

The Grand Ethiopian Renaissance Dam: A Window of Opportunity or a Door for Exclusion?

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Introduction: The Nile River is one of the longest rivers in the world that flows through 11 countries. The Blue Nile River is a tributary to the Nile River, which starts from the highland of Ethiopia and contributes around 85% of water flow to the Nile that flows upstream into the Mediterranean Sea. With the aims to solve the water problem and enhance their development, the Ethiopian government started building the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile River in 2011. Since this river is a tributary to the Nile River, many spectators questioned how Ethiopia has the jurisdiction to build a dam over a river that is transnational. The Nile is Egypt's primary source for freshwater. Egypt's main concern is since their population continues to grow, their freshwater supply will deplete.

Before the Dam

People who live along the Nile River are highly depended on its water. Each country believes they have their own right to the Nile's water, which causes conflict. For the 11 countries the Nile flows through, its usage has been for irrigational purposes, access for transportation, and contains rich soil for plants to grow.



Specifically for Egypt, 95% of the population live around the Nile River as it is their only source of freshwater.

The few transnational water laws, such as the *Cooperative Framework Agreement*, have attempted to establish each state's responsibility to conserve the Nile's water.

Article 14 requires countries to attain and sustain water security

Grand Ethiopian Renaissance Dam



Source: Google Maps

- Developed in 2011
- Located on the Blue Nile River in Ethiopia but close to the border of Sudan
- Water capacity is expected to hold 74 billion cubic meters
- Power capacity will be around 6,000 megawatts

The goals of the dam are to benefit a sustainable economic growth in Ethiopia and help with uneven rainfall distribution.

It is expected to be completed by 2022.

Support for the GERD

A 2014 study aimed to observe the affects the GERD would have on Egypt's *High Aswan Dam (HAD)*. The results showed the GERD will increase Ethiopia and Sudan's food security and have more available cheap power. Additionally, Egypt will also benefit from the dam as they would have expanded irrigation landscapes.

However, Egyptian leaders claim the GERD will have damaging effects on their growing economy.

Implications After the Dam's Completion

"By 2050, northeastern Africa's population growth is expected to double." (Goitom Gebreluel).

What will happen to Egypt when their only source for freshwater will be cutoff by the GERD?

These concerns will include:

- Water scarcity for irrigation and transportation
- Food insecurity as crops will be depleted from the Nile's soil and water
- Climate change will also impact the river's flow causing droughts or flooding

How to Lessen the Impact

- Transnational cooperation
- More storage capacity to make up for downstream current
- Flexible agendas for possible malfunctions
- Possible international intervention



Source: NASA. Is the GERD worth constructing if it will supply the economic growth with available energy but affect the Nile's flow to other shared states?

References

1. Administrator, NASA Content. "Nile River Delta at Night." NASA, NASA, 6 Apr. 2015. www.nasa.gov/multimedia/imagegallery/image_feature_1923.html.
2. "Ethiopia Says GERD Needs 4 Years to Be Completed." AllAfrica.com, 13 Dec. 2018. allafrica.com/stories/201812130433.html.
3. Hala Nasr & Andreas Neef (2016) Ethiopia's Challenge to Egyptian Hegemony in the Nile River Basin: The Case of the Grand Ethiopian Renaissance Dam. *Geopolitics*, 21:4, 969-989.
4. How Climate Change Might Affect the Nile." *The Economist*, *The Economist Newspaper*, 3 Aug. 2017. www.economist.com/middle-east-and-africa/2017/08/03/how-climate-change-might-affect-the-nile.
5. Mulat, A. and Moges, S. (2014) Assessment of the Impact of the Grand Ethiopian Renaissance Dam on the Performance of the High Aswan Dam. *Journal of Water Resource and Protection*, 6, 583-598.
6. Paisley, Richard Kyle. "Why the 11 Countries That Rely on the Nile Need to Reach a River Deal Soon." *The Conversation*, 19 Sept. 2018. theconversation.com/why-the-11-countries-that-rely-on-the-nile-need-to-reach-a-river-deal-soon-75868.
7. Pietrangeli. "Grand Ethiopian Renaissance Dam." *Studio's Pietrangeli, Pietrangeli*, 7 Nov. 2017.
8. Perlman, Howard, and Usqs. "The Water Cycle for Kids Nile Valley in Egypt-Water Makes the Desert Bloom." Photos: Nile Valley in Egypt-Water Makes the Desert Bloom. USGS Water Science School. water.usgs.gov/edu/gallery/watercyclekids/freshwater-nile.html.
9. "The Vanishing Nile: A Great River Faces a Multitude of Threats." Yale E360. User, Super. "Cooperative Framework Agreement." Nile Basin Initiative (NBI)
10. Water Scarcity: The Most Understated Global-Security-Risk/. www.alp.org/research/water-scarcity-the-most-understated-global-security-risk/.
11. Zhang, Ying, et al. "Ethiopia's Grand Renaissance Dam: Implications for Downstream Riparian Countries." *Journal of Water Resources Planning and Management*, vol. 141, no. 9, 19 Feb. 2015, p. 05015002.