Damming the Blue Nile: Will Ethiopian-Egyptian Tensions Ignite?

by Martin Sherman

Are the Abyssinian Highlands to Become an Epicenter of Regional Tensions?

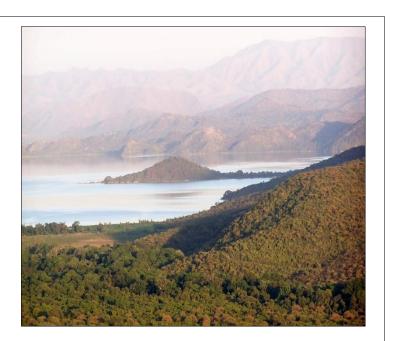
"[It] would lead to political, economic and social instability. Millions of people would go hungry. There would be water shortages everywhere. It's huge." —Mohamed Nasr El Din Allam, formerly Egypt's minister of water and irrigation, <u>The National</u>

Ethiopia's unilateral actions regarding the filling and operation of the dam constitute an existential threat to Egypt and a threat to its stability. —Egypt's foreign ministry <u>letter</u> to the UN Security Council, October 2023

"<u>The only matter that could take Egypt to war again is water</u>." —Egyptian President Anwar Sadat, 1979

Largely ignored in western dispute commentary, a between two westernaligned governments in Africa threatens to erupt into open conflict. The dispute focuses on distribution of the waters of the continent's mightiest river system among its second and third most populous nations-Ethiopia and Egypt, respectively.

The roots of tension are twofold, one legal; the other engineering—the former entailing an almost



Lake Tana in Ethiopia, the starting point for the Blue Nile, a major tributary of the Nile River.

one-hundred-year-old legal document; the other a massive hydroelectric enterprise in the deep gorges of the Ethiopian Highlands.

The History of the Allocation of the Nile

The history of the conflict traces back to an agreement from the colonial era when the 1929 Anglo-Egyptian agreement was concluded between Egypt and Great Britain regarding the utilization of the waters of the Nile River, with Britain representing its upstream colonies in the Nile River Basin-Sudan, Uganda, Kenya and Tanganyika (today, Tanzania)-who had little say in determining its terms (Britain's agricultural interests in Egypt and importance of the Suez canal for its empire were among the reasons cited for imposing the agreement so strongly skewed in its favor). For decades, the waters of the Nile have been administered and allocated according to this 1929 treaty, which

granted Egypt veto power over construction projects on the Nile River or any of its tributaries.

With the end of colonial rule—prior to Cairo's construction of the Aswan High Dam in 1960, which would <u>flood</u> extensive areas of Northern Sudan—this accord was followed by a later <u>1959 Agreement</u>, concluded bilaterally between Egypt and post-colonial Sudan.

This latter agreement effectively reinforced the provisions of the 1929 Anglo-Egyptian Treaty, making little allowance for the water needs of the other down-stream riparian states, including Ethiopia, which was not a signatory to either agreement and whose highlands supply more than 80 percent of the water that flows into the Nile River.

Inevitably, as populations—and water needs—increased, the hydrological realities



Egypt's Aswan High Dam.

began to change, challenging Egyptian hegemony over the river system and its utilization. However, the long-simmering conflict over the waters of the Nile between the upstream and downstream riparians only intensified in 2011 with Ethiopia's decision to begin construction of a massive dam on the Blue Nile. Named the Great Ethiopian Renaissance Dam (GERD), it is Africa's largest dam and the continent's largest hydroelectric power plant—and among the largest in the world.

Ethiopian Electricity vs. Egyptian Water

The potential power generation from the dam offers Ethiopia a chance to dramatically increase the supply of electricity in a country suffering from a dire power shortage. Indeed, according to 2021 World Bank statistics, barely half the overall population (54.2 percent) and considerably less of the rural population (42.8 percent) has access to electrical power. Despite the fact that in recent years, the Ethiopian economy has been one of the world's fastest growing-with access to electric power growing well over 400 percent in the first two decades of this century, it is still a country wracked by severe poverty, with which the GERD project offers a major opportunity to contend.

