

Gibe III Dam Heralds Climate Change Conflicts in Africa

by Anthony Mitchell, June 2009

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The Gibe III dam will become the tallest rock-filled dam in the world if construction is completed on the Omo River in southwestern Ethiopia. The dam is generating controversy because of technical and engineering questions, environmental and social issues, and the lack of transparency that led the World Bank to decline Ethiopia's application for financial support for the project.

The African Development Bank has tentatively approved Ethiopia's request for funding Gibe III through the government-owned Ethiopian Electric Power Corporation (EEPCo).

International banks and EEPCo are relying on an environmental and social impact analysis (ESIA) prepared by Centro Ellettrotecnico Sperimentale Italiano (CESI), an Italian company whose owners include vendors who stand to benefit from the project. This conflict of interest is not disclosed in the impact statement.

The impact statement presents Gibe III as a modern roller compacted concrete (RCC) gravity dam. The impact statement was completed in March 2009, after the project had been designed and construction began.

EEPCo's prime contractor at Gibe III is the Italian company Salini Costruttori S.p.A. Salini states that they are building a low-technology rock-fill structure. When asked to explain the discrepancy between the impact assessment for a RCC structure and Salini's plans to build a rock-fill dam, the CESI team leader for the impact statement, Dr. Guiseppe Paolo Stigliano wrote on May 7:

"I don't notice any discrepancy inside the ESIA.

"In any case, for further explanations please make directly reference to EEPCo for which the ESIA has been prepared."

Emails sent to the EEPCo contacts listed in the ESIA bounced back as undeliverable. EEPCo's main website www.eepco.gov.et was found to be propagating '[Silent love China](#)' [computer attacks](#) that attempt to install Trojan software on visitors' computers and steal passwords. The Chinese are responsible for building the Tekeze dam in Ethiopia.

From the outside, it is now known whether EEPCo's computers have been breached by deliberate acts of espionage by government agencies within the Peoples' Republic of China or by Chinese criminal groups. The nature of the breach at EEPCo, which purposely [avoids infecting PRC government websites](#), suggests the former.

Role of the United States

The United States has the most number of votes in the African Development Bank and is the largest contributor of funds to the African Development Fund or ADF. The ADF is the low-interest loan facility that countries (including Ethiopia) are allowed to borrow from at subsidized loan rates because their credit ratings are inadequate to obtain commercial loans.

Ethiopia relies on civilian and military assistance from the United States, which in turn relies on Ethiopia for security assistance in the region. In fiscal year (FY) 2008, the United States government gave Ethiopia \$455 million in civilian aid and an additional \$550 million in food assistance.

International Rivers [<http://internationalrivers.org/node/3773>], a non-governmental organization (NGO) based in Berkeley, CA, estimates that Ethiopia relies on foreign aid for most of its national budget, which in 2008 was \$4.586 billion, while expenditures were approximately \$5.729 billion. Imports in 2008 were \$6.218 billion, while exports were \$1.439 billion.

Coffee is Ethiopia's largest export, followed by the drug qat, gold, leather products, live animals and oilseeds. Per-capita gross domestic product remained at \$800 in both 2007 and 2008. One in four Ethiopians lives on less than \$1 per day.

In December, 2005, the International Monetary Fund (IMF) forgave Ethiopia's debt to that institution. On January 23, 2009, Ethiopia's request for an emergency loan of \$50 million from the IMF was approved by the IMF's executive board. The loan was provided under the rapid-access component of the IMF's Exogenous Shocks Facility.

The Gibe III dam project is one of several big dam projects in Ethiopia. At a cost of \$1.7 billion, Gibe III exceeds that country's annual exports. The financial risks posed by undertaking Gibe III can be seen in the context of Ethiopia's success with previous dam projects.

Recent Dams Failed to Meet Expectations

Gibe I and Gibe II are located upstream from Gibe III and are also Salini projects. Gibe II is an extension of Gibe I, which has been completed. Work on Gibe II halted after an unexpected geological event that was not predicted by geological investigations before construction began. The design needed to be changed and construction plans altered, increasing costs.

Gibe II is funded by the Italian government, which provided Ethiopia with the biggest Italian aid credit ever granted since the creation of the Italian development revolving fund: EUR 220 million. In March, 2006 Italian prosecutors began a criminal investigation into the granting and use of those funds.

Later in 2006, the Campagna per la Riforma della Banca Mondiale [<http://crbm.org/>] (CRBM), an Italian NGO, initiated its own investigation. On November 16-30, 2007

CRBM members undertook a joint fact finding mission in Ethiopia with representatives from International Rivers, in cooperation with the CEE Bankwatch Network. The report issued by CRBM in 2008 on the three Gibe dam projects is titled the Gilgel Gibe Affair [http://bankwatch.org/documents/gibe_study.pdf].

The Tekeze dam, built by the Chinese in the north of Ethiopia, was recognized on its first anniversary in February 2009 by Ethiopia's Prime Minister Meles Zenawi. At 185 meters high, the Tekeze dam is 10 meters higher than the Three Gorges dam in China. In comparison, Gibe III will be 240 meters tall.

On its first anniversary, Meles announced that the Tekeze dam had run out of water and could not generate electricity. The reservoir was too low, Meles declared. Information on revised generating capacity from the Tekeze dam, if any, has not been released. Nor has there been a public discussion of liability allocation.

As with Gibe II, Tekeze's construction had been delayed due to unexpected geological conditions that led to additional costs. A thorough pre-construction investigation was apparently not done at the Tekeze dam site, leading to unexpected events.

Site conditions at Gibe III are no less complex than at other dam sites in Ethiopia. Three meters of volcanic ash have been found underneath the dam site. Ash creates unstable conditions for construction projects and has poor load bearing properties.

