



Dam Scams: Lessons from Uganda, Tanzania and Ghana

By Mary Serumaga



Murchison Falls will always be under threat from developers, if the trajectory of Stiegler's Gorge Dam in Selous Game Reserve in Tanzania is anything to go by. Since it was explored in 1902 by Stiegler, the pressure to build a dam on River Rufiji has been massive and unrelenting. Both Stiegler's Gorge and Murchison Falls on the Nile are World Heritage Sites, a designation proving insufficient to preserve them. Work on Stiegler's Dam began in 2019, more than a century after it was first mooted.

Downstream from Stiegler's Rock are the Rufiji plains, a farming area prone to seasonal flooding. The floods carry and distribute nutrients and are essential to the fertility of the soil and the survival of the algae in the wetlands. Another economic enterprise carried out there is fishing. The 150,000 dwellers of the area depend on the seasonal flooding for their livelihood, something a dam would change.

Twenty-seven environmental impact assessments (EIAs) of the potential effect of inundating the Rufiji Basin in the Selous Game Reserve had been carried out by 1980. Many warned of salination of the basin with adverse effects on downstream agriculture, prawn fishing and the Rufiji Basin's ecology.

Like the proposed Stiegler's Gorge project of the 1970s, Uganda's dams produce power that exceeds consumption capacity. There is an argument for creating capacity - while only 28 per cent of Ugandans are connected to the grid, the Ministry for Energy says demand grows by 10 per cent every year. But this does not explain why alternative sources of power are not considered. The cost of installing capacity to generate power has to be paid out of revenues that would otherwise be used for other services. For example, expenditure on healthcare was \$12 per head in 2016, short of the \$17 as per the Health Sector Plan and the \$28 needed to secure the National Minimum Healthcare Package.

Yet on 8 December 2019 the Secretary to the Treasury explained to the International Monetary Fund (IMF) that following the commissioning of Isimba Dam in April 2019, which adds 183MW, the total installed capacity is now 1200MW while peak consumption is only 600MW. An extra 600MW will be added when Karuma Dam is commissioned in early 2020.

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The Rufiji Basin Project, as reviewed by Kjell J. Havnevik in his book *Tanzania: The Limits to Development from Above*, provides an interesting insight into the politics of the decision-making process in building dams. The review shows that there were many opposing views. To manage the process, Tanzania appointed an implementing authority, the Rufiji Basin Development Authority (RUBADA), which was tasked with coordinating the consultants studying various aspects of the project, the donors funding the study and the parent ministry.

Tanzanian institutions, including the University of Dar es Salaam, were unable for various reasons to have a major input. Once seen by some donors (including a faction of NORAD) as an important source of expertise in identifying and assessing environmental impact issues, they became marginalised after failing to reach agreement among themselves about whose interests the EIAs should serve and how to prioritise them.

The World Bank let it be known that they were not likely to fund a project based on a single development goal i.e. power generation. Other aspects of the Rufiji Basin development then came under review: transformation from flood-fed farming to irrigation; fishing; and ecological needs. Coming as an afterthought, some lacked depth. Even though the net benefits of building the dam to control River Rufiji floods were found to be marginal by Norplan, the Hafslund Report (commissioned to integrate previous reports and incorporate environmental studies) gave the primary justification of the dam as enabling Tanzania to cover the costs of irrigation and flood control projects in the Rufiji Basin.

NORAD eventually came to the conclusion that Dar es Salaam University and their nemeses in other institutions would not be able to deliver and so most of the funds available for the assessment were spent on external consultants with local scholars carrying out minor assignments. Havnevik states that those opposed to the development tended not to be invited to participate. Although Dar es Salaam University professors were allowed to attend discussions between the Ministry of Water, RUBADA, NORAD and Hafslund to discuss the latter's preliminary report, they were asked to leave when critical matters were on the agenda.

RUBADA itself was not entirely independent; NORAD insisted the assistant to the Secretary General be replaced as he was deemed not to have sufficient political backing and to have developed a

negative attitude to the planning of the project.