On the other hand, the Egyptians, afflicted by a grave lack of water, view with great trepidation the completion of a project that may potentially impede the flow of the river to their country, which is overwhelmingly dependent on the Nile for its water supply. Indeed, 85 percent of Egypt's water <u>comes</u> from the Blue Nile, which originates in Ethiopia, and less than 7

Cairo has been frequently bellicose regarding the construction of GERD, which began to materialize toward the end of the four-decadelong incumbency of Hosni Mubarak in February 2011. Water: The Only Matter That Could Take Egypt to War

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regarding the construction of GERD, which began to materialize toward the end of the four-decade-long incumbency of Hosni Mubarak in February 2011. Immediately after his overthrow, in late March the plans were made public, and several days later, the foundation stone was laid by the then prime minister of Ethiopia, Meles Zenawi.

The Egyptians vigorously opposed the subsequent construction operations, engaging in at times belligerent diplomacy in an effort to dissuade the Ethiopians from their ambitious undertaking. In fact, Egyptian rejection of Ethiopia damming the Blue Nile system within its sovereign borders pre-dates the GERD initiative.

Going back over four decades, Cairo has proclaimed that water could become a casus belli as reflected by former President Anwar Sadat, who sternly pronounced: "The only matter that could take Egypt to war again is water."

Similarly, a decade later, then-Egyptian Foreign Minister Boutros Boutros-Ghali later the U.N. Secretary-General— <u>warned</u> that the next war in the Middle East would be fought not over politics, but over the waters of the Nile.

Thus, <u>Stratfor</u> cited a June 1, 2010, dispatch, according to which a high level Egyptian security/intel source, in regular direct contact

percent from other indigenous resources, which <u>include</u> ground water, recycled effluent, desalinated water and sparse rainfall mainly along the coast.

The gravity of the Egyptian hydro-strategic predicament is reflected in the following sobering figures. During the last six decades, Egypt's population quadrupled (from 27 million to around 115 million leading annual per capita water supply to plunge to 600-700-a quarter of what it had been from 660 cm. to 2,500 cm.). Moreover, Egypt is already below the United Nations' water poverty threshold, and by 2025 the organization warns that it will be approaching a very low level, which water experts deem as constituting conditions of "absolute scarcity."

The long-simmering conflict over the waters of the Nile, between the upstream and downstream riparians intensified in 2011 With fluctuating ups and downs, it involved direct negotiations between the Egyptian and Ethiopian governments, mediation attempts with the participation of the African Union and South Africa, and a lengthy exchange of threats and counterthreats. Tensions flared again in February 2022 when Addis Ababa initiated the operation of the first of the dam's thirteen turbines, unilaterally initiating the production of electricity, without consultation or coordination with any of the other Nile nations. Tensions heightened again recently when Ethiopia reportedly completed the filling of the dam.

with [President Hosni] Mubarak and [thenintelligence head Omar] Suleiman" said:

> If it comes to a crisis [with Ethiopia], we will send a jet to bomb the dam and come back in one day, simple as that. Or we can send our special forces to block/sabotage the [planned]dam.

An Archetypical 'Zero-Sum Game'

Even though Mohamed Morsi, the leader of the short-lived Islamist regime (2012-13) was generally less menacing toward Addis Abba, he too-under pressure from his militarywarned Ethiopia that "all options are open," a reference to a possible airstrike, guerrilla sabotage, or destabilization of the Ethiopian government. These remarks were made at a meeting called by Morsi to address the discontent of the military over Egypt's lack of resolve in dealing with the GERD initiative and were inadvertently broadcast publicly. This caused considerable diplomatic embarrassment for Egypt, which scurried hurriedly to walk back their impact.

