

The open veins of the Xingu River's Big Bend

Analysis of the impacts of the Belo Sun mining company in a region already affected by the Belo Monte hydroelectric dam

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Chapters

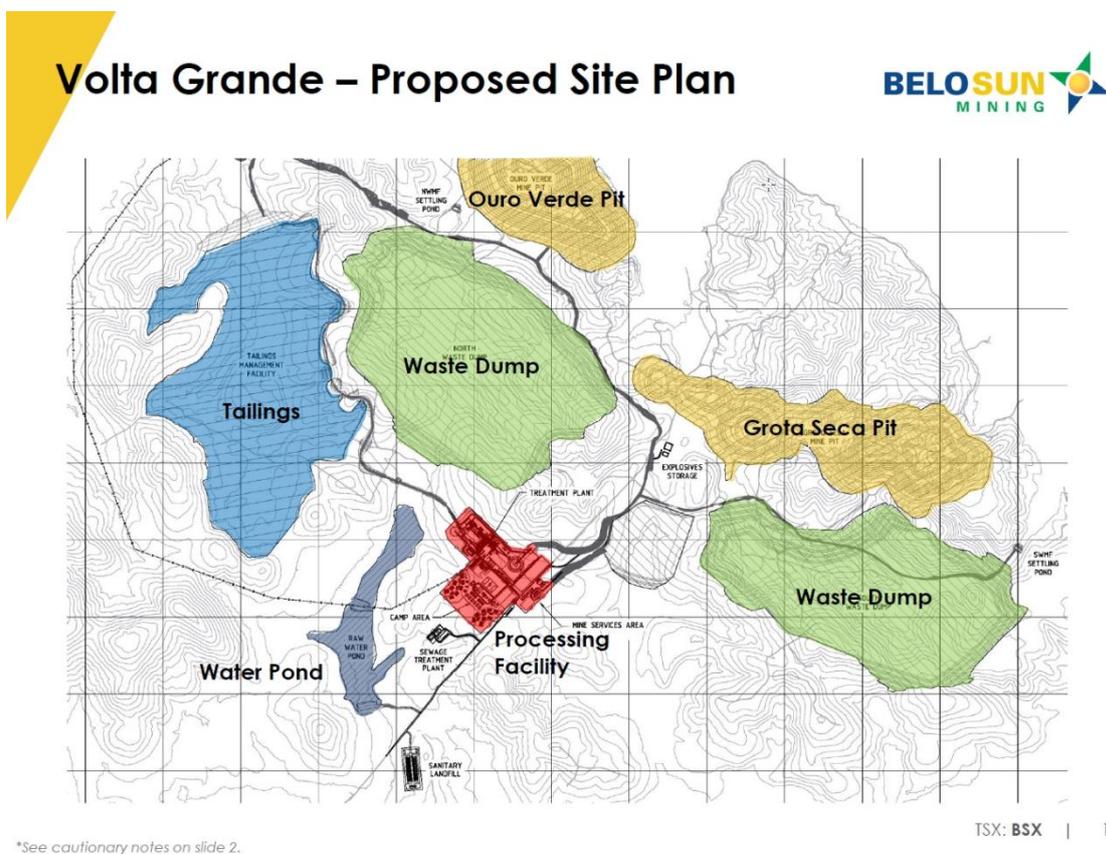
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Acronyms

- ACP – Ação Civil Pública (Public Civil Legal Action)
- CNDH – Conselho Nacional de Direitos Humanos (National Human Rights Council)
- DNPM – Departamento Nacional de Produção Mineral (National Mineral Production Department)
- DPE – Defensoria Pública do Estado do Pará (Office of the Public Defender of the State of Pará)
- ECI – Estudo do Componente Indígena (Study of the Indigenous Component)
- EIA – Estudo de Impacto Ambiental (Environmental Impact Study)
- FUNAI – Fundação Nacional do Índio (National Indigenous Agency)
- Ibama – Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute for the Environment and Renewable Natural Resources)
- Incra – Instituto Nacional de Colonização e Reforma Agrária (National Land Settlement and Agrarian Reform Institute)
- ISA – Instituto Socioambiental (Socio-environmental Institute)
- MPF – Ministério Público Federal (Office of the Federal Public Prosecutor)
- MP-PA – Ministério Público do Estado do Pará (Office of the Public Prosecutor of the State of Pará)
- MXV – Movimento Xingu Vivo (Xingu Alive Movement)
- Semas – Secretaria de Estado de Meio Ambiente e Sustentabilidade do Pará (Environment and Sustainability Department of the Pará State Government)
- TI – Terra Indígena (Indigenous Land)
- TJ-PA – Tribunal de Justiça do Pará (Court of Justice of the State of Pará)

