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**Competing Discourses on the Implementation of the Belo Monte Hydroelectric
Power Plant**

Freiburg
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Competing Discourses on the Implementation of the Belo Monte Hydroelectric Power Plant

Bachelor Thesis presented to the University of Freiburg and as one of the requirements to achieve the bachelor degree in Environmental Engineering at the Engineering School of São Carlos.

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Supervisor:
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POR QUALQUER MEIO CONVENCIONAL OU ELETRÔNICO, PARA FINS
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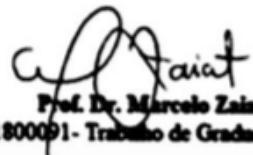
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They are on the right path.

“Reality is merely an illusion, albeit a very persistent one.”

Albert Einstein

PREFACE

In my first years of university I got involved in many student organised groups. They introduced me to my first real notions of politics. At first we only discussed issues related to our major or the campus, but as I went deeper in the issues and organisations I started to touch issues of national and international importance and at the same time meet other groups with totally different positioning regarding the same topics. That intrigued me for a long time.

At first I thought that other groups didn't understand the issues as deep as I did, but I soon began to realise that these opposing groups have a totally logical and believable explanation, but they gave different weights for different aspects of the discussion, influencing the outcomes of the analysis and shaping reality to their point of view, when it should work the other way around.

I also noticed that my ideology had a lot to do with where I was first introduced to the issue. It was surprising for me to realise that political positioning was more influenced by family and friends than logical thinking, I was basically defending my ideology the same way as I support the brazilian national soccer team, not because I think that Brazil has the world's best national team, but because I am brazilian. When I became aware of this I decide to get some distance from those issues and seek for a more sober point of view.

In this study I will use a sociological approach to scientifically analyse the competing discourses on an issue of national interest for the brazilian society, the construction of the Belo Monte mega dam, in the Amazon forest. Back in 2011 I clearly positioned myself against the construction. Today I will be as impartial as possible and analyse the case strictly following a scientific approach.

In the end of this study I hope to achieve a better understanding of the Belo Monte issue and a more comprehensive notion of to what extend it is possible to truly access reality, instead of shaping it according to our preconceptions.

ABSTRACT

ALEXANDRE, A. M. C. **Competing Discourses on the Implementation of the Belo Monte Hydroelectric Power Plant.** 2015. Bachelor Thesis. Engineering School of São Carlos, University of São Paulo and University of Freiburg. Freiburg, 2015.

The implementation of the world's third largest hydroelectric power plant in the Amazon forest does not come without conflict. A project of this magnitude has the potential to generate energy for millions of households, influence the lives of many traditional and indigenous communities, be a driver of investments and immigration to the region, interfere in an entire ecosystem and affect the Brazilian economy at national and international levels. Therefore, coalitions of Pro and Contra groups were formed to compete on the discursive arena and fight for Belo Monte's fate. This discussion became a real battle, where the groups not only express their positions, but also question the veracity of the rival's arguments, making it extremely hard to have a clear and objective understanding of the situation. Using a Sociology of Knowledge Approach to Discourse (SKAD), this study attempts to impartially deconstruct the discourses, defining who are the actors forming these coalitions, what are their arguments and how they position themselves in the political arena. Towards the end their discourses are restructured and condensed into storylines that better explicit how each group makes sense of the Belo Monte polemic.

Key words: Discourse Analysis, Environmental Police, Sociology

RESUMO

ALEXANDRE, A. M. C. **Análise dos Diferentes Discursos empregados na Implementação da Usina Hidrelétrica de Belo Monte.** 2015. Trabalho de Graduação em Engenharia Ambiental. Escola de Engenharia de São Carlos, Universidade de São Paulo e Universidade de Freiburg. Freiburg, 2015.

A implementação da terceira maior usina hidrelétrica do mundo na floresta Amazônica não veio sem conflitos. Um projeto desta magnitude tem o potencial de gerar energia para milhões de lares, influenciar a vida de muitas comunidades tradicionais e indígenas, ser um agente de investimentos e imigração para a região, interferir em todo um ecossistema e afetar a economia brasileira a nível nacional e internacional. Por isso coligações Favoráveis e Contrárias se formaram para competir na arena ideológica e decidir o destino de Belo Monte. Essa discussão se tornou uma verdadeira batalha, onde os grupos não só expressão suas posições, como também questionam a veracidade dos argumentos rivais, tornando extremamente difícil de se chegar a uma clara e objetiva compreensão da situação. Utilizando uma análise baseada na Abordagem da Sociologia do Conhecimento para Discursos (SKAD em inglês), este estudo se propõe a imparcialmente desconstruir os discursos, definindo quem são os atores que formam essas coalizões, quais são seus argumentos e como eles se posicionam na arena política. Mais ao final do trabalho, os discursos são reestruturados e condensados em enredos (storylines em inglês) que melhor explicitam como cada grupo racionaliza a polêmica de Belo Monte.

Palavras-chave: Análise de Discurso, Política Ambiental, Sociologia

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INDEX OF ACRONYMS AND ABBREVIATIONS

ADIn	Direct Action of Unconstitutionality (Ação Direta de Inconstitucionalidade)
Belo Monte	Belo Monte Hydroelectric Power Plant
BNDES	Brazilian Social and Economic Development Bank (Banco Nacional de Desenvolvimento Econômico e Social)
Dilma	Dilma Rousseff, President of Brazil 2011-Present
EIA	Environmental Impact Assessment (Estudos de Impacto Ambiental)
FORT Xingu	Regional Economic and Socio Environmental Forum of the Transamazônica and Xingu (Fórum Regional de Desenvolvimento Econômico e Socioambiental da Transamazônica e Xingu)
FUNAI	National Foundation of the Indian (Fundação Nacional do Índio)
IBAMA	Brazilian Environmental and Renewable Natural Resources Institute (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis)
ISA	Socio-Environmental Institute (Instituto Sócio-Ambiental)
Km	Kilometre
KW	Kilowatt
LI	Installation Licence (Licença de Instalação)
LO	Operation Licence (Licença de Operação)
LP	Previous License (Licença Prévia)
Lula	Luís Inácio Lula da Silva, President of Brazil 2003-2010
MAB	Movement of People Affected by Dams (Movimento dos Atingidos por Barragens)
MMA	Environmental Ministry (Ministério do Meio Ambiente)
MPF	Federal Prosecutor's Office (Ministério Público Federal)
MW	Megawatt
MWH	Megawatt hour
NGO	Non-Governmental Organisation
PAC	Growth Acceleration Program (Programa de Aceleração do Crescimento)
PT	Brazilian Labour Party (Partido dos Trabalhadores)
SKAD	Sociology of Knowledge Approach to Discourse
STF	Supreme Federal Court (Supremo Tribunal Federal)

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1. INTRODUCTION

Since the colonial times, Brazil has always served as a commodity exporter to the metropole. As early as the 16th century Brazil's main role was to supply Europe with natural products:

- 16th century: Brazil-Wood;
- 17th century: Sugar;
- 18th century: Gold;
- 19th century: Coffee.

During those times Brazil used to send commodities to Europe (and later to the USA), and get industrialised products in return. This system worked quite well until the beginning of the 20th century, when Europe went to successive wars and the US economy broke.

During this turbulent period in the industrialised countries, the dependent brazilian economy had nobody to export its commodities and at the same time, difficulty to get industrialised goods. Thus Brazil was forced to start a process called “substitution of importations”, where it would try to produce the goods that were imported before. But in order to do that, Brazil would have to start from scratch, by developing a base industry.

At first, this industrialisation process took place in the more populated and rich south, bringing massive investments and migration (not only from inside of the country, but also from countries like Japan, Lebanon, Italy and Germany) to that promising and war safe zone.

As it developed, before too long the area was saturated and by the second half of the 20th century the industrialised countries were back to business, producing more sophisticated products and with a high demand for electro intensive products like steel and aluminium (goods of low aggregated value and high energy content). In that scenario, a supplier for that kind of industrialised commodity would need to be able to produce an enormous quantity of energy at low costs in order to make such a trade profitable.

Finally, in 1975, the brazilian government started to map the hydroelectric potential of the Amazon, a huge and almost untouched forest with most of its area inside of Brazil.

At about the same time that Brazil started to explore its natural resources in the world's biggest tropical forest, the environmental and human rights movements started to grow in power and notoriety, culminating in terms like "Internationalisation of the Amazon" and putting Brazil in a difficult and controversy situation.

This situation was the spark for the clash between developmental and conservationist discourses, and the way the implementation of large dams subsequently occurred in the Amazon only contributed to heat the discursive battle, bringing it to the point that it is nowadays.

2. RESEARCH QUESTION

To better understand this discursive battle, this work will focus itself on the controversy about the construction of the Belo Monte Hydroelectric Power Plant, which has been the major symbol of the Amazon development dilemma since its preliminary studies in the eighties until nowadays.

Handling a polemic case like Belo Monte at the centre of the study, it is reasonable to expect that at least two main discourses polarising the discussion will be identified, a Pro development discourse followed by a Contra socio-environmental discourse.

With those expectations as a starting point of this study, the research questions of this work are:

1 - Who are the actors that constitute the expected Pro and Contra discourses and what are their arguments?

2 - Is it possible to identify a shift on the main polarising discourses within the time range analysed in this study? If there was an observable change on the discourses, what could be the causes of that?

3. THEORETICAL FRAMEWORK

3.1 Contextual Constructivism

The goal of this study is to help the brazilian and international society to rationally access the polemic around the construction of the Belo Monte Hydroelectric Power Plant.

This is a hard task. A project with such magnitude as Belo Monte (or any other major social discussion) touches many different realms, such as economic, environmental, social, political (and its sub-spheres) from local to global and with major implications. Clearly, this project shall be conceived with many different perspectives of people that have totally different backgrounds from one another. Not to mention the related conflicts of interest.

That said, the complexity of the issue goes way beyond the sole scientific analysis of technical properties of the project and its Environmental Impact Assessment. It has to be taken into account that even those documents are under the influence of the actors that produced them, paid for the them, came up with the project and so on. Furthermore, the political climate at the time of the study can also be of great influence to the results.

