflict (e.g., Somalia, Rwanda, Congo, Sierra Leone), Ethiopia borders Djibouti. Djibouti, which is barely larger than the greater Tampa, Florida area, provides the western land border of the Bab-el-Mandeb Strait. Also, this small country provides military basing for the U.S., United Kingdom, France, China, Japan, and Saudi Arabia.⁴ Any instability in Ethiopia could have negative spillover effects to Djibouti’s significant and non-aligned military basing footprint.

Beyond the GERD related tension between Ethiopia and Egypt, numerous security issues challenge Africa analysts and policy developers. Massive immigration flow towards Europe, exploding populations, water scarcity, violent extremism, and piracy provide a glimpse of the security challenges for the African continent. In light of such a tenuous security environment, significant efforts must be made to ensure the stability of functioning states like Ethiopia in the Horn of Africa.

Recommendations

R3. Office of the Secretary of Defense: Coordinate with U.S. Department of State and U.S. Ambassador to the United Nations to introduce a resolution in support of diplomatic resolution to any disputes over the Nile River. Incorporate Ethiopian economic needs into requests to World Bank and International Monetary Fund to support a longer fill timeline for the GERD.

R4. Office of the Secretary of Defense: Coordinate with Chiefs of Defense with basing in Djibouti to discuss concern and contingency

plans in the event of crisis or conflict over the GERD. Designate specific communication pathways in the event of crisis.

Egypt, CENTCOM and the Forever Wars

Egypt's population of 100 million people endured great hardship over the past several decades. While negative conditions under President Mubarak helped spark the Arab Spring, subsequent political transitions caused even greater social turmoil, opened pathways for violent extremist organizations, and created economic hardships. Besides the recent political transients, Egypt's long-standing tensions and multiple wars with Israel also shape the current environment. While resilient, Egyptians need a period of stability and prosperity.

When Egypt gained independence from the British in 1922, the U.S. provided diplomatic recognition and support. Throughout the decades since, the U.S. supported Egypt even when it strained other alliances (e.g., 1956 Suez Crisis). Along with generations of diplomatic support, the U.S. continues to provide Egypt significant financial aid and places a high priority on U.S.-Egyptian security cooperation.⁵ Today, CENTCOM needs Egypt as a stable security partner. Additionally, the global maritime shipping industry requires unfettered access to the Suez Canal.

While Egypt and its neighbor Israel have enjoyed decades of peace, the two countries' share a history of war. When not at war, the two countries remain deeply suspicious of each other. For example, while United Nations sources confirm Ethiopia's statements that financing has been internally sourced, social media sentiment analysis shows some Egyptians and even more non-identifiable Arabic speakers suspect that the Israelis are secretly funding the GERD in order to weaken Egypt. In addition to the Egyptian-Israeli conflict, Israel and the broader Arab world have been somewhere between tension and crisis over the Israel-Palestine issue since the

1917 Balfour Declaration. While Egypt's earnest diplomatic engagement in the Middle East Peace Process provides a source of optimism for peace, a century of conflict provides multiple obstacles for optimism. Additionally, the U.S. should monitor Egyptian social media sentiment on the GERD. As seen during the Arab Spring, Egyptian unrest on social media can rapidly transform into tangible political unrest and even violence.

Recommendations

R5. AFRICOM and CENTCOM: Coordinate with Egypt in crisis management planning. Consider creating a releasable compartment for classified information sharing with the Egyptians. (Link with R2 and R4)

R6. Department of State: Incorporate Egyptian concerns in United Nations resolution. (Link with R3)

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Israel and EUCOM

Israel and the U.S. share numerous bilateral agreements and national interests. While the U.S. has long supported Israel, the Trump administration's political decisions to move the U.S. Embassy to Jerusalem (2017) and recognize the Israeli annexation of the Golan Heights (2019) show an increasingly close partnership between the two countries. While Israel falls within the EUCOM area of responsibility, Egypt and the surrounding Levantine countries fall into the CENTCOM area of responsibility.