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1. Mine infrastructure and surroundings



The Xingu River basin, which has been featured in the world news in recent years due to the construction of the Belo Monte hydroelectric dam in the municipality of Altamira in the state of Pará, has now become the site of another venture that could potentially generate huge new impacts on the region's peoples, forest and waters.

The Volta Grande Project refers to one of the most emblematic stretches of the Xingu River, its Big Bend, or 'Volta Grande,' as we call the region here. It forecasts the implantation of the largest open cast gold mine in Brazil. Belo Sun Mineração Ltda., a subsidiary company of the Canadian mining corporation Belo Sun Mining, has announced intended investments to the order of 1.22 billion Brazilian Reals (approximately US\$ 388 million).

The venture has been in the making since 2012 in the municipality of Senador José Porfírio, which has a population of only 12 thousand inhabitants. The area encompassing the mineral deposits has already

been acquired and a camp has been established at the site with 38 employees serving as the company's operational base. Belo Sun expects to extract 73.7 tons of gold in 12 years of operations at the site.

The head of the Environment Department of the Para State Government (SEMAS) issued a preliminary license for the venture in 2014 and an installation license in 2017, but a succession of legal actions and court decisions has suspended the second license and paralyzed project operations.

The Office of the Public Defender of the State of Para (DPE) and the Office of the Federal Public Prosecutor (MPF) have identified a series of risks associated to the Belo Sun project and called on state and federal courts to intervene. On one hand communities of artisanal goldminers, riverside dwellers, rural land squatters and agrarian reform project settlers would have to be relocated to other areas. On the other, there is concern about the social and environmental impacts of the project on two indigenous lands in the vicinity: the *Paquiçamba* Indigenous Land and the *Arara da Volta Grande do Xingu* Indigenous Land, as well as to other indigenous people living outside of indigenous villages and territories.

This concern extends to the sorts of new impacts that this initial industrial mining project in the Volta Grande region may bring to an ecosystem already considerably altered by the Belo Monte dam.

In October 2016, the Brazilian National Human Rights Council, a body associated with the Federal Government, evaluated various denunciations of violations of the rights of people residing in the region. After visiting the region, the Council issued a warning: the superimposition of impacts stemming from Belo Monte and Belo Sun could effectively render the Xingu's Volta Grande region uninhabitable.

The Council immediately recommended that Belo Sun should stop buying land in the region given the social and economic impacts that this process was generating. Later, in February 2017, the same body proposed that the Pará government suspend the venture's installation license. However, this did not happen.

Another notable impact has been displacement of artisanal mining activities. The company has bought areas where small-scale autonomous gold miners have worked for decades in “sharing” agreements with the owners of the land where mining takes place. Belo Sun’s land acquisitions have put an end to all such activity.

The way of life for people living in the Xingu basin has been gradually transforming for years, first due to the Belo Monte project and now due to Belo Sun. The Xingu basin comprises 509,000 km² (equivalent to 40% of the state of Pará), and the river’s waters flow from south to north. The headwaters are in the Chapada dos Parecis mountains in the state of Mato Grosso. To the west the basin is bordered by the Tapajós River basin and to the east by the Araguaia and Tocantins basin.

Some of the greatest impacts on the region have been caused by the Federal Highways BR-153, BR-158 and the BR-230 (the Trans-Amazonian highway), which are the main transportation routes for the production of logging and ranching activities in municipalities such as São Félix do Xingu, Novo Repartimento and Novo Progresso.

Despite degraded road condition in various stretches, this infrastructure stimulates speculative depredation, illegal logging and mining activities, the installation of large beef production companies and the conversion of forests to make way for soy cultivation. Belo Sun’s Volta Grande do Xingu Project has now arrived, bringing new pressure upon the middle Xingu basin, which is already vastly altered by the construction of the Belo Monte mega-dam.

