

Early Warning System Briefing on Hydropower

June 2016

Introduction¹

The Itaipú Dam in Brazil destroyed the Guaíra falls, the biggest waterfall in the world in terms of volume, and displaced at least 10,000 families. Brazilian poet Carlos Drummond de Andrade, at the time, wrote: “Here seven visions, seven liquid sculptures; vanished through the computerized calculations; of a country ceasing to be human; in order to become a chilly corporation, nothing more. A movement, becomes a dam.”²

In India, the Sardar Sarovar Dam on the Narmada River tells a similar story. The dam resulted in the displacement of more than 40,000 families, most of which are traditional adivasis. The human and environmental rights abuses drove writer and activist Arundathi Roy to state: “Big Dams are to a Nation's 'Development' what Nuclear Bombs are to its Military Arsenal. They are both weapons of mass destruction. They represent the severing of the link, not just the link—the understanding—between human beings and the planet they live on.”³

Large hydropower has long been met with criticism from experts, civil society, and local communities from around the world, given its adverse impacts on the environment and communities.⁴ Until recently, the World Bank had abandoned large hydropower development.⁵ Now under the banner of tackling climate change and despite the mounting evidence of its negative environmental and human rights impacts, the World Bank has returned to hydropower as a focus of its energy lending.⁶

¹ This brief was initially presented at a hydropower conference at the Massachusetts Institute of Technology in April 2016. We wish to thank the staff of International Rivers for their insight and contributions to this brief.

² Carlos Drummond de Andrade. In *Jornal do Brasil*, Caderno B, Sept. 9, 1982.

³ Arundathi Roy. *The cost of living*. Modern Library, 1999.

⁴ *See for example*, The Three Gorges in China, the world's biggest dam, resulted in a record displacement of some 1.4 million people, and threatens to displace 4 million more by 2020. As is common with these projects, Three Gorges was plagued by corruption, human and environmental rights violations and relocation difficulties. <https://www.internationalrivers.org/campaigns/three-gorges-dam>

⁵ International Rivers, *World Rivers Review- Sept. 2013: Focus on World Bank and Dams*, available at: <https://www.internationalrivers.org/world-rivers-review/world-rivers-review-%E2%80%93-sept-2013-focus-on-world-bank-and-dams>.

⁶ According to International Rivers, over the last six years, two-thirds of the World Bank's energy lending has gone to hydropower and the “latest energy studies show that investments and newly installed capacity for wind and solar are far outstripping other types of energy, including hydropower...” *See The World Bank's Energy Lending is Stuck*

It is not alone. In fact, in recent years, the World Bank and other Multilateral Development Banks (MDBs), with the G20, have revisited their focus on mega- infrastructure, emphasizing the need to leverage resources from the private sector and heralding the return to the big hydropower projects of the past—as a purported source of clean and cheap energy.

Using data collected by the Early Warning System,⁷ this briefer provides a snapshot of project financing by MDBs and discusses emerging trends, to the extent that information is available. It highlights, among other things, that MDBs are not only financing large hydro projects directly, but that they are also shifting their focus to supporting the enabling the environment for future hydropower construction; that emerging banks and new financing instruments are fast-tracking more mega-infrastructure, including hydropower, with questionable regard for environmental and human rights impacts; and that the problems with the lack of transparency and accessibility of the environmental and human rights impacts of these projects continue to exclude communities from shaping the development processes that directly impact their lives.

Scope and Limitations of Data Available

This briefing is a snapshot of hydropower projects that are financed, at least in part, by an MDB,⁸ which were initially disclosed and proposed for funding from January 2015 to April 2016. While exact figures could not be obtained, we understand that, for the relevant period of time, projects financed by MDBs represent a very small portion of hydropower investments globally. The information was compiled from the Early Warning System, which is a project that tracks MDB projects using publicly available sources.⁹ This briefing focuses on MDBs because of their

in the Past (June 2016), available at: <https://www.internationalrivers.org/blogs/352/the-world-bank%E2%80%99s-energy-lending-is-stuck-in-the-past>; see also The Washington Post, *World Bank turns to hydropower to square development with climate change*, May 8, 2013 - “Large hydro is a very big part of the solution for Africa and South Asia and Southeast Asia. . . . I fundamentally believe we have to be involved.” The earlier move out of hydro “was the wrong message. . . . That was then. This is now. We are back.” (quoting Rachel Kyte, then the World Bank’s President for sustainable development).