The multi-purpose development goals for the Rufiji Basin had been ignored, Havnevik tells us, in 1972 when Norconsult prepared a single-purpose preliminary project for the hydropower station. That being so, the technical specifications of the physical dam took precedence over environmental, community and other concerns. The higher above sea level the point of flow regulation, and the lower the unit cost of power generated led Norconsult to recommend that the dam be located at Stiegler's Gorge. At the time there was no market for the 620MW to be generated at Rufiji and so the project recommended that power-consuming industries be built.

The Murchison Falls project

In the case of Murchison Falls, there is no multi-disciplinary coordinating committee or any known committee representing all stakeholders. The Ugandan government abdicated its responsibility towards the environment, the communities downstream and upstream, as well as the greater population when it announced that the issue would be decided by a feasibility study by potential foreign investors.

The terms of the Norconsult/Bonang Murchison Falls feasibility study have not been made public. If, like Norconsult's Rufiji Basin study, as described by Havnevik, it is a single-purpose study commissioned to test the technical and financial feasibility of the structure without considering multi-purpose development goals, such as agriculture and fishing, environmental, tourism and heritage matters, it will not have addressed the issues most important to the tens of thousands who have signed petitions since the controversy began.

Another risk is that data required for a feasibility study that includes a comprehensive EIA may simply not be available within the time frame, which is also unknown. Uganda does not lack the expertise to carry out an EIA - Makerere University teaches conservation studies and tourism. Their voice has not been heard in the current controversy. The National Environmental Protection Agency is similarly silent.

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The Uganda Wildlife Authority and various travel operator associations are fighting their corner, mainly by awareness raising. Murchison Falls is Uganda's most visited of the country's twelve national parks - 32 per cent of visitors see the Falls. Earnings from tourism are 23 per cent of exports (more than doubling between 2008 and 2015, from \$540 million in 2008 to \$1,366 million (Ushs.3,549.3 billion) in 2014/2015. The direct contribution of tourism to GDP in 2017 was Ushs.2,699.1 billion (2.9 per cent of GDP) while the total contribution, including wider effects from investment, the supply chain and induced income impacts, was Ushs.6,888.5 billion in 2017 (7.3 per cent of GDP), up from Ushs.6, 171.5 billion in 2016 ([Budget Framework Paper 2017](#)).

Conservation and environmental issues

The complexity involved in carrying out industrial developments without disturbing the ecosystem requires extraordinary expertise. Dr Eve Abe, a noted ethnologist working in the UK as a wildlife management consultant, had not been consulted or asked to join a coordinating committee by the time of writing. Dr Abe spent years residing in Queen Elizabeth National Park studying elephants

where the elephant population had fallen from 4,000 to 150 (see *My Elephants and My People* by Eve Lawino Abe, 2008). Across the continent the elephant population stood at 415,000 in 2016, having fallen by 111,000 in the previous period. In the 1930s Africa's elephant population was ten million.

In her ground-breaking doctoral thesis (Cambridge, 1994) Dr Abe identified a parallel between the destruction of the human family unit and its habitat in her native Acoli. The destruction of elephants and their habitats has happened all over Africa, but is particularly acute in northern Uganda.

It was Dr Abe who first posited a causal relationship between this type of destruction and globally increasing instances of human-elephant conflict (HEC). HEC has been a problem in Uganda. Previously it was thought HEC was driven solely by encroachment on feeding and foraging territory. However, in Queen Elizabeth National Park, the population had fallen yet food for the elephants was abundant. (Incidentally, Stiegler was killed in an HEC incident in 1907 during a hydropower feasibility study.)

Dr Abe observed that elephants live in family groups and maintain stable relationships for most of their seventy years. Elephants mourn and bury their dead. Poaching in 1980s Uganda (often mass killings using grenades) and other encroachments destroyed those units and displaced the animals, leading to displacement and dysfunction among individuals.