After Morsi's overthrow shortly afterwards, current Egyptian President Abdel Fattah el-Sisi, <u>reiterated</u> that "no one can take a drop from Egypt's water, and if it happens there will be inconceivable instability in the region."

Yet, despite considerable bluster from Cairo, Addis Ababa has remained seemingly unperturbed.

Thus, as The Economist <u>commented</u> on the impasse:

[Y]ears of talks failed to produce a deal on how Ethiopia would fill and operate the dam. The African Union tried to mediate, as did America. ...

Egypt wants Ethiopia to promise to release certain amounts of water to top up the Nile. But Ethiopia is loth to 'owe' water to downstream countries or to drain the reservoir so much that electric output suffers.

Subsequent diplomatic efforts proved fruitless in resolving what is essentially an archetypical "zero-sum game". After all, with a fixed (indeed decreasing) supply of water and increasing populations (and hence, demand for water) of the Nile nations, gains for upstream riparians (such as Ethiopia) must almost inevitably come at the expense of downstream ones (such as Egypt).

According to <u>one expert</u>, even today:

Egypt's share of the Nile still falls [well] short of its annual water needs. ... Consistent increase in demand for water and proportionate decrease in its supply makes the future of Egypt even grimmer.

Consequently, the pursuit of some consensual arrangement, adequately satisfactory to both sides, has proved consistently futile.

Sinai: Islamist Insurgency

Almost at exactly the same time as the construction of the GERD began, significant events—albeit causally unrelated—began to emerge about 2000 kilometers (1,250 miles) to the north, in the Sinai Peninsula that abuts Israel's long southern border, and which precipitated increasingly grave security hazards for both Cairo and Jerusalem.

This was the beginning of a long and brutal Islamist insurgency directed against Egyptian security forces, but which did not spare luckless civilians from gruesome attacks. The insurgency began during the uprising in Egypt that led to the overthrow of Mubarak in 2011 and initially involved Bedouin tribesmen, some of whom harbored long-standing grievances against the central government in Cairo, but later attracted radical jihadist elements from countries such as Syria, Iraq, and Libya. In 2014, one group, <u>Ansar Bait al-Maqdis</u> switched its allegiance from Al-Qaida to ISIS and renamed itself <u>Sinai Province</u>, making itself part of that pitiless Islamist organization.

The Egyptian military engaged with the insurgents, launching two operations under the Morsi regime in 2012 and 2013 to quash the violence, but in 2013 following an abduction of Egyptian officers, violence surged again.

Interestingly, it was during the insurgency that el-Sisi, now Egypt's president, was appointed to the post of defense minister by then-President Morsi, who dismissed el-Sisi's predecessor, Muhammad Tantawi. Ironically, it was el-Sisi who later deposed Morsi to succeed him as president.

Sinai: Diluting Demilitarization

After Morsi was ousted, violence increased. The Egyptian forces responded forcefully, including against civilians, with <u>measures</u> that involved, inter alia, demolition of houses and evacuation of residents to create antismuggling buffer zones. These harsh actions fanned the flames of resentment with the local population due to, among other things, government dereliction and lack of suitable schools and health services. Numerous civilians were also abducted and butchered by the jihadi insurgents.

The military action raged on for more than a decade involving incidents of appalling violence. One of the <u>goriest attacks</u>, in

November 2017, involved the slaughter of more than 300 Sufi worshipers, including about 30 children, in an El Arish Mosque in Northern Sinai.



Explosive materials and weapons found on the bodies of the terrorists who carried out a multipronged terror attack that targeted Israeli civilians on Aug. 18, 2011. The terror attack left eight people dead and at least 40 others injured.

At times, terror attacks erupted beyond the Sinai. For example, there were several lethal cross-border attacks <u>against Israel</u> that inflicted numerous fatalities on soldiers and civilians. Moreover, in 2015, a Russian airliner was <u>brought down</u>, reportedly by Sinai-based terror groups, resulting in more than 220 deaths.

