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The GERD Challenge: How a Compromise Can Be Reached Through Cooperation

Identifying opportunities for Ethiopia, Egypt and Sudan to reach a mutually beneficial compromise while addressing concerns.

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POLICY BRIEF
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Introduction:

Ethiopia's Grand Ethiopian Renaissance Dam (GERD) project could be a central project to stimulate economic growth in the county, while creating jobs and reducing levels of poverty. However, the risks that the project pose for its downstream neighbours of Egypt and Sudan are profound, including risks of drought and concerns over safety. This case has become a key international issue with the involvement of many international bodies such as the African Union (AU) and United Nations Security Council (UNSC). However, there are several solutions that could be implemented to alleviate the concerns of all parties involved, all which require a semblance of cooperation and compromise. It is in all parties' best interests to seek a peaceful resolution to this issue, as there may be greater challenges ahead given the predicted impacts of climate change and overpopulation. Such challenges will require cooperation between all affected states to tackle these shared issues together.

KEY TAKEAWAYS

- Ethiopia's GERD project poses profound risk to Egypt and Sudan without proper safeguards.
- The state of the current political rhetoric surrounding the GERD issue, including arbitration, is damaging and a counterproductive distraction.
- Sufficient safeguards for all interests could be found through technical solutions, such as coordinated water release schedules and adopting dynamic release to prevent droughts.
- Long-term issues of climate change and overpopulation will be greater threats for the future of the Nile Basin states.

The GERD Problem

The GERD is an Ethiopian gravity-based hydroelectric power dam located on the Blue Nile river, near the border with Sudan. The dam project started in April 2011 and is due to open this month of July 2020. The project has cost the Ethiopian government, on some estimates,[1] $6.84 billion US in financial investment. Once fully operational, the dam, which will be the largest in Africa and seventh largest in the world with a reservoir max-capacity of 74 billion cubic metres, is estimated to generate 6.4 gigawatts of electrical power. This power generation is a key pillar of Ethiopia's current political strategy[2] to cover domestic energy needs, improve its economic outlook through increased energy exports to foreign countries, and create numerous jobs for workers.

However, the GERD is a contentious issue for the downstream Nile countries of Sudan and Egypt. The Blue Nile itself is the main tributary that supplies most of the water that meets the unified Nile river. With 98% of its near-100 million population living along the Nile and Nile Delta, and 90% of its water originating from the river, Egypt fears the impact of restricted water-flow for both general use and economic use in the agricultural sector.[3] Egypt is also concerned by the GERD's impact on power generation at its own major hydroelectric dam, the High Aswan Dam (HAD), which some[4] have estimated will produce 24.2% less energy than usual when the GERD becomes operational. Additionally, there are fears of catastrophic humanitarian consequences in the case of drought. Cairo indicated[5] that one of the most sensitive periods for the GERD will be the impact of the initial filling process of the reservoir, itself almost twice the average annual flow of the Nile into Egypt at the Sudanese border, and should the process be rushed to maximum capacity too quickly, there will inevitably be a water shortage.

Sudan, meanwhile, has been less critical of the GERD, likely due to the opportunities that it represents for importing inexpensive Ethiopian electricity as well as the country's lower dependence upon the Nile compared to Egypt. However, it has raised some criticisms related to safe operation of the dam, especially regarding coordination with its own Roseries dam, only 100km down-river from the GERD, which risks being overwhelmed during the GERD's water releases, threatening its operational safety and consequently, in a worst-case scenario, "*the lives and safety of millions of Sudanese citizens*".[6]

International Mediation Efforts and Inflammatory Rhetoric

The issue of the GERD has been brought before several international bodies with the aim of seeking mediation between the three nations. There have been three notable events in this regard. First, in January, the US and the World Bank hosted the three parties in Washington DC for talks, where an agreement was proposed[7] that would regulate the filling and operation of the dam. However, Ethiopia walked away from the talks. Commenting in a podcast for *The Africa Report*, Zerihun Abebe, a member of the Ethiopian negotiating team for the GERD, in reference to this said "*When the observer changes their role from being an impartial observer to a partial arbitrator, that is where the problem started*".[8]