Dr Abe's work informed later research into the effects of trauma on elephant culture and elephants, which now includes M.R.I. scans of elephant brains, which was first done in 2008. Those scans have in fact revealed physical changes in the brains of traumatised animals and new conservation interventions take into account animal trauma caused by humans.

There is an additional risk that increased human activity and road-building in preparation for oil exploration in Murchison Falls National Park and the planned hydroelectric dam on the Falls will make the animals vulnerable to poaching. A cache of smuggled ivory seized by the Revenue Authority in January represented an estimated 325 elephants.

A third risk is human-to-animal transmission of parasites, an area that has been studied by the multiple award-winning wildlife veterinarian (Uganda's first), Dr Gladys Kalema Zikusoka. She is best known for a pioneering translocation of gorillas to save them from poaching. She is also a winner of the prestigious Whitley Prize. Her approach to healthy co-existence is to invest in promoting and maintaining healthy human populations. By marketing the Arabica coffee grown by the surrounding community, she and her organisation, Conservation Through Public Health, help boost the income of the community, enabling them to gain access to healthcare and other services.

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There is a real danger that independent experts on conservation and fields outside power generation may have been excluded from the Murchison Falls feasibility study. Because the consortium led by Bonang Energy, Norconsult and JSC Institute Hydro project has offered its services for free, the extent to which the Government of Uganda can influence the scope of the terms of reference is debatable. Even if the government were to commission the study, the lead firm lacks the expertise, its experience being in road-building and maintenance and housing construction. The experience of Ernest Moloi, the proprietor of Bonang Energy who also owns Moseme Road Construction (PTY),

appears to be limited to minor road construction and maintenance and property development. According to Forbes Africa, it was to seek openings in these two areas that he first came to Uganda.

Uganda is institutionally vulnerable to corruption

The broader governance issues were made clear in 2011 when Norconsult was sanctioned for corruptly obtaining the Dar es Salaam Water and Sanitation (Dawasa) project in Tanzania. The [Integrity Vice President of the World Bank](#), Leonard McCarthy, stated then: *“What we are trying to do here is examine the key intersections between corruption risk, organized crime and money laundering on the one hand and the institutional vulnerability in developing countries on the other. This work will be a critical input to the governance and anti-corruption work that the World Bank is focusing on in the post-crisis world.”*

Does the current Ugandan administration have the will and the capacity to insulate the decision-making process from corruption and organised crime? Nobody will deny that in 2019 the risk of corruption and money laundering is high in Uganda. An indicator of the level of institutional failure is the fact that investors (both local and foreign) only seem to be assured of success after gaining access to the head of state. In the past few weeks the State House Anti-Corruption Unit has announced a crackdown on brokers who charge fees to arrange meetings with the president. Moloji has had face time with the President Museveni.

Given their past involvement in corruption in weak control environments in Tanzania and North West Province South Africa, there is no basis to expect an impartial report from Messrs Norconsult and Bonang Energy. To invite them to undertake work that threatens the ecosystem of Murchison Falls is indicative of the impunity with which the NRM government now operates.

In a [statement](#) calling for the protection of the Falls, the Africa Institute for Energy Governance says: *“The company could be a front for corrupt officials who have caused loss of taxpayers’ money, have caused untold suffering to Ugandans and have degraded the environment.”* Bonang has pulled down its website and currently has no online presence but earlier sightings revealed that it has no track record in hydropower construction or engineering.

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Moseme Road Construction was cited by North West Provincial Government of South Africa for being improperly awarded a contract and was ordered off the site in 2011. A 2016 gazette notice shows Moseme Properties and one Ernest Moloji were defendants to a suit filed by their creditors, Standard Chartered Bank for non-payment of a loan.

Three employees of Norconsult were prosecuted by *Økokrim*, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime on charges of bribery in connection with the \$6.7 million Dar es Salaam Water Supply and Sanitation Project (Dawasa). Irregular payments of \$146,000 were found to have been made in connection with Dawasa.