After years of strenuous and sustained military effort, in January 2023 President el-Sisi declared victory, proclaiming that "we have defeated terrorism", after a conflict of a decade and more, involving around fifteen Islamist organizations that reportedly left almost 3,500 Egyptian security personnel dead and nearly 12,500 wounded, with up to 5,000 insurgents killed.

Sinai: 'Keeping the Lid on'?

At this juncture, several points of strategic importance for Israel should be underscored. For Egypt to subdue the insurgency required employing considerable military resources over a protracted time period, beyond the level that Egypt was permitted to deploy in Sinai by the 1977 Camp David Agreements. Indeed, although the effective demilitarization of the Sinai was the corner-stone of the peace agreement between Egypt and Israel, given the challenges posed by the jihadi insurgency, Israel reluctantly agreed in some cases to the deployments of personnel and equipment over and above the stipulations of the agreement. In other cases, Israel expressed chagrin at Cairo's unilateral breaches of the restrictions, even filing formal official complaints in this regard.

Currently, it appears that the jihadi insurgents have been largely subdued, although some "<u>post-victory" violence</u>—involving fatalities among security forces in El Arish—has occurred.

So, the situation that prevails today in Sinai is one in which the authorities have managed to restore "the lid" on a simmering pot of latent violence, seething in a disgruntled civilian population with a considerable military presence still required to maintain a semblance of law and order.

Indeed, in light of what <u>some see</u> as Cairo's rather lethargic efforts to advance development and human rights in the peninsula, there is little guarantee that a future resurgence of the previous levels of violence will not re-assert itself in the future.

Accordingly, given the effort in terms of personnel and materiel called for to impose law and order in Sinai and prevent a renewed threat of its takeover by jihadi warlords, one can only ponder how Cairo would react if faced with another situation, which could gravely threaten vital national interests elsewhere and require siphoning off resources currently deployed in Sinai.

The Possible Impact of GERD on Sinai

The troubling question that now arises is this: What would be the impact on Cairo's ability to impose law and order in Sinai if it perceives Ethiopia's dam construction as creating an untenable situation regarding its ability to provide vital amounts of water to its population, and thus finds itself compelled to mobilize for coercive action to contend with the situation?

The threat to Egypt's water in this regard is thrown into sharper relief by the <u>significant</u> <u>role</u> agriculture plays in Ethiopia's economy, "accounting for 40 percent of the gross domestic product (GDP), 80 percent of exports, and an estimated 75 percent of the country's workforce."

Indeed, one would need a giant leap of faith in Ethiopian altruism to entertain the possibility that Addis Ababa will refrain indefinitely from using the waters of the GERD for expanded irrigation, rather than merely for hydroelectric power generation as is currently foreseen.

If the impasse with Ethiopia persists, and the grave water situation in Egypt continues to deteriorate, Cairo may well be forced to prioritize the wellbeing of the millions in the Nile delta over its endeavor to maintain its control over the remote Sinai Peninsula, and draw off resources currently allocated to the continued pacification of the Sinai warlords.

This will inevitably result in giving greater rein to the anti-regime—and anti-Israel radicals, who, in the past, have launched attacks against Israel and been heavily involved in smuggling arms into Hamas-controlled Gaza. These are likely to be exacerbated significantly if GERD-induced reductions in Egypt's military capabilities take place.

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The Matter of Military Might

On paper, the Egyptian armed forces are far superior to those of Ethiopia. Indeed, in many—if not most—measures of military might, the Egyptians outstrip the Ethiopians by a factor of tenfold and more.

