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The Belo Monte Dam: a camel in the tent?

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> *"A Bedouin camped in the desert might be tempted to let his camel put its head in the tent at night to get away from a sandstorm, but when the man wakes up the next morning he will find the whole camel inside the tent"*[1].

While Brazil is seen as a strong democratic State with progressive climate and forest protection policies, regulated by a modern Constitutional framework that recognizes indigenous peoples' rights over land and natural resources, a major expansion of hydroelectric dams in the Amazon are pushed forward in the name of development and as a panacea to clean energy production. The planned Belo Monte dam on the Xingu River is likely to contribute to deforestation, destruction of aquatic ecosystems and violation of indigenous and human rights. The approval process has been entrenched by authoritarian decisions, contributing to consolidate a model of development typical of the dictatorial regime.

1. Introduction

The contentious Belo Monte dam, planned to be constructed on the Xingu River in the Brazilian Amazon, dominates the news headlines in Brazil. This hydroelectric project is the focus of intense controversy due to the magnitude and nature of its impacts as well as its questionable Environmental Impact Assessment (EIA) and licensing process. Every day, newspapers bring fragments of information on legal disputes between the government and the Federal public prosecutor's office (MPF), negotiations among industry owners, construction firms and investors, and the resistance of indigenous peoples and local populations in the Xingu River basin. The media coverage on Belo Monte feed dissonant opinions, ranging from considering the dam a redemption to a catastrophe. In an attempt to contribute to this debate, this article seeks to shed light on political circumstances that have steered the decision-making process in an undemocratic and authoritarian fashion. The article highlights the illegalities of the licensing process and the technical and economic inefficiency of the dam project, which leads to speculations on the possible construction of the other originally planned upstream dams, contrary to what the government has declared.

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1 Fearnside, P. M. 2006. Dams in the Amazon: Belo Monte and Brazil's Hydroelectric Development of the Xingu River Basin. *Environmental Management* **38 (1)**: 16–27. http://philip.inpa.gov.br/publ_livres/Preprints/2005/Belo%20Monte%20dec%20making-EM-2.pdf

Figure 1: Map showing the location of the planned Belo Monte dam

2. Death and resurrection of Belo Monte

The first version of the dam dates back to 1975 when the project was named Kararaô, predicted to generate 11,000 MW, and constituted one of six projected dams in the Xingu basin. If built, these dams would altogether flood 20,000 km² of rainforest, including protected areas and indigenous lands, and directly affect 12 indigenous groups. Assisted by a growing environmental movement, the first large indigenous manifestation against the project was realized in 1989 in Altamira, Pará, during the democratic transition[2] (figure 2). The event raised international media attention attracting NGOs and celebrities like rock star Sting and the founder of Body Shop, Anita Roddick. The lobbying against the dam project ultimately resulted in the World Bank withdrawing its loan. Due to Eletronorte's (state energy company responsible for the project) poor financial situation after the construction of the Tucuruí and Balbina dams and Brazil's burden after the debt crisis, the government was in no condition to finance the project and put it on the shelf.


Figure 2: Tu-Ira Kayapó threatens the Eletronorte representative, José Antônio Muniz Lopes, with her machete.
Paulo Jares/ISA

Thirteen years later, the skeleton comes out of the closet, now with a new name; Belo Monte. As a result of pressure from civil society, Eletronorte revised the project several times and technical improvements were

2 Carvalho, G. O. 2006. Environmental Resistance and the Politics of Energy Development in the Brazilian Amazon. *The Journal of Environment and Development* **15(3)**: 245-268.
http://www.indiaenvironmentportal.org.in/files/1_38.pdf

made over the years. The current version consists of two dams; one on the main river channel forming the reservoir, from which water will be diverted through two artificial channels to a second dam where the generation plant will be situated. This adjustment reduces the reservoir size from 1,225 km² to 516 km², avoiding flooding of the Paquiçamba indigenous area, and increases the generation capacity to 11,233 MW. The government re-elaborated the hydroelectric inventory of the Xingu basin in 2008 and declared Belo Monte as the only dam to be constructed, therefore giving up the originally planned upstream dams. This decision was ratified by the National Council of Energy Policy (CNPE), but is vulnerable to changing political winds.