Norconsult Tanzania Limited was convicted and pulled out of Tanzania after an audit revealed \$332 million in irregular payments - they reversed that decision almost immediately. According to Corpwatch (25 March 2008), the subsidiary was established in Tanzania in 1998 but never registered with the companies registrar, Brela. Still, the World Bank and Norway awarded them six road projects worth over \$100 billion. They were all terminated by Tanroads in 2008.

A parallel investigation by Tanzanian authorities found that Norconsult had not filed tax returns nor paid taxes between 2002 and 2007. It was believed these irregularities could only have been made possible by bribery using the equivalent of \$68,257 (Swedish Krona 650,000) expenditure not supported by the required documentation ([Corpwatch](#)).

While the local MD was asked to step down, the firm stood by three Norwegian employees. They were eventually charged in Sweden along with Norconsult. However, the firm was acquitted and one employee had his conviction overturned by the Supreme Court. Two were convicted and one was jailed. The decision was partly based on technical grounds concerning the length of time it took to prosecute the case and the fact that the World Bank had already imposed sanctions (Implementing the OECD Anti-Bribery Convention Phase 4 Report).

The politics of dam financing

The Murchison Falls Project is likely to be further complicated by options for financing. Most likely the financing will be sourced externally. Borrowing from China could jeopardise Uganda's ownership of the national park and surrounding areas.

There are other possibilities. In 2017 Ghana exchanged 5 per cent of the country's bauxite deposits for \$10 billion worth of railway, roads and bridge development. The Ayensu, Densu and Birim Rivers have their source in the Atewa Forest Reserve and provide drinking water for five million people. A hundred wildlife species face extinction.

In the past, the viability of hydroelectric dams has been guaranteed by building industries that consume most of the power. Ghana's Akasombo Dam on the Volta River also required a large, regular primary consumer of the power it was to generate. It was decided an aluminium plant would be built alongside the dam. The Volta River Basin was rich in bauxite, the raw material, as are many African rivers. Aluminium processing is the most power-consuming industrial process ([International Rivers](#)).

Ghana had 80 per cent of the funds (earned from the cocoa boom) and needed to borrow the balance as well as to finance the power-consuming industry. Negotiations opened in the White House when President Nkrumah requested President Eisenhower to introduce him to the well-known aluminium entrepreneur Henry Kaiser.

The most important lesson to be drawn from the Akasombo experience is the geopolitical one. The relationship was threatened by Nkrumah's apparent leaning towards the U.S.S.R. in the UN General Assembly. At one point he was warned by Kaiser that if he sought financial assistance from the Soviet Union for any other projects, the Akasombo deal would be off.

Similar circumstances had bedevilled Egypt's Aswan Dam. After the relationship between Egypt and the United States soured, President Nasser financed the Aswan Dam with money from the U.S.S.R. Although Nkrumah was an irritant to the American administration and their withdrawal from Akasombo was discussed many times, they eventually funded the project fearing further Russian encroachment on their sphere of influence.

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The contract was awarded to Volta Aluminium Company (Valco), a joint venture between the Ghanaian government and Kaiser Aluminium & Chemical Corporation; the latter had a 90 per cent shareholding. Valco was guaranteed 70 per cent of the power generated. According to International Rivers, most of Africa's aluminium smelters consume most of the hydroelectricity generated and pay the lowest tariffs. It will be interesting to see if similar guarantees of supply at fixed low tariffs are offered to investors in the Murchison Falls Project feasibility report.

Akasombo offers other lessons in the importance of maintaining sovereignty in the management of natural resources and carrying out strong representative feasibility studies. Valco was meant to mine aluminium close to the dam, smelt it in Ghana and export the finished product. It turned out that Valco exported raw bauxite for the first five years. In the 21st century, they resisted attempts to increase the tariffs set in the 1950s and were paying less than Ghanaian domestic consumers.

Valco eventually sold its interest without clearing over \$140 million it owed in taxes, claiming tax exemption. Meanwhile, Akasombo has recently suffered from falling water levels, which has forced up the domestic unit cost of the power (which has to be supplemented by fuel-driven generators), an outcome predicted by a minority voice in the 1950s.

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