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Brazil's Belo Monte Dam: A Major Threat to the Amazon and its People

The Brazilian government is moving ahead “at any cost” with plans to build the third-largest dam in the world and one of the Amazon’s most controversial development projects – the Belo Monte dam on the Xingu River in the state of Pará. The Belo Monte dam complex dates back to Brazil’s military dictatorship and the government has attempted to build it through a series of various national investment programs including Brasil em Ação and the Program to Accelerate Growth. Original plans to dam the Xingu have been greenwashed through multiple public relations programs over the course of two decades in the face of intense national and international protest.

Impacts on Environment and People

In order to feed the powerhouse of the Belo Monte dam complex, up to 80% of the Xingu River will be diverted from its original course, causing a permanent drought on the river’s “Big Bend,” and directly affecting the Paquichamba and Arara territories of the Juruna and Arara indigenous peoples. To make this possible, two huge canals 500 meters wide by 75 km long will be excavated, unearthing more land than was removed to build the Panama

“Our ancestors are inside this land, our blood is inside this land, and we have to pass on this land with the story of our ancestors to our children We don’t want to fight, but we are ready to fight for our land if we are threatened. We want to live on our land in peace with all that we have there.”

-Zé Carlos Arara, Indigenous Leader from the Xingu

Canal. Belo Monte’s two reservoirs and canals will flood a total of 668 km² of which 400 km² is standing forest. The flooding will also force more than 20,000 people from their homes in the municipalities of Altamira and Vitoria do Xingu.

Hydroelectric energy is touted as both a solution to Brazil’s periodic blackouts and as a “clean development” approach to global climate change. However, Philip Fearnside of the National Amazon Research Institute (INPA) has calculated that the forests flooded by Belo Monte’s reservoirs will generate enormous quantities of methane, a greenhouse gas that is 25 times more potent than CO₂.¹

Belo Monte will also attract 100,000

migrants to the region. However, at the height of construction, only 40,000 jobs – only 2,000 of them long-term – will have been created. The remaining labor pool will be driven to resort to illegal logging and cattle ranching, the two main causes of deforestation in the Amazon. In addition, new migrants could fuel social tensions as they look for work, pushing into indigenous territories and protected areas to carve out a livelihood. Meanwhile, the needs of those who do find jobs will add pressure to an already weak infrastructure and social services in the largest cities.

For the Xingu’s poor farmers, temporary employment created by the dam is not a viable replacement for lost agricultural lands and the river’s fish supply. Considered an “obstacle” to business interests, indigenous peoples are particularly vulnerable. Mega-projects typically confront indigenous communities with disease, loss of food and clean water sources, cultural disintegration and human rights abuses by illegal loggers, migrant workers and land speculators. The indirect and long term impacts of Belo Monte are of even greater concern as other unsustainable industries such as aluminum and metal refineries, soy plantations,

logging, and mining expand into the area.

Energy Inefficiency and Future Upstream Dams

Belo Monte will be one of the most energy inefficient dams in the history of Brazil. It will produce only 10% of its 11,233 megawatt (MW) installed capacity during the 3-5 month-long dry season, an average of only 4,462 MW throughout the year, or 39% of its nominal capacity. To guarantee a year-round flow of water, the government would need to construct a series of large dams on the Xingu and its tributaries that will gravely impact forests and forest peoples.

The original plans for damming the Xingu included six dams: Kararão, Babaquara, Jarina, Ipixuna, Iriri, and Kokraimoro. However, when the indigenous people of the Xingu rejected the dams and defended the river in 1989, the government changed their approach: the name Kararão (a war cry in Kayapó) became “Belo Monte”, the name Babaquara became “Altamira”, and so forth.

At the Second Historical Encounter in Defense of the Xingu in May 2008, the government announced it would only license and auction one dam complex – “Belo Monte” – which in reality is three dams: the main dam at Ilha do Pimental, a complementary reinforcement dam called Bela Vista, and the main turbine house at Belo Monte do Pontal. However, because of the dra-



matic variations in the Xingu River's flow between the rainy season and dry season, the government knows that building Belo Monte is economically unviable unless more dams are built upstream. Earlier plans for Belo Monte called for four additional upstream dams: Altamira, Iriri, Pombal, and São Felix.

The possible future upstream dams would impact Kayapó indigenous territories, flood the lands of peoples such as the Araweté, Assuriní and Arara, and cause extensive damage to forests and fisheries across the region.

What the Electricity is For

The government claims that Belo Monte's cheap energy will power the houses of Brazilian families. In reality, only 70% of Belo Monte's energy will be sold for public consumption. Meanwhile, the remaining 30% has been purchased by state electric utility Eletrobras to resell to inefficient and energy-intensive industrial mining and other operations. The government has planned a USD \$40 billion investment

in mining expansion for the Amazon region through the year 2014.

The heavily subsidized electricity from Belo Monte and other hydroelectric dams planned for the region would power the expansion of export-oriented mining at the Vale corporation's Carajás iron mine and Salobo copper mine, Alcoa's Juriti bauxite mine, and Anglo American's Jacaré nickel mine, among others. Meanwhile,

Brazilian citizens would continue to pay among the highest energy tariffs in the developing world in exchange for electricity from perhaps the most inefficient dam in the country's history.

Sustainable Alternatives

WWF-Brazil released a report in 2007 stating that Brazil could cut its expected demand for electricity by 40% by 2020 by investing in energy efficiency. The power saved would be equivalent to 14 Belo Monte hydroelectric plants and would result in national electricity savings of up to R\$33 billion (US\$19 billion).²

Retrofitting existing hydroelectric infrastructure would also add thousands of megawatts to the energy grid without needing to dam another river. A first step would be to reduce the startling amount of energy lost during transmission, replace energy-inefficient household products, and update old and failing generators. Rather than invest in large, inefficient dams, Brazil has the potential to be a global leader

in energy efficiency and renewables such as wind and solar power, conserving the Amazon ecosystem and drastically cutting greenhouse gas emissions.