According to Dear (as cited in Jones, 1988), some domains of science are fortunate for having a more precise and unchallengeable respect regarding its findings (usually exact sciences), while others remain on the “margins of observability”. Often on this position are social, environmental and economic sciences.

On this regard, Jones (2002) says that for those disciplines, what science claims to be “reality” could be challenged by other sectors of society or even within the scientific community itself, generating a gap where reality is not more universally accepted. When it comes to that stage, “reality” is subjected to be negotiated by groups of interest through discourse until a new consensus arrive or science is able to narrow the range of uncertainty and renegotiate the facts.

With so much uncertainty regarding the subject of the study, the observation of Rew et al. (as cited in Strauss and Corbin, 1990) that *“the self as an instrument in the data collection and analysis process”*, is even more relevant. Therefore, two preliminary questions must be answered to

ensure transparency in this study: is there such thing as ontological reality (a real world independent from different perspectives)? And, is epistemological realism reasonable (can we be sure that our perspective of the world correspond to the broad term of reality or nature)?

For the author of this study the answers are respectively "yes" and "no". That means, this study has an ontological realism and epistemological relativist perspective, or in other words, there is a real world out there, but we as human beings have no full access to it and fill much of this gap through discourses.

3.2 The Power of Discourses

Without the ability to access the ontology of our world, discourses were created to fill in the gap between what we see of the world and what the world actually is. Frames are a way to portray the reality of an individual (or group) to others, they explain how they understand the world through it. According to this perspective, language ceases to be merely a mirror of the world, becoming a powerful tool to shape reality.

In our society, being in control of such a tool (language) means power. Power to influence decisions, bring issues to the agenda, elect allies, silence rivals or finance certain projects instead of others. Therefore, discourses are often object of dispute between different groups and interests which aim to be (or remain) dominant.

In cases which a discourse is dominant, contrary groups have to find ways to legitimate themselves, otherwise they are not able to maintain their structure in the society. It could be done by counter framing the opposition, making them lose credibility, or just acting inconsistently, i.e., claiming a specific discourse, but not materialising these "beliefs" in actions (Benford, 2000).

Dealing with discourses is dealing with world conceptions, battles of interest and inconsistent behaviour. Adding complexity to the topic, Moran, Rein and Goodin (2006) explains that discourses, beliefs and frames are not at all stable and best seen as constantly renegotiated, generating a great amount of ambiguity in social communication.

For instance, when a well known metaphor is spoken, it is reasonable to expect that the hearer will understand what is meant. But let's take the metaphor "acid rain" as an example. When spoken, it is reasonable to expect that everyone will understand "rain contaminated with acid pollutants", but it is also possible that the interlocutor understands "a natural disaster unrelated to human actions". Thus, Brink and Metze (2006) concludes that this assumption of mutual understanding is wrong, meanwhile, Howard and Torfing (2005) explains that, if dominant, each discourse would have its own impact on public policy and society (ranging from regulating pollutants emissions from fabrics and cars, to doing nothing and hoping for the best). Under this light, it would be irresponsible to assume that metaphors such as development, sustainability or energy security are indisputable and concrete concepts.

3.3 The Sociology of Knowledge Approach to Discourse (SKAD)

For this study an analysis SKAD will be employed. Based on Keller (2011), this approach considers discourse as concrete and material documents such as speech, text, images, videos and symbols that individuals or groups utilise following social instructions as well as complexes of power and knowledge.

In this perspective, fixed meanings are products of social processes submitted to countless different interpretations. Thus, symbolic battles and controversies between competitive discourses are not only expected, but also subject of study.

The analysis will be conducted following the sequel: phenomenal structures, interpretative schemes and storylines. Each one is clarified below (Keller, 2011):

Phenomenal Structures are a tool that enables the many dimensions of a discourse to be fragmented and evaluated based on concrete/observable actions, discourse material or policy measures;

Interpretative Schemes are an actor's interpretative consensus of a statement. It can be used as a power tool, when it is successfully disseminated, making the frame dominant and therefore including certain aspects in the social agenda;

Storylines are the melting pot of a particular discourse. It binds all the different aspects analysed in a comprehensive and coherent way, following a logical sequel of events, just like when a story is told.

Together, those structures enable the researcher to deconstruct the discourses present in the analysed material and, step by step, rebuilt them in a scientific way.

4. LITERATURE REVIEW

4.1 Literature Regarding the Case

In order to develop a discourse analysis regarding the case of Belo Monte, it is important to contextualise the project within the brazilian society and international emergence of the sustainability movement. Also important is to explicit the chronology of the process just as the different reactions generated by the advances of project in the legal realm.

As a starting point, Zhouri (2004) explains how the ecological movement started calling for awareness of the conflicts between nature and progress around the same time that the guidelines of the brazilian development started to focus on the Amazon, bringing not only investments, but also conflicts to the region.

The Socio-Environmental Institute (ISA, 2010) has a large database regarding technical specificities of Belo Monte's project and useful reports explicating how the process was conducted since 1975 till 2010, when the project finally got its Previous License (LP).

Bermann (2012), a reputed specialist on the brazilian energy sector and who also worked in the Ministry of Mines and Energy in the years of 2003 and 2004, explicit his reasons to oppose the project using technical, financial and legal arguments. He also gave an interview in 2011 about his experiences and own opinions regarding the project and which model of development Brazil should aim.

Fleury and Almeida (2013) have a comprehensive study analysing the conflict of Belo Monte. In their study the main phases of the conflict are explained and a characterisation of the actors and key elements of the conflict are studied in depth. In this work two polarising heterogeneous groups are identified, a group Pro Belo Monte and another Contra. The same framework will be used to begin with this study.

Extremely relevant for the case and always quoted in other studies, is the Specialists Panel conducted by Magalhães and Hernandez (2009), responsible for a critical analysis of Belo Monte's EIA.

Finally, Zarpelon and Grisotti (2013) based on theories developed by Foucault (discourse analysis and power) and Bourdieu (language and symbolic power) analysed the Belo Monte case. Their focus was the discourses of the presidential representatives between the years of 2003 and 2010, period called as Governo Lula, when the brazilian president was Luís Inácio Lula da Silva. In this study attention is called to the divergencies between what was affirmed by the regime (a concern to environmental and traditional peoples issues) and what was done (going in the opposite direction with the legal process of Belo Monte), culminating to the point where the discourse changes and becomes more aligned to market interests.

4.2 Literature Regarding Competing Discourses on Energy Generation

In spite of a rich literature regarding Belo Monte, there is still space for contributions. Of all the articles referred, only one uses a discourse analysis approach focused on the President and his representatives. Therefore, a discourse analysis of the broader spectrum of the case is justified.

As a basis of comparison, other studies with similar approaches and field studies must be checked. The literature reviewed in this section is based on cases of competing discourses in the realm of energy generation, the cases are about nuclear, coal and wind generation are geographically located in the United Kingdom, South Africa and Germany, respectively.

In their "*'Energy security' and 'climate change': Constructing UK energy discursive realities*", Rogers-Hayden, Hatton and Lorenzoni (2010) describe how a shift in the discourse brought, in a short period of time, the nuclear energy back from the ostracism. In the beginning of the 2000s, energy security discourses were gaining strength as the threat of an energy crisis becomes a more dominant frame. Meanwhile the UK aims to became a leader in climate change mitigation, making the nuclear energy appear as the solution for both issues.

In South Africa, Rafey and Sovacool (2011) study in depth the controversial implementation of the Medupi Coal-Fired Power Plant. They aimed to clarify the positions and justifications of the major institutions and organisations involved in the project, differentiating between those in favour and the opposition to the project. They focused the analysis on systematisation of the main

justification of each pole for their positions. Similarly to the UK case, those justifications are based in solutions for issues as:

- economic development;
- energy security and;
- environmental sustainability;

therefore an inevitable and logical project.

Interesting to notice that the opposition sees the whole thing with totally different eyes, claiming that the project represents:

- maldevelopment;
- energy poverty;
- environmental degradation and;
- unquestionably corrupt;

therefore, avoidable and undesirable.

Finally, the wind energy case in Germany described by Leibnath and Otto (2014) explicits the competing discourses of two cities faced with the implementation of wind farms in their regions. Once again the case is divided by groups in favour and against the project and the analysis is focused on the competition for the hegemony of the term “landscape”, a recurrent issue when concerning the implementation of wind energy. In the research, landscape is understood as discourse and the analysis develop itself from this perspective, trying to identify different landscape definitions of opposing groups.

Not surprisingly, each polarising group accentuate the perspective that better suit their position of the project. Opposing groups evoke an idyllic and beautiful landscape (natural or traditional) home of a rich biodiversity and humans settlement in need of protection. On the other hand, proponents reinforce the constant changing of landscapes and possibility of nature, tradition and energy generation coexistence.

5. METHODOLOGY

The methodology was designed based on the interpretation of Bern and Winkel's (2013) work on “Nuclear Reaction to Climate Change? Comparing Discourses on Nuclear Energy in France and Germany” and follow these steps:

1. Definition of the research field and formulation of research interest;
2. Determination of adequate data and compilation;
3. Data analysis

5.1 Determination of Adequate Data and Compilation

The time range of this study will be limited from the year 2002 till present days.

This time range is justified by the fact that in 2002 the Brazilian Labour Party (PT) was on presidential campaign. Elected in the same year and taking power in 2003, PT has been ruling the country under the administration of Lula (2003-2010) and Dilma (2011-present). Meanwhile, the project of Belo Monte was, after more than a decade filed, once again brought up to the government agenda.