Secondly, the AU made a statement in June that "*welcomed the commitment of the three Parties to an AU-led process*"[9] and resumed a round of talks between the nations. Late last month, Egypt

[1] https://www.arcgis.com/apps/MapJournal/index.html?appid=d6816b15fa0e4d91a5ac43020c0064c4
[2] http://www.futuredirections.org.au/publication/the-grand-ethiopian-renaissance-dam-power-for-ethiopia-disaster-for-egypt/
[3] Ibid.
[4] https://www.arcgis.com/apps/MapJournal/index.html?appid=d6816b15fa0e4d91a5ac43020c0064c4
[5] https://issafrica.org/iss-today/ethiopias-nile-dam-dispute-must-be-solved-soon
[6] http://english.ahram.org.eg/NewsContent/1/64/372908/Egypt/Politics-/UPDATE--Sudan-says-deeply-concerned-about-GERD-fil.aspx
[7] https://home.treasury.gov/news/press-releases/sm891
[8] https://www.theafricareport.com/32412/gerd-1959-egypt-sudan-treaty-the-worst-agreement-any-government-in-khartoum-could-have-signed-worst-agreement-ever/
[9] https://au.int/en/pressreleases/20200626/hosg-communique-meetinng-grand-ethiopian-renaissance-dam-gerd

and Sudan released a statement[10] that said that the three had reached an agreement during these talks to delay filling the dam until a complete solution was reached. However, this was contradicted by Ethiopia that stated[11] it would begin filling the dam within weeks due to the upcoming rainy season.

The third, and perhaps most controversial, event occured when Egypt brought the discussions of the GERD before the UNSC in late June 2020, with Egyptian Foreign Minister Sameh Shoukry [12] pushing for a Resolution on the matter, calling for "*[all parties] to reach an agreement within two weeks without taking any unilateral measures related to the dam*". Ethiopia replied by claiming that the GERD does not have "*a legitimate place in the Security Council*", [13] considering the ongoing AU-led talks. For Egypt, the fact Ethiopia planned to fill the dam to capacity, regardless of a supposed agreement not to, showed the limitations of the AU process alone. The UNSC, for their part [14] "*all expressed support*" for the AU process, "*but took no immediate action*".

Much of the disagreement over the GERD has been through these types of rhetorical claims. An obstructive element has been reference, from all sides for differing reasons, to the 1959 Nile Waters Agreement, [15] signed between Egypt and Sudan, which gave full control over the Nile between the two countries, while allocating the entire flow in specified shares. However, the other Nile countries including Ethiopia were not party to this treaty, which has caused the 1959 Agreement to be highly controversial. Some Ethiopian commentators[16] call its origins "*colonialism*" and a form of "*entitlement*". Meanwhile, in response to these comments, some Egyptian commentators replied, "*the worst example of colonialism is when one power controls and denies others their basic water rights*". [17] And even at the political level the rhetoric has been inflammatory, with talk of the threat of military action by some officials.

Rhetoric like this is unhelpful and damaging, while distracting from the fact that much has already been agreed. The AU said that "*more than 90% of the issues… have already been resolved*." [18] This includes the not insignificant fact that in 2015 the three nations signed a Declaration of Principles[19] that not only certified Egypt and Sudan's acceptance of the GERD's existence, but also established principles of cooperation, development, regional integration, not causing harm, fair use, trust-building and peaceful settlement, among others. The three nations should revisit these principles in their negotiations. For instance, this document certifies that Ethiopia is right to be able to seek development opportunities for its citizens. However, Egypt and Sudan are also right to seek safeguards to prevent harm befalling their own citizens. And despite some political comments to the contrary, these two objectives are not mutually exclusive.