Project Finance and Cost

The Belo Monte dam complex is expected to cost upwards of USD \$17 billion, including \$2.5 billion for the transmission lines. The project has been developed by the state-owned energy company Eletronorte, and would be funded largely by the Brazilian National Development Bank (BNDES), which has publicly committed to financing up to 80% of the project cost. Financing for Belo Monte would represent the largest loan in BNDES' history, for which the bank has offered unprecedented loan conditions, including 30-year interest periods at 4%, significantly below the cost of capital. The government is also siphoning Brazilian public pension funds and the country's workers' insurance funds in order to bankroll a full 25% of the project's construction consortium, called Norte Energia.

The 18-member Norte Energia consortium is currently marked by a state-controlled participation in the consortium totaling 77.5 percent, dwarfing the role of private sector investors and reflecting concerns about the finan-

cial risks associated with the project. Nonetheless, using subsidized credit from BNDES and through back-door deals, the Brazilian government has lured construction giants Odebrecht, Andrade Gutierrez, and Camargo Correa back into the consortium, and are expected to participate in up to 50% of the dam's construction as contractors. Meanwhile, European companies Alstom, Andritz, and Voith-Siemens and

causing serious divisions within the agency. Despite this, in February 2010 the head of IBAMA approved the EIA, granting the dam's provisional environmental license, and stipulated that the winning consortium monitor the project impacts over a six-year "trial period" of operation.³ This "wait and see" attitude is no way to manage the environmental impacts of the world's third-largest dam.



Photo Credit: Antoine Bonsorte / AMAZON WATCH

Argentine company Impsa are expected to supply turbines for the project.

Grave Omissions in the Environmental Impact Assessment

The IBAMA technical team assigned to the project declared that "there are insufficient elements to attest to the environmental viability of the project" due to the omission of data in the Environmental Impact Assessment (EIA). Data was missing regarding water quality, socioeconomic indicators, and fish populations, and flimsy plans to mitigate the direct impacts on riverine families were devised last minute,

Despite laws and policies promising environmental protection and community participation in development and land management decisions, Brazil's official EIA for the Belo Monte project has also received harsh criticism from national and international experts, all of whom note that the

EIA barely covers even the minimum amount of information required by Brazilian legislation.

In protest, two senior technicians at IBAMA, Leozildo Tabajara da Silva Benjamin and Sebastião Custódio Pires, resigned their posts in 2009 after citing high-level political pressure to approve the project despite the obvious omissions in the EIA.⁴ Shortly after the government's decision to move forward with Belo Monte, 140 organizations and movements from Brazil and across the globe decried the decision-making process in granting

the environmental license for the dams in a letter to Brazilian President Luiz Inacio Lula da Silva in 2010.⁵

Lack of Public Consultation

The government claims that proper public hearings were held to consult indigenous people and river dwellers about the impacts of Belo Monte. Indeed, Minister of the Environment Carlos Minc claimed that the public hearings were “pedagogic.” However, this could not be further from the truth. Only four public hearings were held in the cities of Altamira and Vitória do Xingu, destinations that take days for indigenous people traveling by boat to reach. Even so, at the public hearings security forces impeded the entrance of civil society representatives, and the few public queries that were asked were dismissed, ridiculed, and answered evasively by Eletrobras representatives.

Leaders from the Xingu River Basin have made it clear that their right to consultation on the Belo Monte project has not been honored. José Carlos Arara of the Arara people on the Xingu’s Big Bend, for example, has denounced the government’s claims that he and other leaders took part in an official meeting with the government on Belo Monte, as mandated by the licensing process. He even has video footage of government officials stating that their 2009 meeting with local leadership was an unofficial consultation, clearly promising that an official audience would take place.

Legal Challenges and Federal Injunctions

Brazil’s Federal Attorney General filed

two judicial actions in 2010 against IBAMA for having granted the provisional environmental license without responding to the omissions in Eletrobras’ environmental assessment. The judicial actions argue that the missing water quality data violates National Environmental Council (CONAMA) Resolution 357, which establishes the standards for water quality, and article 176 of the Brazilian Federal Constitution, which prohibits the development of hydrological energy potential on



Photo Credit: Atossa Soltani / AMAZON WATCH
James Cameron visits the Xingu

indigenous lands without a previous fulfillment of regulatory mechanisms.⁶

The Belo Monte auction took place on April 20, 2010 amidst street protests taking place in major cities across Brazil. Leading up to the auction date three injunctions (restraining orders) were issued by a federal judge of Altamira. Favoring the civil action lawsuits filed by the Brazilian Federal Public Prosecutors Office and human rights and environmentalist NGOs, the injunctions were struck down by a regional appellate court judge, under heavy political pressure from the Lula

government. It is important to stress that the auction took place while the third restraining order was in full effect.

Each injunction was overturned in a matter of hours by the President of the Appellate Court for “Region 1” - which covers the entire Amazon basin - succumbing to heavy political pressure from the Lula administration. In spite of legal and constitutional safeguards that place the Belo Monte dam in dubious legal standing, the Brazilian government has consistently used a heavy hand to push this project through to the detriment of the Xingu River and its peoples. If built, the dam forbears a grim future for the rivers of the Amazon basin.

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Amazon Watch works to protect the rainforest and advance the rights of indigenous peoples in the Amazon Basin

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