The collection of data will be reduced to the most relevant statements/reports of the major expected players (identified in the literature review) that were engaged in the creation and support of the two competing discourses on Belo Monte. Therefore the data will be differentiated on Pro and Contra Discourse and the primary data sources are quoted bellow:

- **Data Corpus on the Pro Development Discourse**

Government Statements (president, ministers, agencies reports)
Norte Energia Reports and Statements

- **Data Corpus on the Contra Socio-Environmental Discourse**

Social Movements Statements

NGOs Reports and Statements
 Academic Studies
 Federal Prosecutor's Office (MPF in the portuguese acronym) Reports and
 Statements

Important to mention, not all actors have a definitive position regarding the conflict acting as a Pro at times and Contra at others, therefore they deserve their own category as an Unstable discourse.

• **Data Corpus on the Unstable Discourse**

Fort Xingu Manifests

Indigenous and local communities statements retrieved through other actors sources as Norte Energia, Social Movements or NGO reports.

The selection will be qualitatively made by searching online documents made available by the actors to the public. Within the great range of documents the selection will focus on selecting archives that fulfil the following criteria:

- being from the period before the first licenses of the legal process (before 2010);
- in the beginning of the implementation of the construction site and the actual construction (2010 and 2011);
- during the construction (2012-2014);
- recent (2015).

This criteria will enable the data collection to comprehensively select relevant documents about Belo Monte that will serve as a good basis for the data analysis.

5.2 Data Analysis

Following Strauss and Corbin (1990) advice, in order to approximate theory to “reality”, instead of testing a hypothesis and looking for specific aspects that the author might find relevant beforehand, this research begins with an area of study and will let the theory emerge from the data.

Given the social constructed nature of the research problem, a qualitative approach is best suited to proceed with the analysis (Strauss and Corbin, 1990). Thus, the methodology chosen to

analyse the different perspectives on the issue of Belo Monte is a Sociology of Knowledge Approach to Discourse (SKAD), where all the different epistemological perspectives of reality will be compared.

Just before employing the SKAD approach a characterisation of the main actors appointed by Fleury and Almeida (2013) will be made in order to simplify the analytical process, making it more clear who is who in the Belo Monte case and why each group is regarded as Pro, Contra or Unstable. The data used for this characterisation is made of publications of each group regarding Belo Monte.

The analysis will be made with focus on the differences between the Pro, Contra and Unstable Discourses. To make it more tangible, it will be first divided in emblematic statements, followed by core aspects of the discussion and finally a systematisation of the main discourses employed by each group will be made based on the most relevant aspects identified in the data.

To identify core aspects that built the discourses, a phenomenal structure approach based on Bern and Winkel (2013) adaptation of Keller (2005) will be employed by answering the questions shown in the table bellow:

Interpretational Repertoire	Coding questions
Causal links	<i>What is described as the cause of the issue debated?</i> <i>What are the effects of this issue?</i>
Responsibility (competence)	<i>Who is given responsibility for the issue?</i>
Required actions/Problem solution	<i>Which solutions are offered?</i> <i>How are those responsible supposed to act?</i>
Self-positioning	<i>Who are "we"?</i> <i>How are "we" described?</i>
Other-positioning	<i>Who are "others" or "they"?</i> <i>How are "others" or "they" described?</i>
Value reference	<i>How are terms such as „nature”, „environment”, „technology”, „modernisation” or „development” etc valued?</i>

Table 1: Bern and Winkel, 2013

Based on the phenomenal structure analysis, interpretative schemes (also called frames) can now be reconstructed to clarify how each polarising side makes sense and/or tries to impose a certain discourse of the issue. Inspired by Bern and Winkel (2013), the following guidance questions were elaborate to identify frames:

1. How is sustainability defined? What is clean energy?
2. How does Belo Monte foments development?
3. What does Belo Monte represents? How the discourse positions the project in the political arena and legitimate itself;

Finally, the elements can be put together, building a storyline in which the positions and points of view of each discourse are explicit in a structured way. In other words, the storyline is the coherent binding of the various elements of the discourse into a single element.

Based on Bern and Winkel (2013), two questions will guide the elaboration of storylines within the analysed discourses:

1. Who are the heroes and anti-heroes?
2. What requires action? (What should be done and with which goal?)

6. THE CASE

6.1 1975-1989: Kararaô, the First Project

According to the ISA (2010), the Xingu basin is a 450 thousand square km area located in the North and West Regions of Brazil, in the states of Mato Grosso and Pará. It is home to 29 Indigenous Reserves (about 42% of the total area and 20 thousand Indians), the Amazon forest with a rich biodiversity, the massive Xingu river and a hydroelectric potential of 22 thousand MW (one of the biggest of the country).

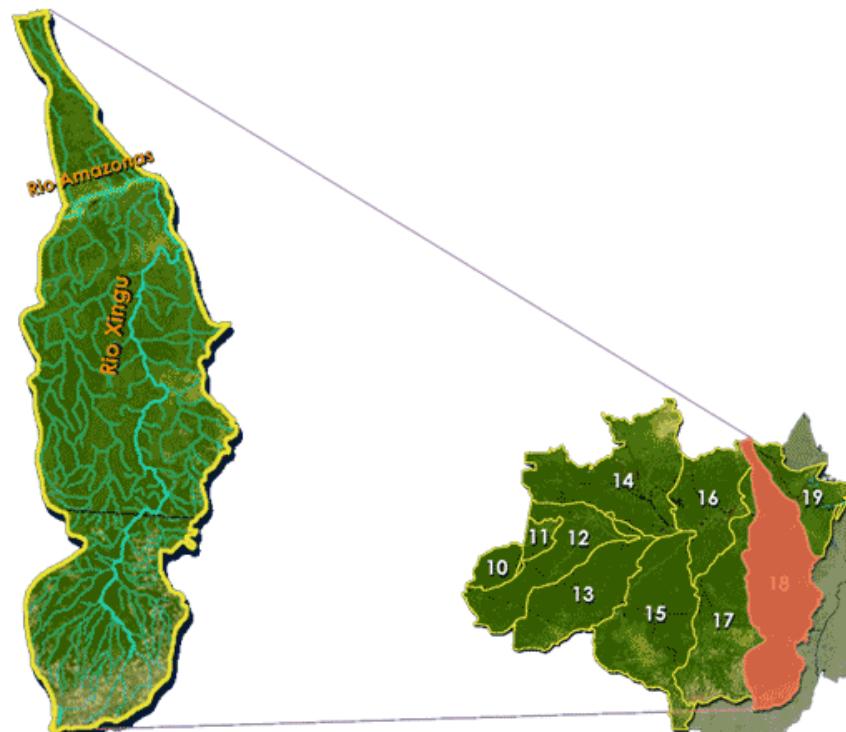


Figure 1: Xingu Basin

In the seventies, studies designed to map the hydroelectric potential of the Amazon started. More specifically in 1975 in the Xingu basin. The movement of technicians on the region was received with suspicion by the local communities since the very beginning, but it was only in 1986, eleven years after the initial studies, that the original project of Belo Monte (called Kararaô back then) was completed, starting the conflicts (ISA, 2010).

Due to the seasonal dynamic of the amazonian rivers, the project would be inefficient without a huge reservoir, since the volume of the river changes drastically with the changing of seasons. Therefore, the first project was expected to flood an area of 1200 square Km, dislodging 13 indigenous groups (ISA, 2010).

These socio-environmental impacts were the spark that started a strong opposition against the project lead by indigenous and socio-environmental movements, culminating on February of 1989 in the 1st Meeting of the Xingu Indigenous People. At the occasion, opposing groups and government authorities got together to discuss the means of development of the Amazon and it received a great and unexpected media coverage (Fleury and Almeida, 2013).

During the event an indian threatened with a knife the director of the agency Eletronorte while he explained the construction of the dam, it was a warning gesture that the indigenous people would not tolerate the dam. The picture became an icon of how development was running over traditional people in the Amazon. This episode was the main reason for changing the name from Kararaô to Belo Monte, since the former is a Kayapó war cry (in an indigenous language).



Figure 2: Indian Threats the Director of Eletronorte with a Knife (ISA, 2010)

Altogether, the event became a historic mark for the socio-environmental movements in the Amazon and a response to the pressure that traditional people in the Amazon were being submitted to. At the time the brazilian environmental movement was still in its infancy and was mostly seen as naïve, romantic and counter development, thus the ecological debate was disregarded of the national political agenda (Zhouri, 2004). Meanwhile events like the murder of Chico Mendes (an

influent environmentalist of the Amazon) in December 1988 also helped explicit the amazonian war between environment and development (Zhouri and Laschefski, 2010, quoted by Fleury and Almeida, 2013).

In the end, the project was not continued after the meeting. According to Fleury and Almeida (2013), this fact was seen as a victory by the social movements, while the government said that this was due to a period of recession that Brazil was facing in the end of the 1980s.

Although never completely discarded, Belo Monte spent the next 15 years in the shadows. After the inquietude of the late 1980s a major ideological shift happened. The environmental discourse gained international strength and terms like sustainable development became dominant, in a way that traditional communities stopped being a barrier to development and turned into the proponents of a new model based on environmental conservation. This new discourse was finally institutionalised at the Rio Conference in 1992 by the agreement on the Convention on Biological Diversity (Carneiro da Cunha, 1999, quoted by Fleury and Almeida, 2013) and the Agenda 21.

6.2 2002-Onwards: Belo Monte, the New Project

The discussions to resurrect Belo Monte gained strength in the beginning of the 2000s. In 2002 the Federal Government started a study with the goal to make the old project more socially acceptable while social and environmental movements restarted getting agitated (Fleury and Almeida, 2013). In 2005 the national congress approves the new project in a quick and controversial process with four days of discussion and without consulting local communities of the region, thus, acting against the federal constitution (ISA, 2010).