Based on geological studies, the project was divided into two sections, approximately 10 kilometers apart: the Northern Block and the Southern Block. Belo Sun plans to mine gold in the area for at least twelve years, followed by two years to shut operations down and eight years of monitoring.

The Belo Sun project plans two open cast pits: one named *Ouro Verde* (Green Gold) and the other *Grota Seca* (Dry Pit), each about 220 meters deep. The names were taken from two gold mines that formerly supported local artisanal mining operations. The company declares that it holds 20 mining authorizations covering an area of 103.354 hectares;

four valid applications for mining permissions covering an area of 2,356 hectares; 10 applications for mineral rights concessions on a total area of 23,208 hectares and another 8 applications for mining rights in public areas totaling 3,660 hectares.

Earth and rocks removed from the pit will be deposited in two piles inside the concession, one 195 meters tall and the other 210 meters tall. The project also foresees the installation of a tailings dam with a holding capacity of 35.43 million cubic meters. The tailings dam of the Fundão mine in Mariana, which burst in November 2015 causing the greatest environmental accident ever recorded in Brazil, had an official capacity of 2.65 million cubic meters of sand, mud and mineral tailings, but in reality 55 million cubic meters of waste was released when the dam burst, according to the Minas Gerais State Environmental Agency (*Fundação Estadual do Meio Ambiente de Minas Gerais* - FEAM)

In a technical note issued by Belo Sun in 2012, the corporation acknowledged some risks/dangers related to the operation of the tailings dam such as “overflows from the tailings dam and contention dykes due to influx of water greater than the dams holding capacity, bursting of the tailings dam or bursting of the tailings pipeline.” The same note stated that “the danger of the dam’s bursting has been defined as not very likely but having ‘catastrophic consequences’ if it does occur.”

In addition to the quantity of mining tailings, there is the question of the substances that could be contained in them. In Paracatu, Minas Gerais, where there is a large gold mining operation, local leaders and authorities mobilized with the MPF after obtaining data showing the presence of arsenic in the city’s drinking water. Arsenic occurs naturally in the rocks and soils of the region but the mineral processing operations have further dispersed it.

Studies conducted by Belo Sun identified the presence of arsenic, antimony, lead, copper and sulfur in the material analyzed in the region, occurring in concentrations it described as “sufficiently low.” In addition to their potential to contaminate the ecosystem, the presence of these elements could lead to increased use of cyanides in gold processing operations.

Cyanides are substances used in gold processing by a leaching method which most commonly used by the industry throughout the world. It generates sub-products that are highly toxic to human beings, fauna, flora, and water, which require rigorous monitoring and control that must continue long after the mine has closed. In twelve years of project operations, it can be estimated that approximately 10,500 tons of cyanides would be used.

The use of water in various stages of Belo Sun's gold mining operations is another controversy. Originally the company intended to use water taken directly from the Xingu River, however that idea was abandoned. This decision was taken to limit the cumulative impacts of Belo Sun and Belo Monte projects upon water availability in the Big Bend, but also to avoid having to involve the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) in the environmental licensing process, given that the Xingu is a river under federal jurisdiction.

Without the option of using river water, Belo Sun now plans to construct two tubular wells (one, already authorized with a with a flow rate of 4.25 m³/hour and another with a flow of 6.25 m³/hour) to guarantee water supply during the implantation stage of the mine. This potable water will be for workers' consumption.

There will be an additional demand for water for general purposes of up to 48.5 m³/hour. The plan is to capture surface water from the Itatá River, the Ressacão stream and another unnamed stream in the vicinity of the Grota Seca area. Up until July 2017 the environment department of the Pará State government had yet to issue any of the three authorizations required.

When the mine goes operational, water demand will soar to an average of 473.1 m³ per hour of which 56% will be new water and 44% recirculated water. To meet the expected demand, in addition to operating the two tubular wells, two artificial water retention ponds will be constructed with planned maximum capacities of 100 m³/hour and 115m³/hour to be filled by rainwater.

Even though the project will not draw water from the main river, its huge demand on water resources has alarmed the people who live in the

region. 473.1 m³/hour would be enough to supply a city of 45 thousand inhabitants. Representatives of social movements and the public authorities have warned about the risks of water contamination and bursting dams, while some have expressed concern that the explosions involved in the mining operations could affect Belo Monte's infrastructure.