Solutions Through Cooperation and Compromise

In 2016, Wheeler et al.[20] constructed a study that examined the drought risks associated with the GERD for Sudan and Egypt. The conclusions of the study recommended that a combination of a drought management policy at the HAD, with a GERD-HAD safeguard policy, would eliminate nearly all risk of water shortages in Egypt. These policies would imply that the HAD would sometimes need to release water downstream early for users, but that the risks to hydropower generation in Egypt could be mitigated by a clear coordination between the HAD and the GERD. Notably, the safeguard would insist that the GERD releases water not in an annual capacity, but instead dynamically to ensure that an elevation of at least 150m of water is always maintained in the HAD downstream. These policies would also integrate the dams in Sudan to ensure that the

[10] https://www.france24.com/en/20200627-ethiopia-on-track-to-fill-controversial-dam-despite-dispute-with-egypt-sudan
[11] Ibid.
[12] https://newsghana.com.gh/egypt-turns-to-unsc-to-push-for-final-deal-on-ethiopias-nile-dam/
[13] https://enterprise.press/stories/2020/06/30/egypt-pushes-flor-un-security-council-resolution-on-gerd-17827/
[14] Ibid.
[15] http://www.fao.org/3/w7414b/w7414b13.htm
[16] https://www.theafricareport.com/30259/dear-egypt/
[17] https://www.theafricareport.com/30960/dear-ethiopia/
[18] https://au.int/en/pressreleases/20200626/hosg-communique-meetinng-grand-ethiopian-renaissance-dam-gerd
[19] http://english.ahram.org.eg/News/125941.aspx
[20] Kevin G. Wheeler, Mohammed Basheer, Zelalem T. Mekonnen, Sami O. Eltoum, Azeb Mersha, Gamal M. Abdo, Edith A. Zagona, Jim W. Hall & Simon J. Dadson. (2016) "Cooperative filling approaches for the Grand Ethiopian Renaissance Dam". *Water International*. 41:4. 611-63.

water flow reaches all downstream countries in a fair manner. The conclusions suggest a number of proactive measures. First, Ethiopia would need to accept that release of water from the GERD would be dynamic and conditional upon the state of dams downstream, including waiting for downstream dams to be close to full to mitigate initial filling-risk. Second, to coordinate this, clear, effective channels of communication between all three countries would need to be established.

Another study by El-Nashar and Elyamany[21] also analyses the drought risks posed by the GERD upon Egyptian users. The study finds that while the GERD will impact Egypt's water supply by 27.91 billion cubic metres, a number of additional water saving strategies in Egypt could save as much as 40 billion cubic metres of water. These technical solutions to conserve water include eliminating rice and other water-intensive crops, changing surface-level irrigation to covered pipes in order to offset evaporation loss, and finding alternative water sources such as increased reuse of drainage water and treated wastewater. While these changes should be considered for sustainable water use in the long term, the study presumes much from Egypt alone to change to offset the effects of Ethiopia's GERD, let alone that Egypt has already undertaken a number of technical improvements to conserve water.[22] What could be done instead is for Ethiopia to assist, financially or technically, in the development of some of Egypt's water conservation strategies, which would not only mitigate some risks of drought, but help to build trust and goodwill that would demonstrate Ethiopia's willingness to address the fears of affected downstream communities.

In addition to these technical solutions to mitigate drought risk, the issue of arbitration should be considered in the framework of the original 2015 Declaration, which indicated that most of these disputes should be settled internally between all three countries. For any issue that cannot be solved within this group, an independent arbiter is required, and this should be settled through the AU, as all countries are Member States. However, it would be better for the AU to establish an independent expert panel specialised on the GERD and related issues, rather allowing decisions to be potentially affected by the will and political leanings of other Member States. This independent panel of experts could then serve as the dispute negotiator.