⁷ The Early Warning System is a joint project of the International Accountability Project and the Center for International Environmental Law. It is available at: www.rightsindevelopment.org/ews.

⁸ The Early Warning System tracks projects funded by 8 MDBs: World Bank, International Finance Corporation, European Investment Bank, African Development Bank, Inter-American Development Bank, Inter-American Investment Corporation, Asian Development Bank, and Multilateral Investment Guarantee Agency (MIGA).

⁹ This research was drawn from project documents disclosed by development finance institutions, in accordance with their access to information policies.

overarching mandate of poverty reduction, a goal that is inherently and inextricably linked to the rights of all to adequate housing, food, and security.¹⁰

That said, this is by no means an exhaustive list of all hydropower¹¹ projects globally. This briefing does not cover hydropower that is entirely financed by private financiers, governments, or emerging banks. Nor, as discussed below, does this briefing represent hydropower financed by financial intermediary lending.

It is worth noting that there were limitations in accessing data about the impacts of hydropower projects. Perhaps this provides as much insight into the development financing for hydropower as what was publicly disclosed and measured in this study. For example, limited information about human and environmental impacts of hydropower projects creates a distorted picture – including the realities of displacement, the changes to local livelihoods and access to basic resources and cultural sites. Many other key project documents were not publicized, such as the resettlement action plan, severely limiting our ability to gauge the broader environmental and human rights impacts of the projects. Finally, another critical limitation to the research is the lack of transparency when MDBs finance projects via financial intermediaries. As stated in a recent study, “the public has virtually no access to information about activities funded by most financial intermediary clients of DFIs.”¹² The fact that MDBs have an increasing trend of lending through financial intermediaries, including to high risk projects such as dams,¹³ requires that the results of this research are taken as only a parcel of what could actually be the amount of hydropower investments.

The Data

From January 1, 2015 to April 15, 2016, 16 hydropower projects were proposed for funding by MDBs, totaling over \$1.9 billion USD in commitments from MDBs, available in Annex 1. Information about the total project cost was not made available by the MDBs for all projects;¹⁴

¹⁰ It is within this context that all hydropower investment must be reviewed—to wit, is hydropower really the way forward to fighting poverty? This larger question—also beyond the scope of this briefer—is one which we hope that this briefer contributes to.

¹¹ For purposes of this briefing, we will use “hydropower,” “hydropower facilities,” “hydroelectric,” and “dams” interchangeably. Included are funding of components that contribute to hydropower development (e.g., funding transmission lines, feasibility studies, etc).

¹² CIEL et al., *Risky Business: Intermediary Lending and Development Finance*, at p.3

¹³ *Id.*

¹⁴ Information was not available for 6 projects within this dataset.

however, low estimates place the aggregate cost of at least \$2.7 billion USD. As Annex 1 shows, eight of these projects are located in Asia --- specifically, in South Asia (Pakistan and Nepal) and the Mekong region (Vietnam and Myanmar). Four projects are in Africa and three in Europe/Central Asia. Of note, within the relevant time period, there was only one MDB-funded hydropower project disclosed for Latin America. In terms of numbers, the main financiers in this dataset are the World Bank funding six projects and its private sector arm, the International Finance Corporation (IFC) funding five.

Emerging trends

Since this snapshot is limited to 15 months, long-term trends will not be clear without a deeper assessment of projects proposed before 2015. With this scope, the following highlights are noteworthy:

A pro-hydropower enabling environment. While MDBs continue to finance the construction, operation, and/or rehabilitation of hydropower, they have also shifted their focus to creating the policy and regulatory enabling environments that will spur potential hydropower investments. For instance, the European Bank for Reconstruction and Development funded the *ONEE Hydro Rehabilitation Project*, which will support studies for the production of potential hydropower in Morocco and establish the Project Preparation and Implementation Unit to manage the pipeline of investments--in addition to overhauling at least 4 hydro facilities. In Myanmar, the IFC signed an advisory services agreement with the Myanmar government to purportedly improve the environmental and social risk management of hydropower projects, under which the IFC will commission a country-wide strategic environmental impact assessment of the hydropower sector. Meanwhile, the World Bank-funded *Myanmar National Electrification Project* will aim to increase electricity access in the country, with an emphasis on hydropower as a long-term energy solution. Similarly, in Nepal, the World Bank has funded the *Power Sector Reform and Sustainable Hydropower Development Project* to reform the country's hydropower sector and to strengthen the capacity of the power sector agencies to plan and prepare hydropower. And, as one final example, in Central Asia the World Bank is financing capacity building for the governments