Adhering to a public lawsuit filed by the MPF and the subsequent ruling of the Federal Court of Region 1 (TRF1) handed down in April 2017, the installation license and implantation of the mine have been suspended. The company has appealed this decision but this appeal has yet to be judged.

The court considers that the company presented an inadequate study to the National Indigenous Affairs Agency (FUNAI) marked by an absence of any data on the indigenous lands of the Juruna and Arara people, and that the company also failed to conduct the obligatory consultations with these communities.

The next section of this study will portray some of the communities directly or indirectly affected by the Volta Grande project, especially the small village known as Vila da Ressaca. The question of indigenous communities will be addressed in greater detail in the fourth section.

The Volta Grande Project

What it is	The first industrial open-cast goldmining project in the Big Bend region of the Xingu River
Location	Municipality of Senador José Porfírio, neighboring the municipality of Altamira in the state of Pará
Entity responsible	Belo Sun Mineração Ltda. Head offices in Alltamira, in the state of Pará Legally Constituted Entity, Tax Registration: CNPJ 02.052.454/0001-31 The company, founded in 1986 with the registered name of Verena, was bought by the Canadian company Belo Sun Mining Corp. in 2010, when the name was altered to the present name. Belo Sun Mining Corp. has been an open

	capital company since 1996 and its shares are negotiated on the Toronto Stock Exchange, the biggest mining stock market in the world.
Licensing Consultants	Brandt Meio Ambiente Ltda. Head offices in Nova Lima (Minas Gerais) CNPJ 71.061.162/0001-88
Installation investment	R\$ 1,223,847,940.00
Employees needed for implantation	1,100 workers
Employees needed for operation	Maximum of 526 workers
Timeframes	Implantation – 2 years Operation – 12 years (useful life of the mine) Closure – 2 years Monitoring – 8 years
Gold Deposits	Average gold content in the primary mineral deposit 0.5 to 25 g/t and in the secondary deposit 1.02 to 1.75 g/t.
Structures	The physical structures to be implanted will consist of: a landfill; two ponds to retain rainwater, one to the east and one to the west; a tailings dam; two open cast pits, Grota Seca and Ouro Verde; effluent treatment station; two overburden stacks, one at Grota Seca and one at Ouro verde; processing facility; electricity sub-station; accommodation for workers; internal access ways; refueling station; other support structures.
Pits	Two pits, Ouro Verde and Grota Seca, each 220 m deep
Overburden piles	Two piles: one at Ouro Verde up to 195 m tall and one at Grota Seca up to 210 m tall
Tailings dam	Capacity up to 35.43 million cubic meters
Metallurgical Plant	A plant capable of processing 3.6 million tons a year.
Processing technique	Leaching process using sodium cyanide
Demand for water during implantation stage	10.5 m ³ /h taken from tubular wells

Demand for water during operation stage	473.1 m ³ /h taken from two retention and recirculation ponds
Expected royalty and tax payments	R\$ 5 million a year under the heading Financial Compensation for Mining Exploitation (<i>Compensação Financeira pela Exploração Mineral</i> - CFEM); R\$ 19 million a year during implantation and R\$ 5 million a year during operation to the municipal authority of a Senador José Porfírio

*Data taken from the Executive Summary of the Installation License (Process 5340/2015), dated October 2016, and from the technical opinion document attached to the Installation License issued by the dated February 02, 2017

2. Affected Communities



The artisanal miners of Vila da Ressaca have been expelled (photo Verena Glass)

The map of the communities that the Belo Sun Mineração Ltda. Volta Grande project could potentially affect is naturally as diverse as the inhabitants registered as residing along this stretch of the Xingu River.

There are indigenous people, some living in indigenous villages and others not, small-scale farmers, artisanal goldminers, riverside dwellers, fishermen, and workers in general – all alerted to the risks and the promises of the first ever industrial mining venture in the region.

The epicenter of the Volta Grande project is what was formerly a settlement area under the auspices of the National Settlement and Agrarian Reform Institute (INCRA). The area, registered as *Ressaca*, was created in 1982 and comprises a total area of 30,265 hectares, where 481 families were formally settled.¹

Artisanal gold-mining activity in the region, whether conducted in the riverbed or on land, is unlike the similar activity in other regions of the Amazon insofar as it is conducted on a smaller scale and through associative arrangements, leading to far less environmental damage than is usually the case.