Thus, Cairo's military budget is reportedly almost \$10 billion (\$9,400,000,00), while that of Addis Ababa is well under one billion dollars (\$888,099,450). In terms of total aircraft, Egypt exceeds Ethiopia by over one thousand to under one hundred. In terms of fighters, the ratio is almost 250 to less than twenty-five. Likewise, Cairo outstrips Addis Ababa in helicopters by almost 250 to barely thirty-one, and 100 to six when it comes to attack helicopters. With regard to land forces, much the same holds true. While the Egyptian army has almost 5500 tanks, the Ethiopian military fields less than 700. As for artillery, Egypt has around 3000 pieces (about half of them self-propelled); Ethiopia has barely 700, with just over sixty self-propelled.

Of course, as a landlocked nation, Ethiopia has no navy or other marine-borne forces of any significance, while the Egyptian navy boasts twenty large surface warships (thirteen frigates and seven corvettes) as well as eight submarines. This, together with two helicopter-carriers, provides Egypt with a clear advantage over Ethiopia in its ability to project military power.

The Potential to Project Power

While in theory, the Egyptian armed forces are <u>far superior</u> to those of Ethiopia, in actual conflict, matters may be a little more complex than dry

figures on fire power and projection capability. Significantly, in the only recorded <u>military conflict</u> between the two countries (in 1874-76), the Egyptians were in fact severely defeated.

Add to this that Egypt would face several <u>significant obstacles</u> in attempting to either destroy or cripple the GERD, or intimidate the Ethiopians by military means regarding its operation

After all, Egypt will have to <u>project military</u> force—whether air force or special forces over considerable distance. However, skeptics should note that in the past Egypt has proven itself both willing and capable of deploying military forces considerable distances from the homeland, albeit with <u>less than</u> <u>overwhelming success</u> in actual combat.

In the early 1960s, Cairo dispatched up to 70,000 troops to then-North Yemen-almost exactly the same distance away as the GERD—for ideo-political rather than existential reasons (i.e. support for republican forces against royalists.) By contrast, the issues involved in the dispute with Ethiopia are viewed as far more important for the survival of the country. Interestingly enough, despite heavy losses in the 1962-67 Yemen engagements, by 2015, then-bitter memories seemed to have faded, with a military contingent in a now-united Yemen being deployed against the Shia Houthi rebels.

Significantly, there are <u>reports</u> that Cairo is engaged in an active search for military bases in various countries bordering Ethiopia, such as Eritrea, South Sudan, Somaliland, and Djibouti, largely due to GERD-related concerns.

As the Diplomatic Process Staggers on Into Its Second Decade

Accordingly, it would be foolhardy to discount the possibility of a military operation against Ethiopia to defend what it considers a vital national interest.

Arguably, one route for such an operation would be via Sudan, which has a more ambivalent attitude toward GERD, as it is likely to reap <u>several benefits</u> from the project—including enhanced flood control and increased electricity supplies. Moreover, it would be most likely to suffer severely from the consequences of an attack on the reservoir. Indeed, if Egypt is successful in causing largescale damage to the dam wall, there is a real risk of <u>severe flooding</u> of extensive downstream areas, particularly in southern Sudan and involving grave diplomatic repercussions for Cairo.

As the diplomatic process staggers on into its second decade, lurching from failure to impasse, Cairo faces a real possibility of escalating tensions with Addis Ababa that may, or may not, ignite into actual violence. In this regard, it should be recalled that around <u>95 percent of the population</u> of the entire country is clustered around the Nile and its delta, while only about 1 percent reside in the Sinai Peninsula and the country's other deserts. Accordingly, the specter of the reduction of the Nile's flow, particularly in time of drought, will compel Cairo to gear for such a "worst-case" eventuality—draining off resources from other areas of potential conflict.

GERD-Like Echoes: Kenya

Although Ethiopia is one of the world's poorest countries, it also has one of the fastest growing economies in the world. One of the major ways Addis Ababa views enhancing national welfare and elevating income is via the utilization of the potential for generation of hydroelectric power provided by the rivers that flow down from its lofty mountain ranges. To this end, Ethiopia has embarked on an extensive enterprise of constructing dams not only on the Blue Nile but on other rivers in the country. While its downstream neighbors stand to enjoy some benefits from these projects, including additional power, they may well be subjected to considerable adverse effects as well.