of Uzbekistan, Kyrgyz Republic, Turkmenistan, Tajikistan, and Kazakhstan in attempts to improve their water resources planning, which may well include hydropower.¹⁵

New and diversifying sources of finance. Emerging economies and new vehicles for financing are making investment in mega-infrastructure, like hydropower, attractive for the private sector. The *Upper Trishuli 1* dam in Nepal and the MIGA-financed *Adjaristsqali Hydro Project* in Georgia are co-developed by IFC Infraventures. Also known as the IFC Global Infrastructure Project Development Fund, this \$150 million global infrastructure fund aims to develop a “bankable” pipeline of public-private partnerships and private projects for infrastructure. This fund and others are catalyzing the development of big hydropower by decreasing the initial financial barriers to investment and decreasing the financial risks so that the project is attractive to the private sector. For IFC Infraventures, the IFC then gets an equity stake in return. At least two other projects have had financing from a special purpose vehicle.¹⁶ Civil society groups have also called into question whether using a private-public vehicle is the right approach to big infrastructure, noting that there may be serious implications on transparency, governance, and accountability for project harms, among other issues.¹⁷ Finally, media reports state that the Chinese Silk Road Infrastructure Fund may provide equity funding to complement IFC investment in the cascade of five large hydropower on the Jhulum River,¹⁸ possibly marking the first project financed by this Chinese fund.¹⁹

Emerging banks. Emerging banks are also investing in hydropower. Notably, the New Development Bank, formed by the developing economies of the BRICS countries, is considering financing hydropower projects.²⁰ The lack of a transparency prevents stakeholders to assert with certainty which projects are in the pipeline. Coupled with an inaccessible environmental and social

¹⁵ See *Central Asia Water Resources Management* (World Bank project no. P152346).

¹⁶ See Itzhi-Tezhi Hydropower Project (African Development Bank project no. P-ZM-FAB-004) and Karaca Hydro (IFC project no. 37872).

¹⁷ See for example Bretton Woods Project, *Where is the public in PPPs? Analysing the World Bank's support for public-private partnerships*, Sept. 29, 2014, available at: <http://www.brettonwoodsproject.org/2014/09/public-ppps-analysing-world-banks-support-public-private-partnerships>.

¹⁸ See Karot Power Company Limited (IFC project no. 36008). Silk Road Fund, *Q&A about Silk Road Fund's First Project Investment*, April 20, 2015, available at: <http://www.silkroadfund.com.cn/enweb/23809/23812/23942/index.html>.

¹⁹ Silk Road Fund, *Q&A about Silk Road Fund's First Project Investment*, April 20, 2015, available at: <http://www.silkroadfund.com.cn/enweb/23809/23812/23942/index.html>.

²⁰ BRICS Bank may finance construction of two hydropower plants in Karela, available at: <http://tass.ru/en/economy/872563>.

policy, which was adopted without stakeholder’s participation, the bank sets the stage for violation of participatory rights at its inception. Concerns only augment when the bank signals, at least for its first projects that were approved without any sort of consultations with civil society or local communities, a total deference to un-designated countries²¹ and banks that have not adopted the Equator Principles.²² The National Development Bank of Brazil, or BNDES, is one of the chosen intermediaries that will allot disbursements coming from the BRICS bank. The Brazilian bank has financed several controversial projects involving corruption and a plethora of human and environmental rights violations, such as that of the Belo Monte Dam.²³