The work has enabled local miners to earn incomes that are relatively high by regional standards, with average incomes equaling four minimum salaries which in present day values would be around R\$ 3,748.00 (US\$ 1,180).

In the 1990s that favorable situation began to change as surface gold deposits gradually became scarcer. It eventually evolved into conflict in 2010 with the arrival of Canadian mining company Belo Sun Mining Corp., which purchased the Brazilian Verena company and the right to explore the claims of the local so-called “mine owners.”

As part of its bid to establish the Volta Grande project, Belo Sun also began to buy up plots of land around the artisanal mining areas maintained by the settlers. Eventually the project will occupy an area of around 1,400 hectares.

With the interruption of small-scale mining activities, many of the residents moved away and the small township of Vila da Ressaca lost its economic vitality. The speedboats that used to connect it by river with the city of Altamira have suspended their services and now the miners can be seen in the afternoon whiling away their time in desultory conversation in front of their houses.

Controversy flared up when it was announced that Vila da Ressaca residents might have to be resettled due to their settlement’s proximity to the Grota Seca pit, which is one of two sites planned for the Volta Grande project.

The plight of Vila da Ressaca residents and that of other communities in the vicinity of the Grota Seca, Ouro Verde and Galo mining areas came to

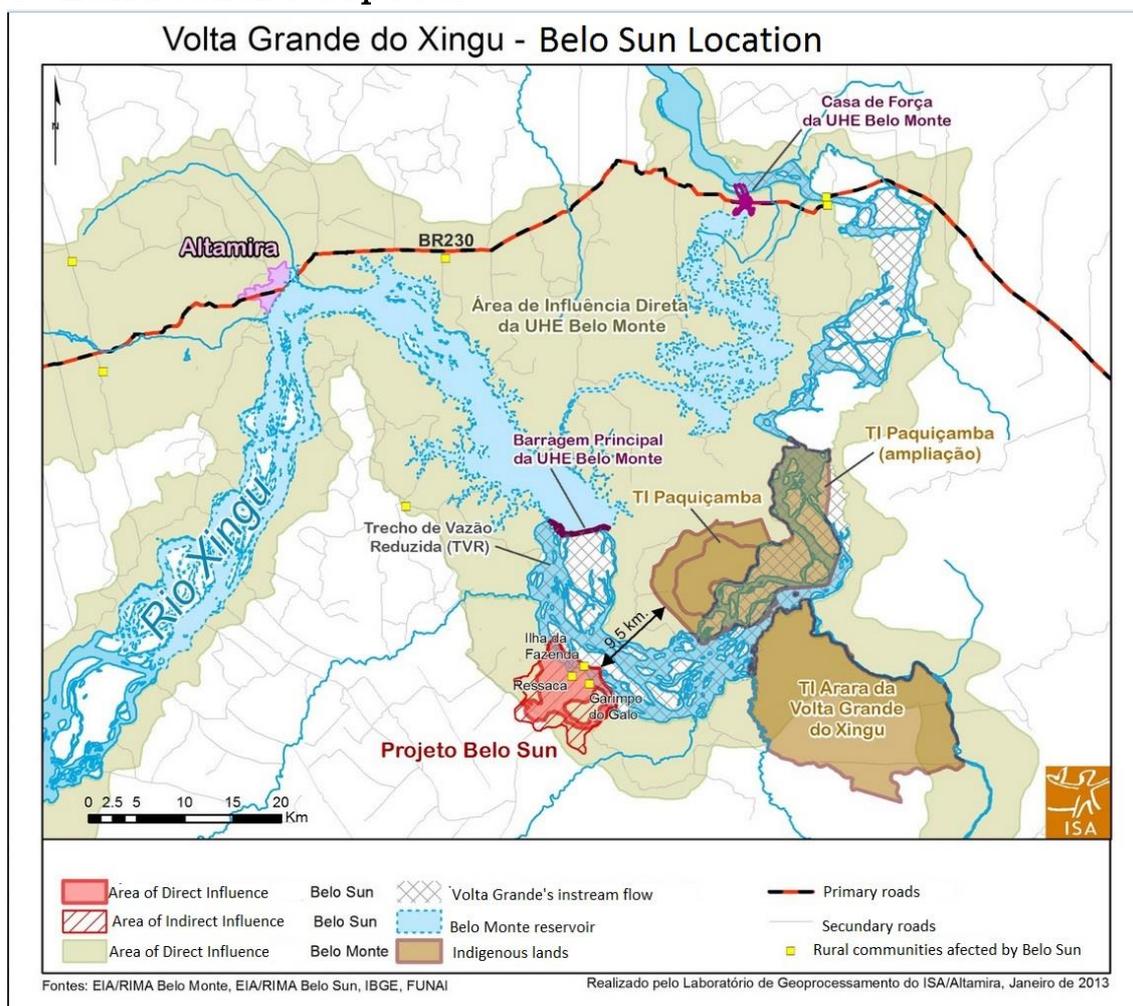
¹ http://www.incra.gov.br/sites/default/files/uploads/reforma-agraria/questao-agraria/reforma-agraria/projetos_criados-geral.pdf