3. The camel in the tent

There is no doubt that Eletronorte's engineers have succeeded in technically improving the Belo Monte project, but this does not mean that the project is free of socio-environmental impacts. As 80% of the river will be diverted through artificial channels to feed the turbines, a 120 km stretch called Volta Grande do Xingu (Xingu's Big Bend) will suffer severe lack of water[3]. Two indigenous lands are located along this stretch (Arara da Volta Grande and Paquiçamba) as well as many riparian communities that depend on the river for subsistence, income, and transportation. Furthermore, part of the city of Altamira will be submerged and at least 20,000 people will need to be displaced. The building of the dam is expected to stimulate the influx of an estimated 500,000 people[4], who will overload public services such as education, health, sanitation and security offered in Altamira, besides increasing land conflicts and pressure on natural resources. IBAMA, the environmental agency responsible for the licensing of Belo Monte, stated that the EIA presents no knowledge on to what extent these impacts will be felt by the people.

A study undertaken in 2006[5] estimating costs of construction with the expected generated energy, concluded that Belo Monte is not economically viable. Due to infrastructure development and the construction of working sites, dams and artificial channels, involving the removal of more soil and rocks than in the construction of the Panama Channel, the project has been estimated to cost between US$15 and 19 billion. Moreover, as Belo Monte will operate without a sizable reservoir to regulate the water flow, energy generation becomes vulnerable to seasonality. The Xingu River has an average flood rate of 30,000 m³ during rainy season that drops to a mere 1,000 m³ during the dry season (even less in the four driest months between May and August). This circumstance reduces the average potential of the dam to 4,571 MW[6], or only around 40% of the declared 11,233 MW. In short, it would be too expensive to generate so little. The study, however, states that if another dam is constructed upstream to regulate the water flow, it would add substantially to Belo Monte's electrical output, making both dams highly profitable.

This suggests that Belo Monte will hardly be a stand-alone dam in the Xingu River in the future. Fearnside (2006) refers to this situation as the “camel-in-the-tent scenario”: if a Bedouin lets his camel put its head inside the tent during a sandstorm, he is likely to find the entire camel inside the tent the next morning. In other words, once Belo Monte is constructed, it is likely that other upstream dams will eventually be approved. Regardless of the government affirming that Belo Monte will be the only dam in Xingu, there is no guarantee it will stick to its words. If failing to live up to its promises, it would not be the first time; when the Balbina reservoir was filled four meters above the decided threshold, and when the second dam at Tucuruí was built in 1998 without an environmental assessment. Based on past dams built by the Brazilian government, both military and democratic, the construction of more dams in the Xingu River is not an unlikely scenario.

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3 Garzon, B.R and R. S. Telles do Valle. 2011. Belo Monte e o apagão democrático. ISA: Unpublished

4 IBAMA. 2009. *Parecer Técnico No 21 – Analisis de componente Indígena de Estudios de Impacto Ambiental.* http://www.ibama.gov.br/licenciamento/index.php

5 Sousa, W. C., J. Reid, and N. C. S. Leitão. 2006. *Custos e Beneficios do Complexo Hidreletrico Belo Monte*. Lagoa Santa: Conservation Strategy Fund. http://www.ibcperu.org/doc/isis/8325.pdf

6 Sevá, O. 2005. *Tenotã-Mô: alerta sobre as consequências dos projetos hidrelétricos no rio Xingu.* São Paulo: IRN.

4. Fast-track bureaucracy and political pressure bend down legislation

Despite what these above-mentioned examples may suggest, Brazil has a solid environmental legislation. In 1981, still under military regime, the National Environmental Policy Act (NEPA) was approved, opening way for the structuring of a complex of public agencies covering federal, state, and local jurisdictions. The goal of NEPA is to "make social economic development compatible with the preservation of the quality of the environment and the ecological balance (...) aiming at its rational use and permanent availability"[7]. NEPA was incorporated into the 1988 Democratic Constitution, which recognizes the right to a healthy environment as essential to the quality of life for present and future generations. The main tools of the NEPA are the EIA and the licensing process, which consists of three phases: the preliminary, installation and operation licenses. Once the EIA is submitted and approved by the environmental agency, according to public terms of reference, the agency is supposed to organize public hearings to discuss the project with society at large. After considering elements gathered in the hearings, the agency may or may not issue the preliminary license attesting the feasibility of the project, and establishing conditions for granting the installation license. Once the preliminary license is granted, the energy agency ANEEL promotes public bidding for the granting of the energy concession to build and operate the plant by private groups; the group that wins the concession is responsible for complying with the conditions contained in the preliminary license before carrying out any installation activity. If the project affects indigenous peoples, there must be adequate consultations according to the ILO Convention 169 (ratified in 2002), and Congressional authorization, according to the Constitution.