Specifics of the Project (ISA, 2010 and Bermann, 2012)

Construction

City of Altamira in the Pará State

Lake: 516 Km²

Excavation of rocks: 50 million m³

Concrete: 4,2 million m³

Jobs generated: 20 thousand

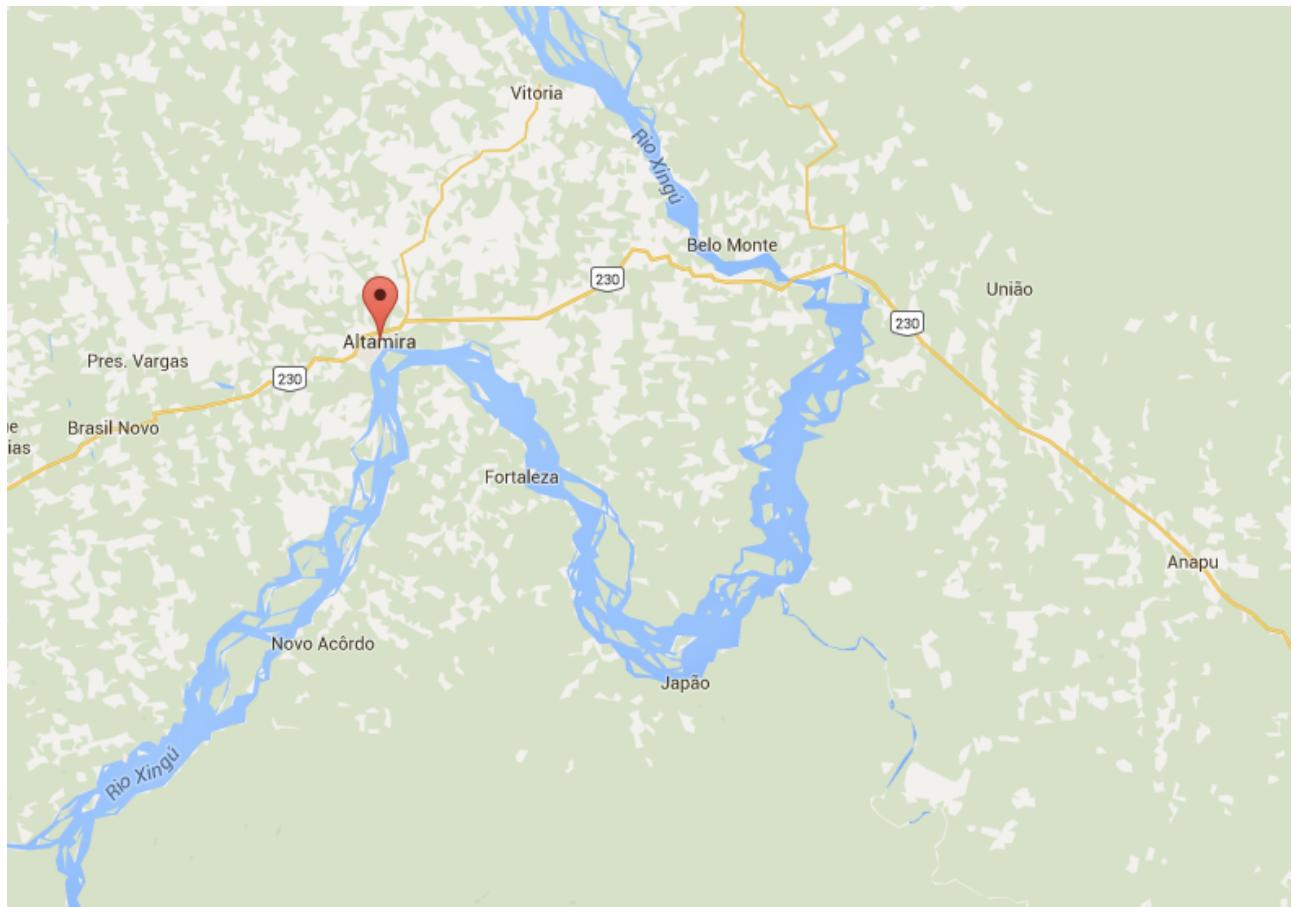


Figure 3: The Big Bend of the Xingu River before the Dam (Image retrieved from Google Maps, 2015)

Price 2005: R\$ 4,5 billion

Price 2010: R\$ 19 billion

Price 2011: R\$ 28 billion

Price 2014: R\$ 32 billion

Energy

Installed power: 11233 MW

Average power: 4428 MW (39%)

Price of energy agreed in the bidding: R\$ 76,00/MWH

Chronology of Belo Monte: From Preliminary Studies to Construction

The chronology section was elaborated based on the following sources: ISA, 2010 for 2005-2010; Fleury and Almeida, 2013 for 2010 and 2011; Xingu Vivo for 2011-2015; Amazon Watch, 2010 for 2010 and news from EBC and G1 for 2013.

2005

6 of July: National congress approves the project

11 of July: Senate approves the project

26 of August: Direct Action of Unconstitutionality (Adin) against Belo Monte's EIA studies is taken to the Supreme Federal Court (STF) by the Attorney General's Office based on civil society organisations.

December: The Adin is voted as inappropriate.

2006

28 of March: The studies of the EIA are suspended by the Federal Justice of Altamira.

2007

March: The same Federal Justice of Altamira judge its last decision unfounded and the action of the Federal Prosecutor's Office (MPF) to annul the whole licensing process. Meanwhile the STF reauthorise the continuity of the studies.

2008

May: The Regional Federal Court in Brasília suspends an injunction of the Federal Justice of Altamira allowing the participation of the construction companies Camargo Corrêa, Norberto Odebrecht and Andrade Gutierrez on the EIA studies. In response the MPF of Pará appeals against privileges to certain companies and demands a bidding process to determine who is going to participate on the EIA's elaboration.

2009

September: The EIA is completed. Two days later the first of the four public hearings about Belo Monte is held. The MPF recommends that at least another 13 public hearings should be held to ensure that the communities have enough time to analyse the document and properly engage in the

process. According to the preliminary studies Belo Monte will impact 66 municipalities and 11 indigenous lands.



Figure 4: The Big Bend of the Xingu River after the Dam (Eletrobras, 2010)

October: The finalisation of the EIA sparked a great turmoil among many levels of the civil society. A panel of 40 specialists analysed the EIA and elaborate a document given to the MPF to verify any legal irregularities and another copy was sent to IBAMA (Brazilian Environmental and

Renewable Natural Resources Institute). FUNAI (National Foundation of the Indian) approves the construction against its own technical advice.

10 of November: the Federal Justice suspends the licensing process.

11 of November: the suspension of the licensing process is revoked.

1 of December: The MPF organises a public audition about Belo Monte, inviting representatives of social movements, indigenous groups and governmental agencies. The government did not come.

2010

1 of February: The Environmental Ministry (MMA) authorises the construction of Belo Monte with a Previous License (LP), but admits that the true impacts of the dam are not fully known.

18 of February: The BNDES (Brazilian Social and Economic Development Bank) announces a massive infusion of public funds (up to 80% of the costs) in Belo Monte.

20 of April: Concession auction of Belo Monte is made within 10 minutes, generating controversy and accusations of pre arrangements. The winner was the Consortium Norte Energia, responsible for Belo Monte for the next 35 years.

2011

26 of January: Belo Monte is granted with a Partial Installation Licence, a kind of licence that usually does not exist in legal processes in Brazil.

1 of June: Finally the regular Installation Licence is granted and the construction work can officially begin.

June: Now the number of MPFs public civil actions against the project sums to 18, plus other two actions by administrative misconduct.

17 of August: MPF elaborates a document asking to stop the construction works due to unconstitutional action regarding the polemic Partial Installation Licence and the removal of indigenous people from their lands.

27 of September: The Federal Justice partially paralyses the construction works.

December: a video with famous brazilian actors against Belo Monte is released. The video turns Belo Monte into an issue of national interest and 1,35 million signatures are collected and

delivered to the president Dilma Rousseff asking to stop the project. The government reacts saying that investments are already too big to retroact.

2012

April: after seven days of strike for better work conditions the military police comes and tries to cease the strike.

2013

28 of October: After two years, the action of the MPF asking to stop the construction of Belo Monte is taken into account declaring all the licences granted to be invalid for un conformity with the legal procedures. Therefore the construction works had to be paralysed.

30 of October: The construction works are resumed with legal support of the Regional Federal Court.

7 of November: The MPF appeals in the STF against the decision of the Regional Federal Court to resume the works of Belo Monte.

16 of December: Once again the works are paralysed based on the MPFs action of 2011.

19 of December: The Special Court of the Regional Federal Court understands that the legal process is actually valid and the works can be once again resumed.

2014

26 of March: The EIA is declared unsubstantial and made with many irregularities and thus a new one is expected from the Consortium Norte Energia.

20 of August: The Consortium Norte Energia receives 90 days to make corrections on the EIA. If not complied, the consortium will have to pay a fine of R\$ 500 thousand and paralyse the work.

2015

11 of February: Nearly ready, the Consortium Norte Energia requested IBAMA for the Operation Licence (LO) and thus permission to fill the reservoir.

7. CHARACTERISATION OF THE ACTORS

There is a great variety of actors involved in the Belo Monte case, they range from supra entities as the government (with its many agencies) to smallholders such as fishers and peasants who will be affected by the project and are mostly unorganised, heterogeneous and inconstant regarding their positioning to the project.

In order to make sense out of it, a brief characterisation of each group will be made and the groups will be divided into their main overall position Pro or Contra.

Who is who in the Belo Monte Conflict?

The main actors identified in the conflict are (Fleury and Almeida, 2013):

Pro

- The Government
- Consortium Norte Energia

Contra

- Amazon Watch (NGO)
- International Rivers (NGO)
- Movement of People Affected by Dams (MAB)
- Movement Xingu Forever Alive (Xingu Vivo)
- The Federal Prosecutor's Office (MPF)
- The Academia

Unstable

- FORT Xingu
- Indigenous Communities
- Riverine communities, fishers and peasants

7.1 The Pro Discourse

The Government

At a press conference on 4 February 2010, the Brazilian Mines and Energy Minister, Edison Lobão, reiterated the importance of the power station for Brazil's *electricity security* and added "that there will be no turning back" on the project. Just months before, he said that there are "demonic forces trying to pull Brazil down", referring to Belo Monte critics.

