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Feature

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Leaked report sparks disagreement between Egypt and Ethiopia over dam

Politics and not evidence informs the ongoing disagreement between Egypt and Ethiopia over the construction of the Grand Ethiopian Renaissance Dam.

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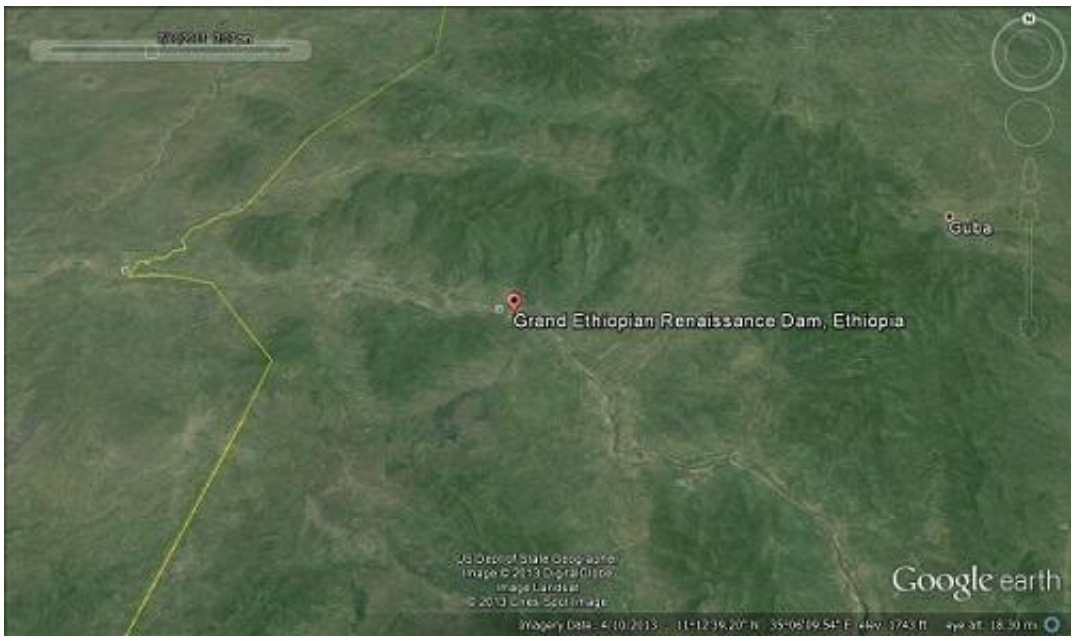

A Google Earth map showing the location where the Grand Ethiopian Renaissance Dam will be built in the Ethiopian Highlands.

When Ethiopia diverted part of the Blue Nile river at the end of May 2013 to begin construction of what will be Africa's largest hydroelectric dam, it sparked outrage from the now ousted Egyptian government, which was concerned the dam would reduce its water supply.

The Blue Nile is one of two main tributaries that feed the Nile River, which supplies 97% of Egypt's population with water. Ethiopia seeks to abolish a 1929 British mediated colonial-era agreement between Egypt and Sudan that gives 90% of the Nile's water to the two countries and gives Egypt the right to veto the construction of dams in countries upstream.

In May 2012, Ethiopia, Sudan and Egypt appointed a panel of experts, with each country appointing two experts, alongside with four experts from non-member countries, to evaluate the environmental impact of the dam on the region. The panel submitted its report on 1 June. Though the report is yet to be published, each government has leaked details of the panel's findings.

While the Ethiopian ministry of water and energy produced a press release saying the report recommends the

building of the dam, the Egyptian state information service **contends** that the scientific evidence cited by their Ethiopian counterparts either lacked sufficient detail or was out of date.

"While Ethiopia has announced that the dam will have many beneficial effects and no negative ones on the two downstream countries, the final report stressed that the studies and designs presented by Ethiopia had several deficiencies in the methodologies used to produce them. Additionally, some of these studies need to be updated in light of the new information that was collected from laboratory and field work," read the statement released by the presidency's office in Egypt.

Risk concerns

“Dams are constructed today with much more care to livelihoods and environments.”

"There were no sufficient geological studies done. The risk is that the dam might create earthquake zones," says Elnaser Abdelwahab, former regional software developer of the Nile Basin Decision Support System, a component of the Nile Basin Initiative, which is a partnership setup among the Nile riparian states to handle cross-border issues regarding the river.

Abdelwahab says that the construction of the dam will create a man-made lake in the mountains, which will contain around 74 billion tonnes of water. This lake could lead to seismic activity that could collapse the dam and cause a massive outpouring of water. "The Ethiopians also used optimistic data when considering rainfall rather than using a worst case scenario."

Abdelwahab, who was not a member of the expert panel but worked with an Ethiopian–Egyptian team to set up the Nile countries' first water management decision support system, claims that the report included no environmental studies. "This is considered to be an extremely negative point. Dams are constructed today with much more care to livelihoods and environments."

Tilahun Amede, a researcher on natural resource management at the International Crops Research Institute in Semi-arid Tropics (ICRISAT), says the dam's design will not be the main factor in the effect it has on the environment and peoples' livelihoods. "It is also about how the dam is going to be managed and water regulated. It is about protecting the upper watersheds of the dam to increase water yield, reduce siltation and improve overall environmental services."

When complete, the dam will be one of the world's tallest at 145 metres and produce 6,000 MW of power, an equivalent of six nuclear power stations. Amede, who was not on the expert panel but has studied water use in Africa for the past four years, says the design and height of the dam means the reservoir will be deep rather than wide to lower evaporation. The cool, humid climate of the Ethiopian highlands should further reduce evaporation, thereby minimizing the amount of water loss from the dam.

All three governments agree that the dam will reduce water flow to downstream countries while the reservoir forms. The reduction in water flow will depend on how fast Ethiopia decides to fill the dam. The original plan aimed to fill the reservoir in three years, but Hailemariam Desalegn, the Ethiopian prime minister, said his government is willing to spend up to six years filling the reservoir to address the concerns of downstream countries.

According to a **document released** by the Egyptian government, the Ethiopian members of the expert panel

failed to present any research on the potential impact on countries downstream in the event of the dam collapsing.

Politics over science

“The current rhetoric will do little for the best shared vision of the three countries.”

Abdelwahab says he is frustrated that both the Egypt and Ethiopia governments are ignoring scientific evidence and technical information. "[The Nile Basin Decision Support System] contains the necessary computer simulation tools to design and test dam projects before construction. However, the countries did not use it and now they deliver such poor studies with such poor scientific arguments."

When the panel presented its findings to the three governments behind closed doors, they outlined the need for further research and it was not supposed to be made public until after agreement was reached. However, both Ethiopia and Egypt leaked details, prompting some Egyptian politicians suggesting military intervention could be taken to sabotage the dam's construction.

Both Abdelwahab and Amede say that the latest political exchanges between the two countries will bring no resolution to the disagreement over building the dam. Instead, they should be collaborating on the science and technical aspects of the dam construction, such as the design to be used and the environmental effects it may have.

"My worry is the current rhetoric will do little for the best shared vision of the three countries," says Amede. "Given their experience with the Aswan High Dam, the Egyptian government could play a pivotal role in helping Ethiopian engineers ensure that the dam construction and overall management is of high quality and will have no negative effect on Egypt."

"Unless they consider the dam construction a technical not a political piece of work, I don't see any resolution to the problem because the politicians will continue to force science out," adds Abdelwahab.

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