Despite its location in an active earthquake region, there is no evidence that a seismic risk modeling study was conducted for the current Gibe III dam design. An independent technical and engineering study of Gibe III [http://www.slideshare.net/anthony_mitchell/gilgel-gibe-iii-hydroelectric-dam-ethiopia-technical-engineering-and-economic-feasibility-study-report] by this author raises additional questions about risks posed by the dam.

Gibe III Investigation Requested

International Rivers, the Solidarity Movement for a New Ethiopia [<http://solidaritymovement.org/>], CRBM, Indigenous Peoples of Africa Coordinating Committee [<http://www.ipacc.org.za/>] and the Bank Information Center [<http://bicusa.org/>] have jointly requested that the African Development Bank's Compliance Review Mechanism Unit (CRMU) investigate the Bank's decision to support Gibe III. The CRMU has until May 25 to respond to the request.

The request is based on the following findings by the NGOs:

- A lack of consultation with civil society groups and the 200,000 people downstream who depend on existing water flows through the UNESCO World Heritage Site that is the Lower Omo Valley.
- Inconsistencies with Ethiopian law, including anti-corruption statutes.
- The delayed and technically insufficient ESIA.

- Environmental, health and social impacts.
- Financial risks for Ethiopia.

The Kenyan conservationist and paleontologist Richard Leakey [<http://richardleakey.wildlifedirect.org/2009/03/26/the-gibe-iii-dam-must-be-stopped/>] has spoken out against Gibe III because it would permanently decrease water levels in Lake Turkana. This high desert lake is downstream from Gibe III and provides drinking water and food that supports 300,000 people. A Kenyan NGO called the Friends of Lake Turkana [<http://www.friendsoflaketurkana.org/>] is urging the Kenyan government to take a stronger role in protecting the lake.

Article 2(2) of the United Nations Convention on Civil and Political Rights (ratified by Ethiopia) states “in no case may a people be deprived of its own means of subsistence.” The NGOs believe that Gibe III and the mineral, oil exploration and biofuels projects planned by the Ethiopian government in the Omo River basin will violate that UN convention and jeopardize the survival of the tribes who live downstream.

Even if Gibe III is not built, the region will face problems due to resource constraints that are accelerating because of global warming. The NGOs would like the international community to take a fresh look at development and conservation issues in the Horn of Africa.

Following the end of the civil war in Southern Sudan, combatants from Ethiopia who participated in the conflict returned home—with their weapons. Peter Greste, a BBC reporter who traveled down the Omo River earlier this year to film a documentary [<http://news.bbc.co.uk/2/hi/africa/7959444.stm>] on Gibe III, found that disruptions in water flows could lead to outbreaks of violence.

In 2008, Ekwe Ethuro, a member of the Kenyan parliament from the area of Lake Turkana, questioned why the Kenyan Government had not followed Egypt’s example in threatening to go to war with any country which might tamper with the Nile’s source.

Public Debate Hindered

International Rivers obtained a field investigation report prepared by the United States Agency for International Development (USAID) on Gibe III. The report found that public debate in Ethiopia about Gibe III had been limited by political conditions in that country. The report states:

“The current political landscape for civil society/NGOs remains difficult in the aftermath of the May 2005 parliamentary elections. This political environment discourages public discourse on development issues, including both energy policy and projects to implement the policy.

“The absence of a free debate in the media also compounds concerns associated with the lack of public discourse. There appears to be tight government control of

the media with no questions openly asked concerning national development issues and policies. This further restricts the limited amount of political space civil society has to engage in with the government.”

Open public discourse is not encouraged by Meles Zenawi, who has led Ethiopia since 1991. Meles has been recognized for his anti-poverty efforts and for allowing Eritreans to vote on whether or not to remain within Ethiopia or form their own country, which they did in 1993.

Violence and intimidation of opposition supporters following the May 2005 election brought condemnation from election observers and human rights groups. The Carter Center sent observers and reported that the period following May 15 was marked by highly charged political tensions, several days of protests and electoral violence, delays in vote tabulation, a large number of electoral complaints, and a prolonged and problematic electoral dispute resolution process.

Observers from the Carter Center were allowed to remain in Ethiopia during the 2005 elections. However, the Carter Center’s report on the election noted that three US-based non-governmental organizations (NDI, IRI, and IFES), which could have provided assistance to the electoral process, were expelled in the months prior to the election.

On March 22, 2009, Parade Magazine ranked Meles Zenawi in 16th place in its World's Worst Dictators list [<http://www.parade.com/dictators/2009/more-of-the-worlds-worst-dictators.html?index=6>].

According to Peter Bosshard [<http://internationalrivers.org/blog/peter-bosshard>], policy director for International Rivers, the United States is in a position to encourage environmentally sustainable development for all countries in the region, all of which face similar challenges and all of which have a stake in the allocation and conservation of water resources. Complex challenges surround the colonial-era agreements that govern rights to water from the Nile.

Ethiopia’s development of water from the Omo River does not face sanctions from Egypt, which has been accused of supporting Al Shabaab’s military activities against Ethiopian interests in Somalia. Egypt has threatened to invade Ethiopia if Ethiopia dams the Blue Nile. The Blue Nile originates in Ethiopia and supplies 56% of the surface water entering Egypt.

Tanzania appears to be disregarding treaties governing Egypt’s allocation of waters from the Nile and is unilaterally withdrawing water to support its own development efforts.

“Conflicts over water rights in the region will increase with global climate change and development pressures,” Bosshard said. “The United States is in a unique position to play a constructive role in the region.”

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