The main proponent of the project since the 1980s, the government, has a big interest in the project. In its view, the construction of the world's third biggest hydroelectric power plant in the Amazon means bringing *development* to the country and the region, safeguarding the future from an *energy crisis, job generation, international competitiveness and sustainability*, therefore an inevitable project (Zarpelon and Grisotti, 2013).

According to Zarpelon and Grisotti (2013), over the years the discourse changes. In the beginning of the 2000s the project was seen as an opportunity that had to be broadly discussed with the Brazilian society, showing concern for local communities and the environment. Starting from 2006 the discourse gradually changes to a more developmental, anti energy crises frame, while the project is included as the biggest priority of the Growth Acceleration Program (PAC), a strategic plan aimed to reorganise and revitalise structural sectors of the country through public and private investment in fundamental works, generating wealth, jobs and safeguarding the economy (Brazilian Government).

"The brazilian energy matrix, that basically rests on hydroelectricity with mega dam projects, has been affecting the Amazon basin. The crisis of the energy sector in 2001 is due to lack of investments on the sector, lack of protection of the watershed and bad water administration. [...] Considering the specificities of the Amazon, the fragmented and insufficient knowledge that has been accumulated about how nature reacts to the implementation of dams, it is not recommended the blind reproduction of the dam recipe that has been put in practice by Eletronorte." Coalition Lula for President, 2002. [translated by the author]

“We don’t only have the project of Belo Monte, that will begin next year. We have many hydroelectric power plant projects that we plan to start in the following years, because hydroelectricity is a renewable and clean energy. Thus, to fight global warming we need to make our innovations, also technological, in our energy matrix, and Brazil has 85% of it’s energy matrix in the field of electricity as clean energy, and 47% of all it’s matrix totally clean.” Lula, 2009.

[translated by the author]

“If they had the patience to hear, they would learn what I have learned. [...] Due to *lack of information* they said that the lake of Itaipu [another brazilian mega dam] would cause an earthquake and change the climate of the region. It is because of these *constructed fantasies* that we cannot be afraid of the discussion” Lula, 2010. [translated by the author]

Shortly after Dilma Rousseff becomes President of Brazil, Belo Monte receives the green light to be constructed while the discussion practically ceased. When asked by a journalist about the environmental and social impacts of Belo Monte she simply answered: “Would you rather stay in the dark?” Rousseff, 2014. [translated by the author]

Consortium Norte Energia

Consortium Norte Energia is the name of the group who won the public bidding in 2010, becoming the official responsible group for the construction of Belo Monte. It is composed by a great variety of public and private companies, outsourcing labour companies, companies responsible for communication, topography studies, registration of properties and impacted areas.

Another big party is the Constructor Consortium of Belo Monte, responsible for the logistics and the construction work. The main construction companies are Andrade Gutierrez, Camargo Corrêa and Norberto Odebrecht. Also related to the group are the multinationals responsible for the electromechanical equipment installation, mainly Alston, Andritz, Siemens and Impsa.

Most of its discourse echoes the positive governments view towards the project, energy crisis, job generation, international competitiveness and sustainability. In their website, Norte Energia mainly conveys responses to attacks suffered from other media groups or news reports

based on their social and environmental mitigation projects. A Norte Energia's response to an attack of the MPF based on supposed irregularities regarding the removal of riverine communities is showed bellow:

“Our orientation is to always *talk first*, unless it interferes in the autonomy of the consortium. There are the interests of the *shareholders*, so we don’t have autonomy to compose certain compromises”. (Xingu Vivo, 2015) [translated by the author]

Norte Energia concentrates itself in the execution of the project, therefore they contracted the group Santa Fé Digital (from Brasília) to be their public relations and disseminate information about Belo Monte. They maintain a blog called Belo Monte Blog where a lot of information about the project can be found.

“Belo Monte never was Kararaó, the great Xingu dam planned in the *dictatorship* times. No other great project was as studied in Brazil. No other project in the Amazon has been through such a *deep dialog*. No other project had its blueprint so reformulated in seek for solutions. And, above all, no other project of this magnitude had its construction so strongly linked to *regional development* as Belo Monte.

The *brazilian demand for electricity* scaled in the last decade. Belo Monte will supply 18 million households, that’s 60 million brazilians. It could generate up to 11 thousand MW, 4,5 MW on average. *Clean and renewable energy*, taking advantage of the great *brazilian hydroelectric potential*.

Notwithstanding, Belo Monte privileges the *reduction of environmental impact* and shows respect to traditional communities. No centimetre of indigenous land shall be flooded. The project incorporates a series of social and environmental compensations and inserted itself in the lives of the cities of the region, bringing *schools, health centres, hospitals, public sanitation, habitation, security equipments, urbanisation and development of the regional production*.

This blog has the mission - in spite of a collective *imaginary* based on *conservative and retrograde discourses* - show everything that happens around Belo Monte. Stories that bring *human dramas*, as in any development process. But that also bring the *true face of Belo Monte*: citizenship,

development and respect towards the environment. The face of a Brazil in constant development and that does not leave social and economic inclusion of the citizens behind.” Blog Belo Monte, 2014. [translated by the author]

7.2 The Contra Discourse

Amazon Watch (NGO)

One of the two main NGOs present in the context of Belo Monte, Amazon Watch opposes fiercely to the project, seeing it as a "reckless way through which the brazilian government seeks to meet its stated development needs and its profit-driven goals [...] in spite of the many financial, social, and environmental uncertainties with this project." and affirms that "indigenous communities had not been adequately studied, nor have these communities participated adequately in public hearings" (Christian Poirier, Brazil program coordinator from Amazon Watch).

In general they state that, for the government, *protection of environment and minorities* is just a nuisance, but it also works as a *fallacy* to generate public support to this and other equally *destructive projects*, which the socio environmental impacts lay way beyond any *mitigation* policy.

Also categoric is the BNDS announcement of the grant (financing up to 80% of the project), not taken into consideration civil society or local people's voice in order to favour *mega corporations*.

Finally, they see the actions of the state as *dictatorial* and classify the impacts of Belo Monte as *ethnocide*, when "the object of the crime isn't life, it is culture – but the objective is the same: destroying a people." Federal prosecutor Thaís Santi, 2015.

International Rivers (NGO)

The other major NGO also position itself against the project. Mostly backed up by research and investigate journalism.

Identifying a *lack of discussion* between government and society, they call attention to *inaccurate data* of the EIA and economic costs, they state that the *true costs* of the dam are much higher or severe than the ones divulged by the government. They are specially concerned with *communities* living in Xingu's Big Bend, where the river will most likely dry leaving those communities helpless and doubling the affected from 19 to 40 thousand.

They also bring in the discussion of the *social catastrophe* usually brought by mega dams to the region. With the sudden migration of thousands of men to labour on the construction site a new sex market is established, enhancing prostitution, gender inequality, sexual abuse, violence, women and children's traffic.

Therefore, an urgent change of conduct and immediate action is expected from the government. As a start, real and *serious assessments* of socio environmental impacts must be made and really taken into account before deciding for a project (keeping in mind that this is just one of other 120 large dam projects for the Amazon).

Regarding the main reason why the government seems to be so eager to implement such a project, International Rivers start with the evaluation that since Belo Monte is the biggest project of the *PAC*, no debate on this flagship would be tolerated. However this supposition was recently substitute by denounces of a *corruption* scheme involving the whole Dam Industry and government, as stated here:

“As the investigations of operation *Lava Jato* have revealed massive *corruption* within the brazilian dam industry, the fundamental reasons for the federal government’s *obsession* with destructive dam projects such as Belo Monte and São Manoel – particularly during the administrations of Luis Inácio Lula da Silva and Dilma Rousseff – are becoming increasingly clear. If investigations and criminal indictments help strengthen democratic institutions and the rule of law in Brazil, especially with regard to human rights and environmental legislation, a major victory will have been achieved for the threatened rivers and populations of the Amazon.” (International Rivers, 2015).

Movement of People Affected by Dams (MAB)

This is a grass root social movement formed by affected people of the dam industry in Brazil. While the number of affected grew, so did the MAB's influence and organisation level.

They re-discuss the brazilian *development model*, specially related to energy generation and the *dam industry*. In their evaluation they see a model driven by the capital aiming to generate great profits for a few *transnationals* while the people pays the *socio environmental costs* of their activities. Finally, the model is seem as *un-sustainable and unfair*.

In their studies (MAB, 2009) they encounter *privileges* for big consumers such as *electro intensive exporters*, who pay only 10% per KW while the people have to pay a 100% of the fare. MAB explains that the fear of an *energy crisis* has nothing to do with the amount of energy generated, but how the energy is used. Therefore, they fight for energy for the people and against the electro intensive exporter model, since it brings no benefits to the nation.

As an example, the Sobradinho Hydroelectric Power Plant was built over 30 years ago, but the local people still have limited access to energy (60%). They explain that most of this energy will be exported in form of primary metals used to supply developed countries industries, leaving only *human rights violations* and *environmental degradation* for the local communities and, ultimately, to Brazil.

Regarding Belo Monte, MAB coordinator Soniamara explains: “Belo Monte will be connected to the national energy system and its energy sent to Peru. Who will profit the most are great mining companies who supply the production of other countries. It is possible to built smaller dams, which local municipalities could help in the administration of the project.” [translated by the author]

Movement Xingu Forever Alive (Xingu Vivo)

The biggest coalition of social organisations against Belo Monte englobes many small regional actors and is supported by bigger organisations such as MAB, the Pastoral Land

Commission, Movement of Unemployed Workers, Workers in Education Syndicate and the Missionary Indigenous Council, the latter figuring as a major player.

Xingu Vivo claims the uniqueness of the Xingu basin, with its biodiversity, protected areas, ethnic diversity and love of the people for the land and see Belo Monte as a “*death penalty for Xingu and its inhabitants*” (Xingu Vivo, 2010) [translated by the author]

They show disappointment with the way the Federal Government has been conducting the case, specially how they felt *betrayed* by the popular government of Lula and Dilma (a government that some of them even helped to built since the beginning of the Brazilian Workers Party), which had the chance to end Belo Monte forever, but instead made the project a *priority of the PAC*, submitting to a desire of the *international capital in spite of the people* who elected the government. They always remember how Lula said that Belo Monte would not come as an *unilateral decision*, but that was exactly what happened.