Missing, inadequate, and untimely information provided to affected communities on environmental and human rights impacts. Experience has shown that the impacts of hydropower can be devastating, resulting in physical and economic displacement, the disenfranchisement of indigenous people’s rights, and the destruction of fragile ecosystems. Despite the historically significant impacts of hydropower, the information provided to affected communities and to the general public appears to be woefully inadequate. Twelve of the projects flagged by the Early Warning System were categorized by the MDBs as “Category A,” the highest environmental and social risk category by MDB standards. Nonetheless, at the time of writing, the disclosure for eight of these projects did not include key environmental and social documents, including the resettlement action plan, prior to board approval. Based on a reading of the available project documents, it was not possible to gauge, for instance, the estimated economic and physical displacement or the extent to which indigenous populations may be impacted. Specifically, estimates on the number of households to be displaced were available in only six of the projects. In the IFC-funded *Gai Lai Electricity* in Vietnam, the bank noted that its project would be in areas with dense populations of ethnic minorities and that the government had represented that land acquisition was “insignificant”; however, the breadth of land acquisition could not be verified. In the Myanmar *National Electrification Project*, funded by the World Bank, land acquisition was

²¹ Equator Principles Designated Countries, available at: <http://www.equator-principles.com/index.php/ep3/designated-countries>.

²² Generadora del Istmo (GENISA), available at: <http://www.equator-principles.com/index.php/members-and-reporting>.

²³ Monga Bay, *BNDES funded Belo Monte dam – a mega-project with mega-problems*, March 17, 2016, available at: <https://news.mongabay.com/2016/03/bndes-funded-belo-monte-dam-a-mega-project-with-mega-problems/>

also flagged as an issue, though bank documents noted that the scope and locations of land acquisition would not be possible to gauge until sub-projects had been identified.

This is a critical gap. In a recent study that drew upon 22 years of its caseload involving resettlement (22 investigated cases in total), the Inspection Panel—the independent complaints mechanism of the World Bank—noted that 2/3 of all its investigations involved involuntary resettlement and that the availability of project information is key for stakeholders to challenge eventual miscalculations on impact assessments, which could help prevent the common underestimation of project-affected-people by banks.²⁴ Among the reasons for the lack of accuracy of people to be displaced by projects, the Inspection Panel identified the underestimation of projects' impact areas and improper baseline studies.²⁵

Cascading hydropower. Several of the projects are part of a cascade, or a series of dams along a river. The IFC-funded *Karot Power Company Limited* in Pakistan will be part of a cascade of five large hydropower schemes on the Jhulum River. Likewise, the *Vietnam Hoi Xuan Hydropower Project*, which is financed by MIGA, is part of the Vietnam Ministry of Industry and Trade's 2005 Master Plan to develop a cascade of seven hydropower plants on the Fme Ma River in northeastern Vietnam.

Run-of-river and “small” hydropower. However, MDBs are also funding their share of “small” and run-of-river hydropower projects. A recent article written by International Rivers debunks the myth that run-of-river hydropower is “low impact,” stating that the impacts of these projects can be “particularly detrimental to the ecology of rivers that provide vital services to people living downstream.”²⁶ At least seven of the projects involve the construction of run-of-river “small” dams, with at least one of projects financing seven run-of-river dams, with a total installed capacity of 16MW at various locations in Kenya.²⁷ The World Bank-funded *Vietnam Dam Rehabilitation and Safety Improvement Project* intends to rehabilitate dams in over 30 provinces and an initial

²⁴ World Bank Inspection Panel, *Emerging Lessons Series Involuntary Resettlement*, Series no. 1, April 2016, available at:

http://ewebapps.worldbank.org/apps/IP/IPPublications/Emerging_Lessons_Series_Involuntary_Resettlement.pdf?platform=hootsuite.

²⁵ *Id.*

²⁶ International Rivers, *Swindling Rivers, Run of River Hydro*, Feb. 2016, available at <https://www.internationalrivers.org/resources/10332>.

²⁷ See IFC-funded KTDA Small Hydro in Kenya, project number 36402.

450 “small” dams have already been prioritized. Likewise, the *ONEE Hydro Rehabilitation Project*, mentioned earlier, reportedly will attempt to rehabilitate 6 small hydropower plants.

Conclusion

As this briefing demonstrates, these all too common adverse consequences of hydro projects do not seem sufficient to prompt a modification on MDBs investment priorities. The discourse that points to hydropower as source of clean and cheap energy continues to drive MDBs’ priorities while sweeping the unacceptable price paid by marginalized members of society under the rug.