the attention of the Office of the Public Defender of Pará State (DPE), which filed a Public Civil Lawsuit in the Agrarian division of the State Courts in Altamira.² The aim was to suspend the licensing process until the future of the families could be defined.

The DPE succeed in obtaining a ruling, from both the local court in Altamira and from the State Court of Justice in Pará's capital Belem, that suspended the project. However, a subsequent court ruling, made on June 22, reversed the initial decision favoring suspension.

As a condition of this reversal, the court demanded that Belo Sun keep it informed on a monthly basis regarding the progress of negotiations with displaced people, and mandated that it remove large signs defining its property, which had been set up in various parts of *Ressaca* and impeding people from freely coming and going.

3. Land tenure aspects



² ACP nº 0005149-44.2013.8.14.0005. The current status of that action can be consulted at www.tjpa.jus.br

The Belo Sun mining company intends to implant its project in a land settlement area known as *Gleba Ituna*, where there are five established land agrarian reform settlement projects.

As is common in the Amazon, a region historically plagued by land tenure conflicts, the negotiations between Belo Sun, INCRA, land settlers, and people living along the Xingu River on lands belonging to the Brazilian State, there have been continual denunciations of abuse and government inefficiency, which have led to several, ongoing legal battles.

Since acquiring the Verena company, Belo Sun proceeded to buy landholding rights of the region's settlers and squatters with the intention of preparing the infrastructure necessary to exploit gold deposits. This has led local settlers to complain of insecurity created by the company's actions. There are reports that some farmers desisted from planting their fields in 2016 because they were expecting to be forced off their land. Such situations can lead to food insecurity.

Local residents have also criticized the fact that the company has put up signs bearing its logo on plots of land it purchased. Setting such boundaries restricts people's circulation in an area where free movement associated with extractive activities are part of the way of life.

Belo Sun's actions, which were intended to promote its progress, caught the attention of the DPE of Pará State, which decided to take legal action in defense of local communities.

In 2013, the DPE filed a Public Civil Lawsuit³ and obtained an injunction⁴ against the Belo Sun mining company. The goal was to avoid the forced removal of the residents of Vila Ressaca and Galo and Ouro Verde after the company purchased the rights of possession of these areas.

According to the State Public Defender,⁵ the arrival of the mining company has aggravated conflicts in an area that already suffers from a lack of land tenure regularization, while spurring illegal logging activities. Regardless, the Pará state environmental agency SEMAS granted the company a preliminary license, stipulating 37 social and environmental conditions for mandatory compliance within a period of 1,095 days.

³ ACP nº 0005149-44.2013.8.14.0005

⁴ Ação cautelar nº 0001062-06.2017.814.0005

⁵ http://www2.defensoria.pa.def.br/portal/noticia.aspx?NOT_ID=2851

In February 2017, the DPE filed another lawsuit concerning the injunction, this time calling for the suspension of the project's environmental licensing process. In a document submitted to the court, the DPE listed a series of illegalities that both Belo Sun, in 2014, and SEMAS, in 2017, had allegedly committed in relation to the preliminary installation license.

In addition to the aforementioned conflict, the DPE underscored that Belo Sun's registration of 2,759.5 hectares under the Rural Environmental Registration (CAR) mechanism must be questioned in the courts because this area includes land whose concession for use and occupation is the prerogative of the Brazilian State.

