



## Neither Panacea nor Toxin: Chinese Dam Building in Africa

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Large dams have been built across the world for hydropower, irrigation and urban water supply. In developing countries, they are mostly owned by governments and supported by loans from international lenders to finance the design and construction. Yet such projects can bring serious social and environmental problems, including the [impoverishment](#) of resettlement communities and the [endangerment](#) of freshwater species. In reaction to these problems, an anti-dam movement coalesced in the 1990s, and in the early 2000s, influential financiers including the World Bank responded by committing to reduce lending for dam projects. More recently, however, Chinese companies and agencies have been increasingly investing in developing countries and are seen as major [forces](#) driving new large dams. With reference to general concerns over a rising China in Sub-Saharan Africa, in what follows I will outline the nature of Chinese involvement in African dam building, using a case study of the Bui Dam in Ghana. I argue that Chinese players have not been going it alone to push dam-building in Africa but rather have been collaborating with non-Chinese actors on big infrastructure projects across the continent. Even with this multi-player approach, however, such projects are not guaranteed to deliver developmental outcomes, let alone to safeguard social and environmental consequences.

Generally speaking, Chinese players are found [participating](#) in many big and sometimes controversial dam projects, including Sudan's US\$3 billion Merowe Dam Nigeria's Zungeru Dam, which was challenged by legal and resettlement issues; Ghana's Bui Dam, which angered wildlife conservationists; and Ethiopia's Gibe III Dam, which triggered cross-border tensions in Eastern Africa. There has been extensive commentary on such Chinese engagements. Some critiques echo typical China-in-Africa narratives, with Western media warning [against](#) Chinese (mis)use of labour, loan arrangements and natural resources. Others claim that the West [misunderstands](#) the real story of China-in-Africa. Some African [experts](#) see the Chinese dam activities as breaking an "investment boycott" to finance the continent's hydropower, while environmental [campaigners](#) continue to worry about social conflicts and the environmental destruction caused by big dams, especially those backed by China.

When it was commissioned in December 2013, the Bui Dam was the [largest](#) Chinese-funded project in Ghana and the largest foreign investment in the country since the 1960s. The Bui financial contract was initially valued at US\$622 million, but [additional](#) funding increased the project cost to US\$790 million. Unlike other China-financed projects in Africa, Bui finance was not backed by strategic natural resources like oil, but the loan repayment was tied to a low value-added commodity, in this case a [cocoa](#) sales

agreement. In this sense, the Chinese financial arrangement for Bui is business-oriented, rather than serving China's [energy security](#) needs. The dam's construction displaced 1,216 people and inundated a considerable part of the Bui National Park, which caught the attention of antidam activists and created [tensions](#).

The [official](#) story of Bui starts with the involvement of Russian hydro-engineers in 1966 and Australia's Snowy Mountains Engineering Corporation in 1976, with support from the World Bank, as well as a feasibility study submitted by French company Coyne et Bellier in 1995. Less well known is that Ghana also signed a Memorandum of Understanding with a subsidiary of American firm Halliburton in 1999. While the Ghanaian government briefly [shelved](#) the project in 2001, the project revived in 2002, with a failed international tender. Ghana then turned to China for assistance: in 2005, an unsolicited bid led to an agreement with the Chinese state-owned enterprise Sinohydro to build the dam, paired with finance from the China Exim Bank, a policy bank.

During the Sino-Ghanaian negotiations, non-Chinese and non-Ghanaian actors were also involved. Coyne et Bellier updated its earlier Bui [feasibility](#) study in 2006, which evaluated the project's potential, especially in technical and economic terms. After Ghana signed an Engineering-Procurement-Construction turnkey contract with Sinohydro in 2007, the French study also served as the guidance for Sinohydro to engineer the dam. British consulting company Environmental Resources Management prepared a bundle of social and environmental studies for Bui, including an impact [assessment](#) required by Ghana's Environmental Protection Agency for an Environmental Permit, which was then [submitted](#) to the China Exim Bank as a prerequisite for loans.

The set-up of Bui contracts and project implementation reveal at least four characteristics of Chinese engagement in infrastructure building in Africa. First, apart from contractual requirements, Sinohydro maintained a "hands-off" approach. As the turnkey contractor of Bui, Sinohydro managed the details of engineering design, purchase of materials and equipment, and onsite construction activities but was under no legal obligation to deal with the project's environmental and social challenges or with the dam's post-construction operation. Second, the Chinese financier has improved its social and environmental safeguard policy, but concerns remain about implementation. Just before contracting for Bui, China Exim Bank issued an update of its social and environmental [guidelines](#), with changes formulated in accordance with international norms and China's domestic laws. However, little is known about the Bank's monitoring and evaluation of project implementation, and critics continue to question the [transparency](#) of Chinese banks' environmental record overseas.

Third, other external actors continued to play significant roles given the limited local capacity in Ghana. The Ghanaian Parliament created the Bui Power Authority (BPA) in 2007 as a specialised government body to execute the project. As the project owner, BPA should oversee Sinohydro's work, as well as take care of complaints raised by civil society organisations and project-affected communities, including demands for information disclosure and the resettlement of the local population. Due to its lack of capacity, however, BPA actually hired Coyne et Bellier as its consultant to supervise Sinohydro's engineering performance.

Fourth, the management of labour issues has been a process of evolution and adaptation. While BPA was charged with ensuring the overall advancement of the dam project, Sinohydro had to handle the employment of workers onsite. Although the proportion of employment of Ghanaian and Chinese was [not](#) a point of contention as it had been in [other](#) projects, problems arose during the dam construction over wages and working conditions. Independent research [found](#) that Ghanaian workers at Bui in 2008 had no union, no contracts, and worked overtime without proper payment. In 2013, Ghana's Trades Union Congress, in collaboration with European researchers, [reported](#) that a local union had been formed in 2009 and that Sinohydro was cooperative in letting all employees know their rights and obligations. Comparing working conditions in 2008 and 2012, they also reported that employment security had improved, wages had increased, and onsite housing was enhanced. Nonetheless, some health and safety problems remained, and overtime continued.

Megaprojects like the Bui Dam are large, complex projects that are inherently risky, and outcomes are often hard to control. In the case of Bui Dam, the planning and construction involved not only the Chinese contractors, but also the Ghanaian government, European technical consultants, and onsite workers. While specific complexities often vary from project to project, Chinese players participating in such projects tend to be pragmatists who prioritise business above all else. Focusing on profits and following Beijing's "[no strings](#)" policy, however, has led to uncertain project outcomes. Ghanaian media reported that in 2017 the Bui hydropower production [declined](#) sharply due to the lack of water in the dam and that in 2018, the Bui resettled households were still in need of project [benefit sharing](#), raising questions about who actually benefits from such big infrastructure projects.

As China's global role expands in dam-building and other projects in the Belt and Road Initiative, a broader question might be: can China afford to continue pursuing its traditional "no strings" policy in pursuit of commercial gains? The Bui Dam experience suggests that the Chinese government might need to tread more carefully when participating in large-scale construction projects in developing countries since, fairly or unfairly, they are seen as the enablers behind the dam's construction, and are blamed if things go wrong. Chinese companies, particularly state-owned enterprises like Sinohydro, might also want to re-consider their "hands-off" approach and instead learn to evaluate and monitor impacts on the host society and local environment, not just their own bottom line.