Kenya is a case in point. Indeed, there is concern that some 300,000 Kenyans who depend on <u>Lake Turkana</u>, the world's biggest desert lake that is fed almost exclusively by the <u>Omo River</u> that originates in Ethiopia, will face running short of both drinking water and fish should Ethiopia move ahead with plans to construct two additional dams upstream (<u>here</u> & <u>here</u>) on the Omo river.

Indeed, the United Nations Educational, Scientific and Cultural Organization (UNESCO) recently placed the lake on its list of endangered "World Heritage Sites" because of the "disruptive effect" of an <u>existing Ethiopian dam</u> and irrigated sugar estates in Ethiopia across Kenya's northern border. One UNESCO environmental expert warned that the current situation, and Addis Ababa's future plans, augur ill for the local communities who rely on the imperiled lake for their livelihood. According to Ethiopian authorities, the allegations are unfounded. They claim that their studies indicate that the dam will stabilize the river's flow and control water levels in the flood-prone region.

Despite Ethiopian reassurances, concerns from critics remain, with fears that the upstream dams will cause salination, and even toxification, of water sources, reducing fishing grounds and creating <u>tensions and</u> <u>conflict</u> over access to shrinking supplies of potable water.

So, while certain benefits are planned to accrue to Kenya—particularly in terms of increased electrical power—many have qualms that the detriments of the upstream disruptions will outweigh the downstream gains.

Ethiopia, for its part, shows little signs of flexibility.

The US Angle

In recent years, Washington has not always been an entirely neutral observer in the face of Ethiopian intransigence and unilateralism. In 2020, in an apparent flash of chagrin over the rebuff of its mediation efforts regarding the GERD project, the Trump administration decided to cut up to \$100 million in aid to Ethiopia. The measure was reportedly triggered by Addis Ababa's decision to begin filling the GERD without agreement with Cairo and Khartoum. In a Financial Times interview, Ethiopia's then-ambassador urged the US to reconsider the decision, invoking "the 117 years of diplomatic relations" with Washington, and expressing the hope that these "will not be damaged by an issue not related to the two countries.

The Trump cuts in aid to Ethiopia were intended to be applied until Ethiopia relented

and conceded to some agreed US/World Bank-led accommodation with its downstream riparians.

However, it seems that the US's punitive measures were short lived. With the changing of the guard in the White House, the Biden administration reversed its predecessors' policy, apparently unconvinced that withholding funding had produced anything of substance beyond angering the Ethiopians.

Somewhat later, in 2023, US aid was paused for reasons unrelated to GERD, due to theft and mismanagement of the aid, only to be resumed once again several months later.



President Donald Trump (center), joined by Treasury Secretary Steven Mnuchin (far right), meets with Sudan's Minister of Foreign Affairs Asma Mohamed Abdalla (far left), Egypt's Minister of Foreign Affairs Sameh Shoukry (left), and Ethiopia's Minister of Foreign Affairs Gedu Andargachew (right), in the White House on Nov. 6, 2019.

US policy toward Ethiopia has thus been buffeted in opposing directions in recent years, now hither, now thither. Addis Ababa's pugnacious attitude and its less-thanunblemished human rights record have tempered them, while the need to avoid pushing them to the Chinese, always willing to partake in Africa's infrastructure development (including those associated with— \$1.2 billion in transmission lines from the site, and partial financing for purchase of the <u>turbines</u>) has helped sustain them. Washington's diplomatic balancing act has been

made tougher by its <u>explicit commitment</u> to Egypt's water security, something Cairo sees as gravely imperiled by the operation of GERD.