The legal dispute between the Office of the Public Defender and Belo Sun then took a new turn with the presentation of a second Public Civil Lawsuit,⁶ in February 2017, brought against the State of Pará and the Pará Lands Institute (*Instituto de Terras do Pará – Iterpa*) before the Agrarian Court of Altamira.

The lawsuit demands that urgent measures be taken to regularize the land tenure situation of the *Napoleão Santos* State Agro-extractive Settlement Project (Peax) where 268 families live. The call to regularize the land tenure situation of Bacajaí, part of another land settlement located in the municipality of Senador José Porfírio, was first made in 2005, yet the State has yet to finalize this process.

According to the DPE, Belo Sun managed to obtain its license to prospect and mine inside the area of the Extractive Reserve from the National Mineral Production Department (DNPM) without any consultation with local residents. It is foreseeable under these dubious circumstances, in the Public Defender's analysis, that in the future there will be other mining projects in this region, or that Belo Sun will move to expand its operations beyond the current scope of the Volta Grande project.

Even though that legal process is ongoing, the DPE is calling on the DNPM to cancel the mineral prospecting licenses that refer to areas in the designated extractive reserve which benefit Belo Sun. The request refers to Convention 169 of the International Labor Organization (ILO) regarding the obligation to consult indigenous and traditional peoples. Brazil is a signatory to the convention.

⁶ ACP nº 0002333-50.2017.814.0005. Disponível em <https://drive.google.com/file/d/0BBymSev7h91aZOVd5TTJvQVBHdDQ/view>

Furthermore the legal argument evokes the Joint Edict of the DNPM and INCRA nº 01/2009, which “considers a mining activity to be incompatible when it directly affects the development of a rural settlement project, wholly or partially, or when it requires the relocation of families, causes significant environmental damage, or when there is any evident conflict of interest.”

4. Indigenous peoples



Juruna with the UN rapporteur for indigenous rights Victoria Tauli-Corpuz (photo Christian Russau)

One of the biggest controversies associated to the Volta Grande project is its potential to impact local indigenous populations, including those living in titled indigenous territories, and those outside indigenous villages living adjacent to the area where the project would be installed. This is only a few kilometers from the *Paquiçamba* and *Arara da Volta Grande do Xingu* indigenous territories.

Highly active in the area, the Socio-environmental Institute (ISA) has produced a technical study⁷ on the risks associated to the Belo Sun project. In addition to the difficulties for communities to adapt to the new

⁷ <https://site-antigo.socioambiental.org/nsa/detalhe?id=3721>

dynamics of the river as a result of the construction of Belo Monte, the organization issued a warning about the toxic effects that cyanide – used in processing gold – as well as other “chemically active” materials would have as they are piled into two towering deposits on the banks of the Xingu River.

Although the licensing process was conducted by a state authority – SEMAS – in 2012, the federal indigenous agency FUNAI issued terms of reference to guide Belo Sun when carrying out a study of the project’s impacts on indigenous peoples. However, SEMAS did not interrupt its licensing process to await the conclusion of the indigenous component of the project’s impact study.

Justifying its actions, SEMAS cited a controversial inter-ministerial edict (419/2011) which determines that it is only obligatory to assess impacts from mining operations when they are located at a distance of 10 km from an indigenous territory. There is no consensus on the distance from the mine to the nearest indigenous land of *Paquiçamba*. ISA and the Juruna indigenous people measured it as 9.6 km, which would require an indigenous impact study. SEMAS measured the distance as 10.7 km and FUNAI and Belo Sun measured it as 12km.

In the light of this doubt the Federal Public Prosecutors Office (MPF) entered the case and recommended that SEMAS should not issue the license to the mining company. The Pará government body replied that it could not “penalize the entrepreneur” and that the Belo Sun’s license was supported by a “conception of the social function of the mining activity.”

Accordingly, the prosecutors decided to go to court against the licensing. A Public Civil Lawsuit⁸ was filed on November 13, 2013. The Federal Prosecutor called for the license to be suspended until the study of the indigenous component could be finalized “and the participation of the indigenous peoples could be ensured as foreseen in the terms of the International Labor Organization’s Convention 169.” Brazil is signatory to the convention which determines that any measure that affects indigenous lands must be preceded by a consultation with those affected.