While Israel is not directly impacted by the health of the Nile, it has tangential security interests to the GERD. Even if Israel is innocent of providing shadow funding for the GERD, Egypt's suspicion over the GERD as an Israeli attempt to weaken Egypt reduces Israel's chances

for peace. Israel needs a cooperative Egypt as a neighbor as well as an Arab advocate within the Middle East Peace Process. Israel has extensive technical resources and capabilities that could aid Egypt, Sudan, and Ethiopia. Extending technical assistance in exchange for publicized diplomatic recognition could benefit all parties.

Recommendation

R7. Department of State: Coordinate with Israeli counterparts to support the technical challenges of filling the GERD without negatively impacting Egypt.

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Integrate Efforts amidst Existing Regional Security Challenges

Middle East Peace Process

While recent decades witnessed multiple U.S.-led attempts to broker peace between the Israelis and Palestinians, the Trump administration will soon release the “deal of the century.” While the contents of the deal have been closely guarded, the Arab nations have clearly stated that any deal that does not include a two-state solution with East Jerusalem as the capital of Palestine will be unacceptable. Further, even proposing a deal that does not include these terms may result in a spike in violence among the region.

Recommendation

R8. Department of State: Conduct strategic communication across the U.S.-led diplomatic and security enterprise that the Middle East Peace Process has three primary tiers of

stakeholders: (a) Israel and Palestinians, (b) regional Muslim countries, and (c) the broader community of Muslim nations.

Russia, Turkey, Iran and the Syrian Civil War

The civil war in Syria casts a long shadow. During the war the embattled regime of Bashar al-Assad received an infusion of life support from Russia, which enabled the regime to survive the conflict. However, the war destroyed the Syrian infrastructure, devastated the economy and displaced over 10 million Syrians from their homes. Due to the shared border between Syria and Turkey and the large number of refugees, Turkey’s increasing diplomatic and military involvement in post-conflict Syria further complicates the chessboard.

In addition to the civil war, Syrian territory also hosted the battle against the Islamic State in Iraq and Syria (ISIS). For multiple reasons, Iranian forces were among those attempting to destroy ISIS. Even though the battle of Baghouz marked the defeat of ISIS’s physical caliphate, Iranian military forces remain in Syria. Due to the long-standing enmity between Iran and Israel, Israel interpreted the lingering presence as hostile intent, and has conducted numerous aerial strikes against Iranian forces in Syria.

The fall of Baghouz appears to be the origin of a diaspora of ISIS fighters, and many are fleeing to Africa. The pre-conflict Syrian population of approximately 15.5 million generated an incredible number of refugees that promptly drained the resources and political good will of neighboring countries and foreign aid donors.

The combined population of Egypt, Sudan and Ethiopia is greater than 240 million. If given time and space to sew their ideology in the midst of a conflict, then a destabilizing event in North Africa or Horn of Africa over the GERD could generate an order of magnitude more refugees and extremist fighters than Syria.

Recommendations

R9. Department of State: Ensure United Nations resolution martials technical and financial resources to provide targeted support for northern Africa and Horn of Africa. Ensure resources sufficiently alleviate potential for human suffering, create conditions for economic growth and eliminate space for ISIS affiliates to proliferate. Assign specific measures of performance for continued aid. (Link with R3)

R10. Department of State: Create opportunity within the United Nations resolution for great power coordination between the U.S., European Union and China.⁶ (Link with R3)

Harmonize Support with the U.S.'s Strategy towards the Great Power Competition

Suez Canal: The Maritime Bridge between Europe and Asia

The Suez Canal provides a critical transport link between the Mediterranean Sea and Indian Ocean. Any instability surrounding the Suez Canal could trigger a dramatic increase in insurance premiums for maritime shipping, which would immediately translate to higher prices globally on consumer goods and energy. Additionally, the Suez Canal shortens the transit between the Atlantic and Indian oceans by thousands of miles.

If maritime shippers were required to transit the southern route around the Cape of Good Hope, the additional weeks in transit would trigger a global shortage of available shipping. The combination of increased insurance premiums and global shortage of shipping would have dramatic cascading impacts on any goods transported on the sea. As such, the national security interests of the European Union countries need a reliable operator of the Suez Canal—a stable Egypt.

Recommendations

R11. Department of State: Coordinate with the European Union countries who are the biggest beneficiaries of the Suez Canal in order to ensure continued flow.

R12. Joint Staff: Continue to plan security exercises like Bright Star 18—a multilateral CENTCOM field exercise and senior leader seminar held with Egypt and other partner nations—to ensure interoperability with regional partners.