“Lula gave his word that the federal government would not ‘put Belo Monte down the throat’ of indigenous people, social movements and other brazilian groups.” (Xingu Vivo, 2010)’. [translated by the author]

For the president of the Missionary Indigenous Council, Erwin Kräutler: “To Dilma, Belo Monte was never an issue to be treated with social movements or the direct affected population. (...) The government continuous defending big land owners and the privileges of the agribusiness against indigenous communities. (...) The steamroller will continue to run over all of us here in the Xingu and soon will run over the Tapajós community and other amazonian rivers”. [translated by the author]

Finally he states: “Lula runs the risk of going down in history as the great predator of the Amazon and as the gravedigger of the indigenous peoples living along the Xingu river”.

The Federal Prosecutor’s Office (MPF)

Maybe the most effective actor against Belo Monte, the MPF is the legal watchdog of the whole process. Even before the initial EIA studies, the MPF has been attacking the project with

legal actions based on the federal constitution or cases of administrative misconduct taken by the state in order to accelerate (or even skip a few steps of) the legal process. Many of MPFs actions and the whole battle between the state and MPF became feedstock to opponents of the project as an example of lack of democracy on the implementation of Belo Monte. Looking back at the Chronology of Belo Monte (page 34) the MPF's relevance becomes clear.

The main points stressed in their actions are: *irregularities on the legal process; administrative misconduct; unconstitutional actions; deprivation and violation of rights and ethnocide.*

In an interview (after an inspection with affected communities coordinated by the MPF) in 2015 the federal prosecutor Thaís Santi explains: “The reality of the region was not investigated, is not being respected and now is hindering people of continue exercising their traditional lifestyle. How is it possible that a fisherman born and raised near the river, and wants to remain a fisherman, is relocated to a roadside of the Transamazônica [the amazonian highway]? Nobody is relocated to riverine areas”. [translated by the author]

About the same report, Federal Prosecutor Felício Pontes Jr. says: “The situation that we saw was of people being humiliated, violated and affronted by the proponents, turning Belo Monte into one of the worst examples of dam implementation in the country. The violations verified by us are even more severe than in other dam projects dated from the military dictatorship times. One can not simply destroy the way of life of entire traditional communities, terminating traditions, knowledge and livelihoods of these people”. [translated by the author]

The Academia

The second watchdog works in partnership with the MPF and the NGOs, they complement each others actions. The Academia has played the role of inspector of all data produced by the proponents, many times finding lacks that would be latter used by the other contrary groups.

Extremely relevant to the discussion is the Panel of Specialists elaborated after the EIA was released. The panel critically evaluates the EIA and based on it the MPF even demanded that a new one was necessary due to the inaccuracies of this document.

The most relevant arguments brought by the Academia are:

Efficiency: it is stated that Belo Monte will generate 11233 MW, but during the 8 months of dry season the generation will be roughly 10% of that, bringing the average generation down to 4428 MW, 39% of the stated maximum capacity, compromising its efficiency as a hydroelectric power plant. (Panel of Specialists, 2009).

Consequences of low efficiency: In order to increase the efficiency of Belo Monte a much higher supply of water would have to be ensured during the dry season to regulate the flow rate. It would only be possible with the construction of other three dams upstream in the Xingu river. (Panel of Specialists, 2009).

Number of affected people: because Belo Monte will redirect a great portion of Xingu River's flow, many people will be left without water, instead of being flooded and if those people were considered as directly affected, the number will double up to 40 thousand. (Panel of Specialists, 2009).

Financial engineering: Belo Monte is a very inefficient project and therefore the private sector would not be interested in it if a huge financial engineering were not orchestrated by the state. Part of this is the BNDES grant for up to 80% of the costs of the project and the compromise made by Eletrobras (energy public owned company) to buy 20% of the energy at R\$ 130,00/MWH, 70% more expensive than the value agreed on the bidding. (Bermann, 2012).

Greenhouse gases emissions: water energy is usually seen as green energy, but in the case of mega dams in the amazon, the forest's methane generation under the lake (a greenhouse gas 25 times more impacting on global warming than CO₂) could emit more greenhouse gases than gas-powered plants. (Panel of Specialists, 2009).

The True Costs of Belo Monte: altogether, scientists conclude that the true social, environmental and economic costs of Belo Monte far exceeds the ones admitted by the proponents

(Panel of Specialists, 2009). Based on these data, NGOs started to say that "no one is in condition to quantify its true costs" (International Rivers, 2009).

7.3 The Unstable Discourse

FORT Xingu

FORT Xingu stands for Regional Economic and Socio Environmental Forum of the Transamazônica and Xingu. This coalition is composed by medium and smallholders, mainly local entrepreneurs seeking *business opportunities*, but also a few christian, syndical and neighbourhoods organisations that sees Belo Monte as an opportunity for bringing important *infrastructure development* for the region joined this organisation.

In 2010, when the project was still going through the legal process, FORT Xingu presented itself as a strong ally of Belo Monte proponents, sending supporting letters to the government and being in touch with Norte Energia.

In May 2011, after the polemic Partial Installation Licence and before the definitive Installation License, the group was worried and made pressure on the government to allow the construction to start. This pressure is justified because many entrepreneurs had already made investments counting on the new situation of construction of Belo Monte and feared bankruptcy if the project did not start soon.

In July 2012 the situation changes. Unsatisfied with Norte Energia's negligence on starting the infrastructure works even after one year of construction, FORT Xingu public accuses Norte Energia and the government of *forgetting the people* while making the situation of Altamira and region worst than ever due to the number of people brought to the region and their *indifference* on taking responsibility for their actions.

Finally in 2013 the coalition make their last attempts to force Norte Energia to comply with their obligations with local communities. They complain about systematic contracting of non local

services for Belo Monte, *disregarding local entrepreneurs*, hindering them to be part of Belo Monte beneficiaries.

“Until now [two years after the initial works] the consortium Norte Energia [...] didn’t even start the infrastructure works of Altamira. [...] Although on time with the Belo Monte schedule, Norte Energia is still very late with the removal process of the families who live along the marginal rivers and should receive new houses in good structured neighbourhoods. Until now, no family was removed and according to the schedule there will be no time to remove the five thousand families from the area before the reservoir is filled. [...] The society of Altamira always defended the construction of Belo Monte, for understanding it as a *driver for regional development*. But we cannot accept that, more than two years after the initial works, the city is still completely unstructured, overpopulated and with intensified traffic, overloading the local government and becoming a real chaos for the population. It is *unfair* that society suffer the *negative consequences* of Belo Monte while the promises are not fulfilled. [...]” (FORT Xingu, March 2013). [translated by the author]

Indigenous Communities

These communities organise themselves in tribes and decisions are taken together in their own instances, sometimes influenced by relations with the governmental agency FUNAI or Norte Energia. Each tribe has its own positioning and depending on the situation and the kind of agreement that they can get, end up deciding to be in favour or against the project (Fleury and Almeida, 2013).

Before the initial works they had a more strong position against the project, even threatening to start a *war* that would transform Xingu into a “*river of blood*” (Amazon Watch, 2010).

As stated by a federation of 14 brazilian ethnic groups in 2009: ”We are demanding the government definitively cancel plans for this hydroelectric plant. If it decides to begin work on Belo Monte, the Xingu Indians will respond with ‘warlike actions’” (International Rivers, 2009).

But with the construction near its completion they never went to war and are now in a state of helplessly, as this interview with an indigenous man of the Xingu shows:

"We also asked for speedboats for fishing, although the water is murky and dirty, we don't have sanitation. [...] We have customers for our products, but we don't have any means of transport, because we won't be able to use boats anymore" (Amazon Watch, 2015).

Riverine Communities, Fishers and Peasants

The last group of the case resembles the indigenous in many aspects, but with a lower level of organisation. They present themselves as heterogeneous and inconstant regarding their positioning to the project, their opinions are likely to change very quickly, they feel threatened by Belo Monte, but see an opportunity of closing a deal with Norte Energia that could give them access to great sums of money in exchange of their lands and rights. In their internal meeting they always update who still *resists* and who *gave up* (made a deal) (Fleury and Almeida, 2013).

In many ways they are the most vulnerable group of all, for being directly impacted by the works/lake, not having an organised representative structure and lacking the appeal of the indigenous as traditional communities, they are constantly frustrated with their inability to influence this process, in the end they just try to save themselves.

"If I hadn't learn to work as mason I would be starving right now. Life has gotten worst to everyone, we are all impeded to fish". Says Hélio, a fisherman who was relocated by Norte Energia. (Xingu Vivo, 2015). [translated by the author]

"One thing is to see the blueprint, a completely different thing is to see the resettlements with my own eyes. This gives me much more confidence towards the project" Says Djailson Bologna on a visit to the new settlement constructed by Norte Energia for him as part of the mitigation plan. (Norte Energia, 2015). [translated by the author]

8. COMPETING DISCOURSES ON BELO MONTE

8.1 Qualitative Selection

At first a qualitative selection of the most emblematic statements of each actor will be organised, in order to highlight metaphors employed by each polarising discourse.