Unfortunately, the gap between the legislation and *real politique* is wide. Belo Monte illustrates how strong political and economic lobbies around a specific project can influence the executive, legislative and judiciary powers, bending the legislation to the will of sectoral interests. As authorities complained that the environmental legislation was an 'obstacle' to development, the press started portraying environmental licensing as the main bottleneck to economic growth. In March 2004, then President Lula called his ministers to demand that they find ways to circumvent environmental impediments to completing stalled infrastructure projects. Shortly after, the National Congress approved Belo Monte's construction with virtually no debate.

The EIA carried out by the private engineering company CNEC was considered incomplete by experts in IBAMA in 2009, as it did not meet the terms of reference given for the assessment. The experts further stated that their *own* analysis was incomplete due to time restrains imposed by the agency's president[8]. So far, two directors and one president of IBAMA have quit because of the pressure to quickly grant the preliminary license. After the delivery of complementary studies, the 20,000 page EIA was eventually accepted by IBAMA and became available to public scrutiny only two days before the public hearings. The acceptance of still incomplete studies was questioned in court by MPF and a lawsuit was filed to suspend the licensing process. However, a federal court judge - using a procedural mechanism created during the military regime to allow judges to decide individually on urgent matters that may "adversely affect public order" - ruled in favor of the government, allowing the process to continue. Eventually, the validity of the four public hearings also became a matter of court as they clearly did not meet the purpose they were supposed to[9]. Actually, the energy ministry had announced the date of the preliminary license before any public hearings had been held[10].

In February 2010, the license was granted by the newly assigned IBAMA president, despite an assessment from his expert team highlighting missing elements to attest the feasibility of the undertaking. MPF filed

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7 Federal Law 6.938/81, Articles 4, I and 4, VI

8 Parecer COHID/CGENE/DILIC/IBAMA nº 114/2009

9 Salm, R. 2009. *Belo Monte: a farsa das audiências públicas*. Correio da cidadania 08/10/2009. http://www.ecodebate.com.br/2009/10/08/belo-monte-a-farsa-das-audiencias-publicas-artigo-de-rodolfo-salm/

10 Marques, G. 2009. *Governo mantém data para leilão de Belo Monte*. Estadão 02/11/2009. http://www.estadao.com.br/noticias/economia,governo-mantem-data-para-leilao-de-belo-monte,460109,0.htm

lawsuits to suspend the license in court, based on illegalities in the licensing process. Twice have the license been suspended by local judges with solid argumentation, twice were these decisions summarily overruled by court judges through the same procedural stratagem mentioned above. This became a kind of 'dead-end' pattern in legal disputes around Belo Monte: technically solid decisions in first instance quickly overruled by brief political decisions by judges from court of appeals. The lack of proper consultation of indigenous peoples as required by the ILO 169 Convention also became a matter of international dispute resulting in civil society organizations presenting a case to the Inter-American Commission on Human Rights in the Organization of American States. The Commission has recently demanded clarification to the Brazilian government concerning claims of violation of environmental, social, economic and human rights[11].

According to legislation, installation license can only be granted after compliance with all conditions of the preliminary license. The latter requires that the entrepreneur complies with 40 socio-environmental conditions, concerning infrastructure investments and a regional development plan for the Xingu River basin[12]. The government declared that these measures could accrue to up to US$800 million, while the Energy Research Agency (EPE) and other potential investors have estimated the costs up to US$1.35 billion. Some private investors have already declared their intention to transfer these costs to the final consumer. Without complying with a single condition, Norte Energia S/A (NESA), the consortium responsible for building Belo Monte, asked IBAMA the granting of a 'preliminary' installation license for the construction sites, in order to not delay the project schedule. There exists no such disposition in the Brazilian legal system, but IBAMA's legal experts created a distorted interpretation of the licensing legislation to argue for the legal possibility of granting such a license as long as the entrepreneur commits itself to comply with the preliminary conditions *afterwards*. IBAMA issued this exotic license in January 2011, approving the installation of the construction site. Once again MPF filed a lawsuit against the license, the local judge in Altamira suspended its effects in March 2011, and some days later the decision was summarily overruled by a court judge in Brasilia. Dead end.

