



The Grand Renaissance Dam: Egypt, Sudan, Ethiopia Relations

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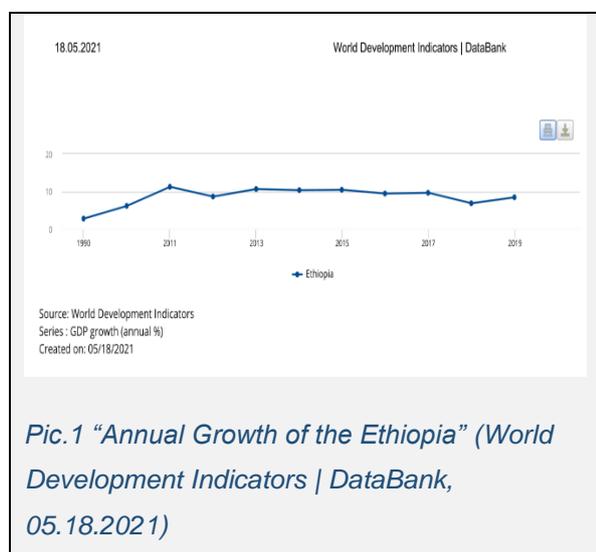
Great Ethiopian Renaissance Dam

In 2011, Ethiopia began building the Grand Ethiopian Renaissance Dam Project (GERDP) on the Blue Nile River in a place called Guba, 60 kilometres from Sudan, which hold 74 billion cubic meters (BCM) storage capacity and about 60 BCM live storage which will produce 6000 MW electric generation. (Tesfa, 2014) The on-going construction of the controversial GERD on the Blue Nile River has been on the Ethiopian Government's drawing board since the 1960s, but it was officially launched in April 2011 and it is the largest engineering project ever planned in the country. The Grand Renaissance Dam with a cost of \$ 4.8 billion and an installed capacity of 5250 megawatts is situated in northwest Ethiopia, about 40 km from the Sudanese border. (Chen & Swain, 2014)

The Importance of the Dam for Ethiopia

Ethiopia is the most important source country supplying water to the Nile basin. As a matter of fact, the Blue Nile basin, which feeds 85% of the Nile River, is fed from Tana Lake located within the borders of Ethiopia. Ethiopia has an important advantage over the Nile in terms of both water resource and geographical location. Despite this, Ethiopia can only use 0.6% of the water resources of the Nile. Hosting 113 million people according to 2020 data, Ethiopia is the second most populous country in Africa after Nigeria and the fastest growing economy in the African continent. In Ethiopia, whose economy is based on agriculture, it accounts for 46.3% of gross domestic product (GDP), 60% of exports and 80% of total employment. In Ethiopia, where the mining industry is very limited, water-based agriculture is the most important income item for this reason.

The River Nile has a vital role for Ethiopia, given the energy supply for the country's total population and its thriving economy. (Turhan, 2020)



Ethiopian Aims

With the objective of making poverty history, Ethiopia's developmental plans prioritized hydropower projects as drivers for development and regional integration. In this context, the GERD is central to Ethiopia's development vision of becoming a middle-income country by 2020–23, and Africa's energy hub. Ethiopia's electricity exports are expected to increase tremendously when the GERD is commissioned securing more hard currency for the Ethiopian government. Environmentally, Ethiopia's gradual dependence on hydropower would reduce the environmental and health impacts of

biomass fuel used by most of its population. Dam projects will also reduce Ethiopia's vulnerability to climate variability. It was estimated that hydrological variability costs the Ethiopian economy more than one-third of its growth potential. (Tawfik, 2016) However, the Renaissance Dam has the potential to stabilise human security in Ethiopia. The dam's hydroelectric potential can triple the current megawattage available to the domestic grid; the project itself has eased ethnic divisions to create a pan-Ethiopian sense of self. (Veilleux, 2013)

Estimated Effects of the GERD on Egypt

Researchers provided an overview of Ethiopia's plans to build a major dam on the Blue Nile and its effect on Egypt and Sudan. Although both Egypt and Sudan will suffer from water shortage caused by the construction of the dam. Egypt will lose 3 times the quantity lost from Sudan based on 1959 water share agreement. They also evaluated the impact of the GERD under three different climatic and hydrological scenarios, taking into account both the transient GERD impounding phase and the long-term operation phase. The results showed that during the impounding phase, the GERD benefits mainly Ethiopia and to some extent Sudan. GERD impounding inflicts economic costs, however, on Egypt,

especially if it occurs during a sequence of dry years, and depending on the level of water withdrawal in Sudan. The negative effects of the GERD on Egypt's economy are reversed when the GERD becomes operational. (El-Nashar & Elyamany, 2018) Therefore, Egypt, Ethiopia and Sudan make diplomatic initiatives to fill the dam in a controlled manner and to compensate for the damages arising from the construction of the dam.

History of Diplomatic Relations of Three Countries on Transboundary Rivers

1929 - A water control regime agreement was signed between Egypt and Great Britain. The agreement between Egypt and Sudan, which is under the British colony, guaranteed Egypt to use 48 million m³ of water per year, while this figure was only 4 million m³ for Sudan. (Tandoğan & Yücel, 2017)

1959 - Egypt and Sudan signed an agreement for 'the full utilization of the Nile' (Republic of the Sudan and the United Arab Republic, 1959).

It effectively allocated the entire flow of the Nile between the two countries, with 55.5 billion cubic meters (bcm) going to Egypt

and 18.5 bcm going to Sudan. (Whittington et al., 2014)

2011 - In 2011, Ethiopia began constructing the Grand Ethiopian Renaissance Dam (GERD) (El-Nashar & Elyamany, 2018)

- Egypt and Sudan agreed with the Ethiopian proposal in September 2011 of establishing an international panel of experts, consisting of 10 members, two from each of the three countries, and four from outside the Nile Basin countries. (Salman, 2016)

2013 - Ethiopia diverted the Blue Nile from its main and natural course of flow so it could commence construction of the GERD. Egypt demanded that construction of the GERD be suspended until the studies were completed. (Salman, 2016)

- Sudan announced on 4 December 2013, through its President himself, and in the presence of the Ethiopian Prime Minister, the support of Sudan to the GERD. (Salman, 2016)

- Three rounds of technical negotiations among water ministers from Egypt, Sudan and Ethiopia were carried out in Khartoum. (Chen & Swain, 2014)

2014 - Egypt decided to withdraw from the negotiations with Ethiopia and Sudan and announced that it would use diplomatic and political measures to maintain and even increase its water share. (Chen & Swain, 2014)

2015 - Ethiopia, Egypt and Sudan was signed Declaration of Principles (DoP) on 23.03.2015 on the use of Nile River waters. It includes principles on regional integration and sustainability and cooperation between others. (Aydm, 2019)

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