A thorough analysis of the US perspectives of the full spectrum of potential GERD GERDrelated flashpoints cannot ignore the possible nexus between the ability of Cairo to maintain law and order in the remote Sinai Peninsula and the necessary resources to ensure adequate quantities of water to the major population centers along the Nile. After all, should diplomacy fail, and a situation arise in which the recalcitrant Ethiopians compel the Egyptians to siphon off forces from Sinai because of mounting friction over the Blue Nile's northward flow, the resurgence of jihadi violence that could result would undoubtedly run counter to US interests, especially if Israel finds itself having to violate Egyptian sovereignty to protect its long southern border.

Can 'Zero-Sum' Be Made 'Positive Sum'?

Even without the potential menace that it sees GERD imposing on its water system, Egypt is in a highly tenuous hydro-strategic situation anyway. <u>Rising temperatures</u>, scanty rainfall, intrusive sea levels and land subsidence, coastal flooding, eroding shorelines, increasing soil salinity, recurring drought, and together with <u>diminishing flow</u> in the Nile, all combine to exacerbate Egypt's vulnerability regarding its water supply. These factors,

Indeed, Egypt today is using more than its renewable supplies annually, a deficit that is predicted to increase with time. Significantly, some of the threat to Egypt's water arises well beyond its own borders. together with its <u>robust</u> population growth, raise stark questions as to Cairo's ability to continue to ensure adequate water supplies to its people in the future.

Indeed, Egypt today is using more than its renewable supplies annually, a deficit that is predicted to increase with time. Significantly, some of the threat to Egypt's water arises well beyond its own borders. As other populations-and demand for water-in upstream riparians on the Nile climb, there is increasing pressure on them to set aside decades-old restrictions, rooted in colonial times and imposed on them by a once hegemonic Egypt, and to begin to utilize the river's water for their own people. Aptly, the headline of a 2021 article in the Atlantic Council reflected this grim reality, pronouncing "Egypt has a water problemand no, it's not only the GERD".

Clearly then, in the longer run, naturally occurring water sources will not suffice to sustain Egypt, and reshuffling the same cards will not produce any satisfactory outcome.

For example, the Egyptian government has been trying for decades to limit water intensive crops. However as <u>Hamza</u> and <u>Mason</u> have <u>pointed out</u>, although "agricultural policy has aimed at limiting rice and sugar cane in order to save water losses, ... so far this policy has not been very successful." They note that: "Considerations of social stability outweigh considerations of water efficiency (understood quantitatively) especially to safeguard groundwater quality and prevent the seawater intrusion." Although some time has passed since this assessment, it still appears substantially valid. Indeed, a decade and a half later, Nader Noureddine, a professor of agriculture and irrigation at Cairo University <u>cautioned</u> that such restrictions "will affect the salinity of the soil in some farmland, which will be devastating to the agriculture sector." Ominously, he warned, "Increased salinity will mean that the farmland will be destroyed forever and in an irreversible way."

Underscoring the myriad obstacles in the way of governmental efforts to restrict the cultivation of water intensive crops, a former head of the Egyptian Farmers Union <u>asserted</u>: "The law is an ultimatum for farmers—they either go to jail or face hunger."

Indeed, whatever the <u>value</u> of these claims are, in light of the ongoing water crisis, the planned restructurings of Egyptian agriculture clearly has not been able to surmount the plethora of cultural, social, and political obstacles facing it. So, while clearly some reforms are essential, it seems unlikely that this could be considered a timely stand-alone solution to the problem

Accordingly, if Washington is to realistically approach previously mentioned its "commitment to Egypt's water security", no matter the outcome over GERD, the unavoidable conclusion is that the solution that must be pursued is the artificial production of water-with the most likely alternatives being purification of and/or sewage/wastewater large scale desalination.

Activity of this sort is currently being undertaken. but it is merely a <u>small fraction</u> of what is needed. However, this may just indicate that the daunting challenges of GERD could be transformed into an opportunity, paving the way for a-US led megainfrastructure initiative, hopefully taking the lead over the Chinese.

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