5. Public and private interests: distributing risks, concentrating benefits

A recently published report[13] brought forth the financial risks associated with Belo Monte pointing to the low investment returns due to uncertainty over construction and socio-environmental costs, low firm generation potential associated with the highly seasonal flow of the Xingu River, and uncertainty of future market value. In such a risky business, who is willing to take the chance? Private investors have pressured the government to assume these risks through large and safe disbursements of public resources. Brazil's development bank BNDES is responsible for enhancing investment capacity in infrastructure projects and in 2010 it lent out US$96.32 billion[14], three times more than the World Bank. Under Lula's and Dilma's administration, BNDES has widely expanded its capacity to facilitate financing of priority development projects like Belo Monte, thanks to large disbursements from the Official Treasury (public money). BNDES has agreed to finance up to 80% of Belo Monte over 30 years, accruing to around US$7.2 billion, the largest loan ever made by the bank to a single project. The largest shareholders in NESA Consortium are public companies (subsidiaries of Eletrobrás holding) and pension funds from State-owned companies. These companies receive large financing from BNDES backed by legislation that authorizes the Treasury to rescue the bank in case of breach of contract or failure to perform from NESA[15].

It is not surprising that the government makes it easier for private investors, as the largest contributors to Lula's and Dilma's presidential campaigns were construction and mining companies. The construction sector

11 Braga de Souza, O. 2011. *OEA intima Brasil a se manifestar sobre licença de usina de Belo Monte* . Notícias socioambientais 11/03/2011. http://www.socioambiental.org/noticias/nsa/detalhe?id=3275

12 Plano de Desenvolvimento Sustentável da Região do Xingu, created by Federal Decree nº 7.340, 21/10/2010

13 Hurwitz, Z. et al. 2011. *Mega Projeto, Mega Riscos: Análise de Riscos para Investidores no Complexo Hidrelétrico Belo Monte*. São Paulo: IRN. www.amazonia.org.br/arquivos/374461.pdf

14 Leopoldo, R. 2011. *BNDES empresta 391% mais em 5 anos e supera em três vezes o Banco Mundial.* O Estado de São Paulo 10/3/2011.

15 Medida provisória nº 511, 5/11/2010

contributed with 27% of Dilma's declared campaign revenues. For instance, the Camargo Corrêa corporation was the second largest contributor to Dilma's 2010 campaign (US$5,1 million) besides financing the film about president Lula's life in 2010[16]. CNEC, the company that elaborated the EIA of Belo Monte, was until recently a subsidiary of the Camargo Corrêa group. The holding sold control over CNEC to an Australian group to be able to participate in the concession bid and, once with the concession, be able to hire its ex-subsidiary for engineering services. Even before the preliminary license was granted, the holding had declared exclusivity to CNEC in future engineering contracts in case of winning the future concession[17]. Nevertheless, Camargo Corrêa and other large groups eventually withdrew from the dispute, arguing unfavorable economic and financial conditions, as the government would not raise the maximum energy price in the bidding call. They remain interested, however, in future contracts with the winning consortium for engineering and construction services.

With the withdrawal of the major players, the winner of the Belo Monte concession was NESA with 49.98% public participation through the Eletrobrás holding. Private partners include minor construction firms, energy firms, pension funds, and self-producers. The public bidding session was tumultuous and lasted less than 10 minutes, punctuated by two court decisions suspending the bidding, which were rapidly dead-ended by court judges. In December 2010, BNDES announced a bridge loan of US$0.6 billion to NESA in order to purchase machinery, but in February 2011, under pressure from MPF and civil society, the bank declared it would not release funds until a full Installation License was issued. During the Carnival, while the country was busy celebrating, engineers from NESA set camp to build the construction site. The head of the camel is now well inside the tent and only time will tell if it succeeds to enter with the rest of its body.

16 "Lula, o Filho do Brasil"

17 Landim, R. 2010. *Camargo Corrêa vende unidade por R$170 milhões.* O Estado de São Paulo 12/01/2010. http://www.zap.com.br/revista/imoveis/ultimas-noticias/camargo-correa-vende-unidade-por-r-170-milhoes-20100112/