Pro

The most recurrent statements of the Pro discourse are:

- clean and renewable energy;
- development; investments and structural works (regional and to Brazil);
- electricity security; energy crisis;
- innovation; technology
- international competitiveness; export products with aggregate value;
- job generation; generating wealth;
- sustainability; fight global warming;

In response to attacks suffered from the Contra discourse the following statements appeared:

- Belo Monte was never Kararaô [associated with the military dictatorship];
- conservative and retrograde discourses; or demoniac forces [against the project];
- construction of: schools, health centres, hospitals, public sanitation, habitation, security equipments, urbanisation and development of the regional production;
- lack of information; constructed fantasies;
- reduction of environmental impact;
- respect towards traditional communities;
- social and economic inclusion;
- talk first; deep dialog;

Contra

The most recurrent statements of the Contra discourse are:

- catastrophe; destructive projects; unsustainable
- development model; electro intensive exporters; energy crisis; priority of the PAC; international capital in spite of the people; transform the Amazon rivers in megawatts mines;
- ethnocide of indigenous and local communities; death penalty for Xingu and its inhabitants; the gravedigger of the indigenous peoples; the great predator of the Amazon;
- fallacy; protection of environment and minorities; nuisance; mitigation;
- irregularities on the legal process; administrative misconduct; unconstitutional actions; deprivation and violation of rights;
- obsession; development needs; profit-driven goals;
- participation; people's voice, dictatorial; lack of discussion; unilateral decision; down the throat;
- privileges; mega corporations; transnationals; great mining companies; dam industry;
- reckless; serious assessments; inaccurate data; environmental degradation (greenhouse gases);
- true costs; corruption; environmental costs; financial engineering; low efficiency;
- unfair; human rights violations; betrayed; steamroller; affected people;

Unstable

The most recurrent statements of the Unstable (when Pro) discourse are:

- development; business opportunities; infrastructure; driver for regional development;

The most recurrent statements of the Unstable (when Contra) discourse are:

- indifference; forgetting the people; disregarding local entrepreneurs; on time with the Belo Monte schedule but very late with the removal process;
- resists; surrenders;
- river of blood; warlike actions;
- unfair; negative consequences;

8.2 Considerations about the Unstable Discourse

Although not completely fitting in any of the two polarising discourses, it is clear that this is not third polarisation, but a group that has no fixed opinion about the case. These actors are local communities affected by Belo Monte, and their opinion towards the project changes according to how the case is being conducted at their doorsteps and the perceived benefits they can get from it.

The case of FORT Xingu is revealing. They are an organised coalition of entrepreneurs who had no voice in the legal process of Belo Monte, but happened to be close to the construction site. At first (2010) they were supporters of the project, pressuring the government to authorise the construction. They were excited with business opportunities and infrastructure promises made by Norte Energia, but as time went by and their profit goals were not met, nor the promises fulfilled they started to pressure Norte Energia to hire local enterprises instead of companies from other states and to start the infrastructure works. In 2013, before the coalition disappears, FORT Xingu discourse's resembles a lot the Contra discourse.

Concerning traditional and local communities, because they have a lower (if any) organisational level, it is extremely hard to find first hand statements from them. Their stories are usually told by other actors with accordingly perspectives. For example, the MPF shows a very negative local community's perspective towards the project, meanwhile Norte Energia has interviews where the same communities have positive things to say about Belo Monte and the mitigation actions.

Their opinions also seems to depend on the kind of agreement that each individual, household or tribe can get with Norte Energia in exchange for their lands. But regarding indigenous communities, it is safe to say that although still a little volatile on their opinions, they are the ones who had a more clear and stable Contra discourse.

Altogether, it seems that both local and indigenous communities are initially Contra and only surrender for an agreement if they become hopeless and have the chance to make a deal with Norte Energia.

8.3 Phenomenal Structures

Interpretational Repertoire	Pro Discourse	Contra Discourse
Casual Links	<p>Belo Monte is a grandiose project able to combine economic development, social responsibility and environmental protection while generating clean/renewable energy for Brazil</p> <ul style="list-style-type: none"> - Investments to avoid an energy crisis - Job/Wealth generation, social inclusion - International competitiveness - A sustainable project that fights global warming 	<p>Belo Monte is a destructive project designed to meet an unsustainable development model that only interests a few sectors of society</p> <ul style="list-style-type: none"> - true costs are unknown - ethnocide - privileges a handful of transnationals leaving only negative effects for the local people - social and environmental catastrophe
Responsibility (Competence)	<p><u>Politics</u>: The State ensures energy security and sustainable economic development for Brazil and the Amazon</p> <p><u>Society</u>: must understand that critics come from conservative and retrograde groups trying to pull Brazil down</p> <p><u>Market actors</u>: great construction and engineering companies are responsible for implementing the project and invest in socio environmental mitigations</p>	<p><u>Politics</u>: Government is obsessed with Belo Monte, leading and financing an undesirable project in a reckless and dictatorial way</p> <p><u>Society</u>: needs to monitor and pressure the government in order to stop Belo Monte</p> <p><u>Market actors</u>: the dam industry influences the government (supposedly by corruption) and will be the biggest beneficiary of the project</p>

Required Action/ Problem Solution	<p>Reformulate the blueprint in seek of solutions that will ensure maximised bonuses and minimised onuses</p> <p>Measures:</p> <ul style="list-style-type: none"> - Deep dialog with society about the project ensuring participation of all actors involved - Respect, mitigation and compensation plans towards affected communities - Environmental protection through reduction of the size of the lake 	<p>Stop Belo Monte and re-discuss the brazilian development model</p> <p>Measures:</p> <ul style="list-style-type: none"> - Prioritise electricity for the people instead of the electro intensive industry - Stop expanding the electro intensive sector in order to control the electricity demand - Make investment in the distribution net to make the transmission more efficient, i.e., enhancing the offer without new dams
Self-Positioning	<p>The main enthusiasts and drivers of the Brazilian sustainable development</p>	<p>Promoters of a truly democratic, responsible, ecologic and socially fair development model</p>
Other-Positioning	<p>The Contra group is uninformed and their arguments based on constructed fantasies, thus they are unable to clearly access the benefits and see the true face of Belo Monte</p> <ul style="list-style-type: none"> - Not undertaking this project would be a huge irresponsibility that would endanger Brazil with a blackout and leave the country technologically behind 	<p>The Pro group has the big capital's voice, but the appearance of the democratic State</p> <ul style="list-style-type: none"> - State acts against society's will in order to fulfil profit-driven goals and privilege mega corporations - Mitigation plans and worries towards the environment and traditional communities are just a rhetoric fallacy
Value Reference	<p>The proponents are safeguarding the economy, employment, energy generation and international competitiveness, all in a sustainable and socially responsible way</p>	<p>The Contra group is interested in the well being of traditional communities and environment. They propose a different development model that can truly conciliate economic development and sustainability</p>

Table 2: Phenomenal Structures of the Pro and Contra Discourses of Belo Monte

8.4 Interpretative Schemes

Based on the phenomenal structures of the last section and the four guiding questions explicit in the methodology, interpretative schemes (or frames) can be identified.

Interpretative Schemes of the Pro Discourse

Hydroelectricity is a clean and renewable energy, thus sustainable.

In a world where climate change, CO2 emissions and oil based energy generation are seen as villains, a logical conclusion is that renewable energies are the heroes. While many countries have no other energy option other than coal, Brazil is in a privileged position, having one of the worlds greatest hydroelectric potentials in the Amazon, yet to be explored. Taking advantage of it, Brazil positions itself as an environmental leader, having almost half of its energy matrix based on hydropower, therefore, clean and renewable energy.

In that sense, sustainability is defined as an environmental factor. It can be reached by the intelligent use of this potential in the Amazon, perceived as a clean and renewable energy source.

Beyond the sole clean generation of electricity, Belo Monte also reduced it's lake, an optimisation designed to protect the environment and traditional communities, turning Belo Monte into a social and environmental success, thus sustainable.

International competitiveness, energy security and investments for the region, Belo Monte is development for Brazil.

The energy generated in Belo Monte has two main goals:

Protect Brazil from an energy crisis: a period of energy shortage already happened in 2001. Since then the brazilian energy demand increased, increasing the danger of a new crisis, thus Belo Monte is a necessary investment.

Keep the country competitive in the international arena: this project is crucial for the Brazilian industrialisation, since it will supply the base industry withs cheap energy, making room for development, also technological. As the president said: “Instead of exporting iron ore and buying chips, we will export product with aggregate value” Lula, 2010. [translated by the author]

Apart from these goals, Belo Monte has other positive side-effects: the construction and operation of the dam will employ thousands of brazilians, bring new infrastructure to the region and create business opportunities for many local entrepreneurs, generating wealth for the region.

Belo Monte is the face of sustainable development.

Finally, the pro discourse combines the other two interpretative schemes above to elaborate this last frame.

The first frame explains how sustainability is perceived and how Belo Monte fulfil the criteria. Meanwhile the second justifies the need for energy generation and the positive side effects for the construction of a large dam. Together these two frames combine sustainability and development relating it to Belo Monte. Going further, the fact that this is a priority of the government, receiving massive investments from the BNDES gives the project national and sometimes international projection, therefore it is used as a slogan of the brazilian commitment to sustainable development.

Interpretative Schemes of the Contra Discourse

Sustainability is a much broader concept

For the proponents, sustainability is oversimplified. They focus their discourse in the sole aspect of electricity generation based on water, as if water goes in, generates energy, goes out and nothing happens. In their assessments important social and environmental aspects are ignored such as externalisations, the real impacts of large dams, the social chaos created by a sudden migration

(traffic, prostitution, pressure over sanitation and other resources, housing), impacts to traditional communities who need to be relocated and how a massive project like that can interfere in the hydrogeological cycle of the river. Therefore it becomes clear that the true costs of this project were not assessed, making it a fallacy that this is a sustainable project just because it is based on hydropower.

Development for the Elite, Discourse for the People

Belo Monte certainly generates development, but who will truly benefit from this project are just a handful of transnationals in charge of constructing and operating the dam, some corrupt politicians that facilitated the legal process, mining companies that will use the cheap electricity to melt metal and developed countries that will enjoy cheap primary metals.

The discourse that this is energy for the people is merely rhetoric since in the history of the Brazilian dam industry the same discourse has been employed several times and the negative consequences are always left for the local population to, unassisted, deal with, sometimes in the dark.

The kind of development generated by Belo Monte is based in a socially unfair and environmentally irresponsible development model.

Steamroller in the Amazon, a Green Washed Catastrophe

Combining the two previous frames it becomes clear that in the Contra perspective the elites are saving no efforts to take the project out of the blueprint.