Having said this, the issue of the GERD raises another more urgent problem that is unfortunately not discussed much at present: the impact of climate change and population growth trends on water use of the Nile. In this respect, the presence of the GERD serves a useful purpose, as it forces states to consider what methods they will use to meet challenging, and competing, water needs in the future. Climate change is expected[23] to increase levels of water scarcity from 10% of the Nile Basin population at present, to 35% in a normal year in 2040, and as much as 45% in a hot year. That is the equivalent of about 110 million people facing severe water shortages. Meanwhile, the population of the region is expected[24] to continue to grow, which will create a huge shortfall of available water in the future. In these difficult scenarios, it will be necessary for all affected States to cooperate to mitigate the risks for their citizens. The best practices that could be hypothetically established from a mutually beneficial outcome of the GERD negotiations would form the bedrock of those future mechanisms.

In the short-term, more work needs to be done urgently to de-escalate tensions between the countries. Confirming circulated satellite images showing an increase in water levels in the dam from between 27 June and 12 July 2020, Ethiopian Water Minister Seleshi Bekele said[25] on 15 July that the GERD reservoir had started to fill naturally with rainwater. This comes a day after the most recent round of AU-led talks between Ethiopia, Egypt and Sudan ended without agreement.[26]

[21] Walaa Y. El-Nashar & Ahemd H. Elyamany. (2017) "Managing Risks of the Grand Ethiopian Renaissance Dam on Egypt". *Civil Engineering*. 9. 2383-2388.
[22] https://wwww.dailynewssegypt.com/2020/01/26/egypts-water-strategy-based-on-4-directives/
[23] https://theconversation.com/in-the-future-there-will-be-more-rain-but-less-water-in-the-nile-basin-129360
[24] https://www.reuters.com/article/us-climate-change-nile-water/more-people-less-water-scientists-see-risks-on-upper-nile-idUSKCN1VI24A
[25] https://www.bbc.com/news/world-africa-53416277
[26] https://enterprise.press/stories/2020/07/14/au-sponsored-round-of-gerd-talks-end-with-no-agreement-18860/

Key Insights and Conclusions:

- **Ethiopia's GERD project has posed risks for the downstream countries of Sudan and Egypt, while generating a significant amount of negative political rhetoric.**

- **Most issues could be solved through better efforts to seek technical compromise between all three countries, including synchronized operation of the GERD and downstream dams, and a dynamic release schedule of water to mitigate drought risk.**

- **The AU retains its place as the best option for independent dispute resolution, however steps should be implemented to establish an independent expert panel to assess claims.**

- **There are still outstanding questions regarding sustainable long-term Nile water use due to the complementary issues of climate change and overpopulation growth.**

In conclusion, while the GERD requires some additional mediation, the situation should not be as politically controversial as it currently is. All States have room for compromise with the goal of finding a settlement that fairly balances all sides. Egypt will inevitably experience a reduced rate of water when the GERD becomes fully operational; however, by adopting a dynamic water-release schedule, Ethiopia does not need to make this reduced rate so catastrophic. Finally, it will be necessary for all States to learn to coexist on the Nile and develop good solutions for shared challenges, as the looming issues of climate change and overpopulation both pose far more profound risks for long-term water management.

BIC Policy Recommendations:

Towards the Governments of Ethiopia, Egypt, and Sudan:

- Avoid taking unilateral actions, such as active filling of the GERD or threats of military action, that could raise further regional tensions.
- Reframe discussions of the GERD and outstanding disagreements with less hostile political rhetoric that does not invoke unnecessary controversies, and instead focuses on pragmatic compromise.
- Return to the framework and spirit of the 2015 Declaration of Principles in building trust and conducting bilateral negotiation.
- Explore technical solutions that address downstream concerns of drought and safety-issues. These solutions could include safeguard policies through coordinated and dynamic release of water between the GERD and other dams, notably the HAD.
- Explore further water conservation strategies such as reducing the number of water-intensive agricultural crops.
- Conduct all discussions with the issues of long-term sustainability and climate change as central themes.

Towards the African Union:

- Establish an independent Panel of Experts for the GERD to as an arbiter and dispute-resolution for issues that cannot be negotiated between the three affected countries bilaterally, in line with the framework of the 2015 Declaration of Principles.
- Implore all three countries to exercise calm and find a compromise that is mutually beneficial for all three and the region in general.

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6