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U.S. National Security Strategy

The 2017 National Security Strategy highlighted the return of Great Power Competition.⁷ Russian, Chinese, and U.S. activity in the Levant and northern Africa provide a perfect example of this competition. In the competition for markets, influence, and security, Egypt's Suez Canal and Ethiopia's prominent position in the Horn of Africa will play significant roles in the strategies of the great powers.⁸ The U.S. will seek to maintain its network of partners and allies in order to maintain security and stability in the region.

Successful U.S.-led management of the GERD issue could provide a winning platform in the much-discussed Great Power Competition. To achieve success, the U.S. can coordinate the resources of federal agencies as well as non-governmental organizations to support the GERD. For example, the U.S. can send specialists from agencies such as the Department of Energy, Army Corps of Engineers, National Weather Service, and other agencies to advise on the construction of the GERD and subsequent

safe impoundment of the Blue Nile River. Additionally, the same resources could provide technical assistance with the Egyptian Aswan High Dam, which has been challenged by an excessive silt deposit rate. Finally, the United Nations resolutions could provide a much-needed framework and future precedence for international engagement in conflicts over fresh water resources.

Recommendations

R13. Department of State: Coordinate via appropriate channels with major shipping insurance providers to understand market perceptions and values of risk. Communicate risks in order of priority.

R14. AFRICOM and CENTCOM: Develop prioritized risk mitigation plan to ensure market stability to greatest extent practicable. (Link to R13)

China's Belt and Road Initiative

China's interests are antithetical to violent extremism, and China's Belt and Road Initiative has already made massive financial investments in Egypt and Horn of Africa. However, China usually cites its "developing nation" status when countries call on it to bare any international burdens for the sake of the world order. However, the Suez Canal plays an essential role in the Belt and Road Initiative since it provides maritime access to European markets.⁹ The canal unifies the land and maritime links of the Eurasian land mass and Africa. Given China's investments to date and the vulnerability of these investments if violent extremist organizations proliferate, the U.S. should press China to funnel more technical and financial resources to the region to ensure the GERD does not challenge regional stability.

Recommendation

R15. Joint Staff: Coordinate with the Chinese Chiefs of Defense to ensure de-confliction between U.S. and Chinese security planning in order to (a) support regional stability, and (b) avoid a Sino-U.S. miscalculation in Djibouti in the event of instability in the Horn of Africa. (Link to R4, R10-12, R14)

Conclusion

The U.S. must establish a proactive posture to assist Egypt, Sudan and Ethiopia since a destabilized Nile would have rippling consequences throughout Africa, Europe, and Asia. The proactive posture must focus on coordinated diplomatic engagement of all countries with equities in the GERD, coordinated military engagement by U.S. geographic combatant commands and targeted economic assistance. Importantly, the U.S. must ensure its aiding institutions approach the challenge with a unified solution since the goals of sister agencies may conflict in the GERD debate. Above all, any U.S. assistance must leverage its existing network of allies and regional partners, not conflict with existing or create new kinetic conflicts and harmonize with the U.S.'s strategy towards the Great Power Competition. **IAJ**

Recommendations (Recap)

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NOTES

- 1 B. Keith, D.N. Ford, and R. Horton, 2017: “Considerations in Managing the Fill Rate of the Grand Ethiopian Renaissance Dam Reservoir Using a System Dynamics Approach”, *J. Def. Model. Simul.*, 14, no. 1, 33-43, <https://pubs.giss.nasa.gov/abs/ke00200u.html>.
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- 6 Benjamin Miller “Explaining Great Power Cooperation in Conflict Management” *World Politics*, Vol. 45, No 1 (Oct 1992), pp 1-46 Cambridge University Press
- 7 The White House, “National Security Strategy of the United States of America,” December 2017, 25.
- 8 James Jacobs and Kevin Boldt “Assessing the Impact of American and Chinese Economic Competition in Sub-Saharan Africa”
- 9 Shannon Tiezzi, “Xi’s Visit Cements Egypt’s Place on the Belt and Road,” *The Diplomat*, January 22, 2016, <https://thediplomat.com/2016/01/xis-visit-cements-egypts-place-on-the-belt-and-road>.