They are doing it by producing low quality documents and pressuring governmental agencies to authorise the construction. Meanwhile, in the discursive battle, the real intentions with the project are hidden and the focus remains on benefits for the people based on false, oversimplified, overoptimistic or frightening arguments to make the project seem sustainable, ethical or indispensable while ignoring or disqualifying contra arguments. Therefore Belo Monte is

a constantly green washed catastrophic project that the Contra coalition (the true voice of democracy and the people) repeatedly tries to unmask.

8.5 Storylines

Based on the interpretative schemes of the last section and the two guiding questions explicit in the methodology, storylines can be identified.

Pro: A Sustainable Solution for Brazil and the Amazon

With the 2001 energy crisis, the always increasing energy demand and a more competitive international marked, Brazil needs to make strategic investments to keep the nation economic stable. To ensure progress and energy security, politicians together with great construction and engineering companies decided to seek solutions for the problem in a social and environmentally responsible way. In order to increase the productivity of the base industry and guarantee electricity supply for brazilian households, Belo Monte (a well-designed hydroelectric power plant) will combine electricity generation for millions of people, job creation and investment to the Amazon with clean and renewable energy, furthermore it proves the brazilian commitment to sustainable development. Unfortunately there are conservative and retrograde groups disseminating false information about the project, generating national and international unrest. They are a threat to national development, trying to bring Brazil back to the stone age. It is important to make people understand that hydro energy is much better than other alternatives, it is a sustainable way to generate energy, ensuring a better future for the people.

Contra: A New Development Model for the Amazon

The battle against Belo Monte and other mega dam projects in the Amazon is not new. Since the eighties, social and environmental movements have been actively opposing the construction of these giants. With the election of Lula (Labour Party), many groups thought that these projects were finally buried, but they were soon surprised with Belo Monte's return. The project ran over many

environmental laws in a very troubled legal process, where important actors (such as indigenous communities, the Academia and the Federal Prosecutor's Office) were ignored. Altogether the whole process was conducted by the Government in a reckless and dictatorial way, most likely honouring secret agreements with transnational companies interested in the project. It is necessary to stop the project as soon as possible and nationally re-discuss the development model designed for the Amazon. The way "progress" has been conducted there was at the expense of losing forests and ethnicities while generating unaccountable environmental impacts, human rights violations and privileges only to a very small sector of society.

Finally, inspired by Bern and Winkel (2013), the major aspects of the discussion were condensed in a graphic way to explicit the antagonistic positions of both groups, as showed in the next page:

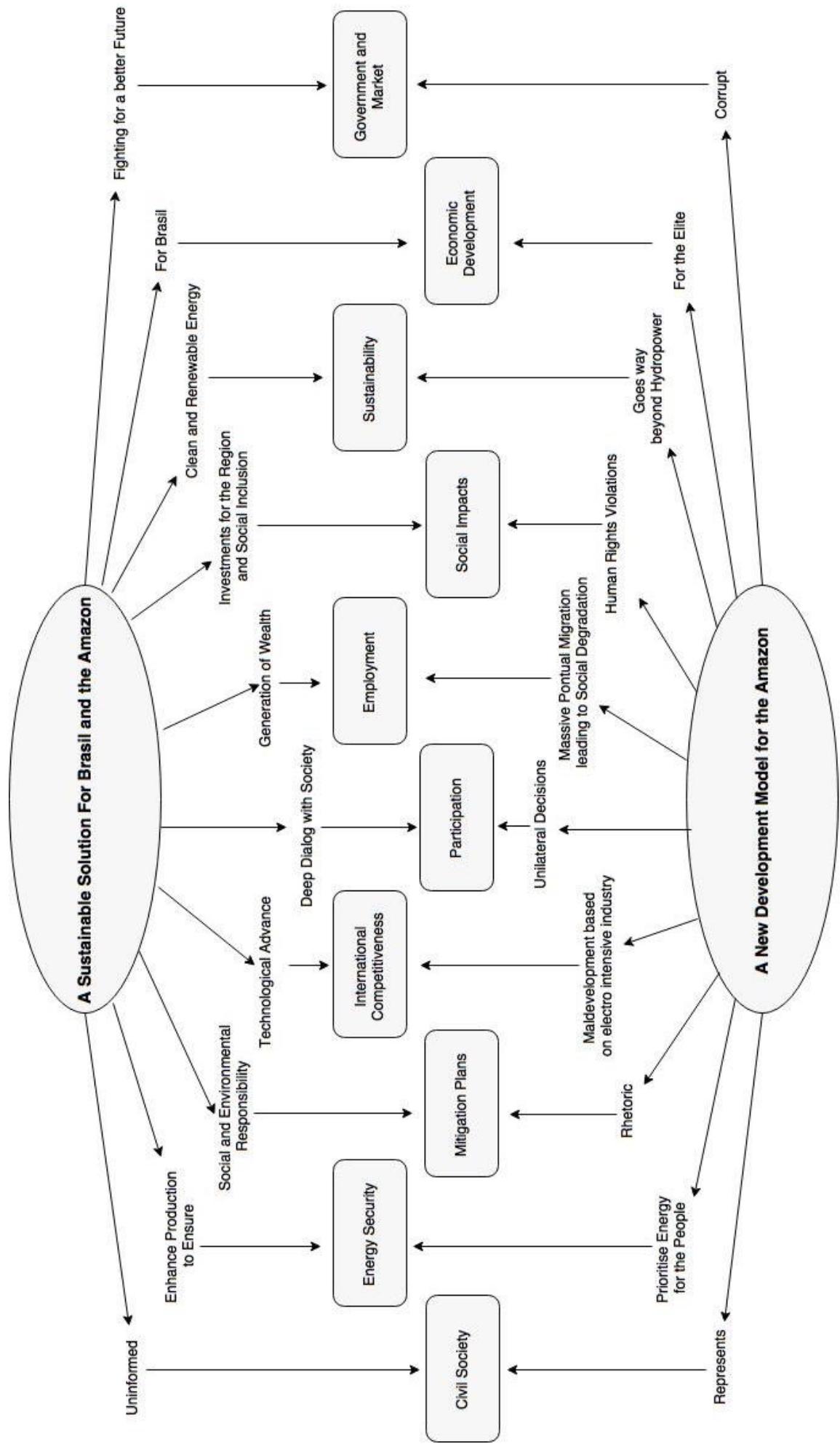


Figure 5: The Discursive Battle on Belo Monte (made with draw.io)

9. CONCLUSIONS

At the end of the study the research questions are revisited and answered.

The first question was about identifying the actors that constitute the expected Pro and Contra discourses and their arguments. Although a simple question, it took a lot of research and analysis to proper characterise all the actors. This question was essential, because it served as a basis on which it was possible to built up the discourses of both groups and rearrange the expected Pro and Contra group in an iterative process of data sampling and analysis. This characterisation also came up with a surprise, an Unstable group that was not foreseen.

The second question asks about a shift in the polarising discourses. This shift does happen, but not as explicit within the discourses, the shift appears on the actors level and there are a few considerations to be made within this regard:

Government: while the governments intentions regarding Belo Monte never changed, the discourse shifted with time. From 2003 to 2006 the discourse was focused on the need to discuss Belo Monte with all the involved actors in a democratic process, but at the same time the project rapidly advanced in the legal stages with an absence of discussion. In Lula's second term (2007-2010) the discourse changes and becomes more focused on developing Brazil, including Belo Monte in the PAC. Finally, when Dilma is elected, the discussions about Belo Monte vanish while the construction begins.

It is also interesting how the discourse of the Labour Party changes when they reach the presidency. Before 2003 they were much more critical to projects like that than after the election, raising questions about how old structures and corruption can influence politics.

Regarding to **Norte Energia, the NGO's, the Academia, MAB, Xingu Vivo and MPF**, as expected, they maintained their positions Pro and Contra the whole time, being the foundations on which the discourses were fragmented and reconstructed.

Due to their specificities, **local communities and indigenous tribes** ended up being two of the three Unstable groups. Although unexpected it is understandable that they have a volatile position. Since they are Belo Monte's most affected groups, it is clear why they are eager to change

sides if they see an advantage on doing that. Furthermore, the fact that they have limited access to media makes their voice more subjected to mediatic manipulation.

Interesting to notice is how clear is the opposition of both discourses regarding almost all aspects of the discussion. Nearly all subtopics were interpreted in totally antagonistic ways, making Belo Monte simultaneously the cause and the solution for all issues discussed, depending only on the self positioning of the actor.

Finally, the biggest surprise of this study was the coalition of entrepreneurs **FORT Xingu**, who started as Pro and within three years changed its discourse, becoming more similar to the Contra group. This was the most revealing fact of this study, since it can be easily interpreted as a corroboration of the Contra discourse accusations.

Considerations on biases within this study

For a SKAD analysis to be made successfully it is necessary that the author remains as impartial as possible, but that does not mean that he or she has no previous positioning regarding the object of study. In my case, I position myself against the construction of Belo Monte, and that is not optimal, since the elaboration of the basic structures of this study (phenomenal structures, interpretative frames and storylines) draw from a scientific foundation with a considerable degree of subjectivity (since the researcher have to chose the most important aspects and restructure them to rebuilt the discourses). This makes it really hard to ensure that my previous conceptions would not interfere in the analysis and its results.

Thus, I had to make an effort to analyse the discourses solely based on the texts that I read during the research period. Nevertheless, at the end of the study I came to the “impartial” conclusion that there really is more behind the Pro discourses than it is actually said. This conclusion is mainly based on the suspicious change of the Labour Party after the presidency and the way that FORT Xingu became more of a Contra group after a few years of Belo Monte’s construction. Nevertheless, I cannot help but to ask myself until how extend my pre conceptions influenced this study and its conclusions.

Given the limitations of the SKAD method to avoid biases, it would be interesting to see the same research being conducted by someone initially in favour of the construction of Belo Monte and see if the same “impartial” conclusions would appear. Alternatively, a comparison between the current discourses on mega dam projects and their actual impacts seen elsewhere (the binational mega dam Itaipu, for example) could be even more revealing.

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APPENDIX: Primary Data Sources

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