Ten days later, the federal court in Altamira (Pará State) ruled that all project licensing be conditioned to the prior elaboration, by Belo Sun, of a study of the project’s impacts on indigenous communities. In his

⁸ <http://www.mpf.mp.br/pa/sala-de-imprensa/noticias-pa/mpf-entra-na-justica-para-suspender-imediatamente-licenciamento-da-belo-sun>

restraining injunction⁹ judge Sérgio Wolney de Oliveira underscored that Belo Sun's operations, in synergy with the effects Belo Monte, could cause "direct interference in the existential-ecological minimum for the indigenous communities" with irreversible negative impacts on their quality of life and cultural heritage.

Judge Guedes's injunction was confirmed by the sentence¹⁰ handed down by his colleague Cláudio Henrique Fonseca de Pina in June, 2014. Faced with those legal setbacks, Belo Sun prepared a study of the project's impacts on indigenous peoples, however FUNAI did not approve it.

In October 2016, FUNAI officially informed SEMAS that it considered the studies presented by Belo Sun to be inadequate. Among the points that were criticized were the non-participation of FUNAI in dialogue with indigenous communities, as the mining company had unilaterally entered directly into contact with them. Another was the absence of any measures to mitigate the effects of the mining venture. The federal agency also expressed its misgivings about the impacts already caused by Belo Monte on the reproduction of life and environmental stability in the Volta Grande region.

FUNAI's restrictions did not prevent SEMAS from issuing an installation license to Belo Sun in February 2017. In its official communication, SEMAS declared that it requested that the mining company elaborate an indigenous impact study and given it up to three years to do so "even though the existing indigenous lands are beyond the 10km distance from the project, which means that based on relevant legislation this study would not be required by law."¹¹

The MPF then decided to take the case to the Federal Court of the 1st Region in Brasilia. In April 2017, Federal judge Jirair Meguerian confirmed that SEMAS had failed to comply with a court order to require an indigenous impact study from Belo Sun, and suspended the installation license.

The case is currently awaiting a decision on the appeal. In its defense, Belo Sun alleges that unlike what FUNAI stated about deficiencies with the company's indigenous study, it had in fact adopted "best practices" based on terms of reference established by FUNAI itself. Furthermore, FUNAI had approved the work plan for the study.

⁹ <http://www.mpf.mp.br/pa/sala-de-imprensa/noticias-pa/sentenca-anula-licenca-ambiental-para-o-projeto-belo-sun>

¹⁰ <http://www.mpf.mp.br/pa/sala-de-imprensa/noticias-pa/sentenca-anula-licenca-ambiental-para-o-projeto-belo-sun>

¹¹ <https://www.semas.pa.gov.br/2017/02/02/projeto-volta-grande-recebe-licenca-de-instalacao/>

Jáilson Juruna, deputy leader of the *Paquiçamba* Indigenous Land confirmed that technical staff from Belo Sun had paid them a visit, but those representatives limited themselves to giving information about the project and after they left “started to say that they had conducted a [formal] consultation.” With support from ISA, the community is preparing a consultation protocol based on ILO Convention 169.

“Belo Monte brought us a lot of trouble, but it was a lesson. Before they bring us any new proposals we want to talk to experts, get to know other mining companies, even go to Canada if necessary,” said the Juruna leader.

He declared that his community is very worried about the water in the river, the risks associated to the tailings dam and the new inhabitants who will be attracted to the region by the mega-mine. The aim is to avoid aggravating the problems that accompanied the construction of the Belo Monte dam.

“When we arrived in Brasília, Belo Monte’s plans had already been drawn up and all we did was to sign them. We had no idea of the impact it would cause. Disputes broke out among the villages for the money that [Belo Monte’s project consortium] Norte Energia was distributing. The quantity of water today is reduced, but one day in the past it rose suddenly and washed away all of our ornamental fishing equipment. The quantities of fish in the river and their size have both worsened because the flooding of the islands and small streams, which has diminished the amount of food available. Imagine having to live through all that again,” he said.

Similar concern was voiced by the leader of the *Arara da Volta Grande* Indigenous Land, Leôncio Ferreira do Nascimento, known as “Seu Nego.” The 80 year-old leader criticizes the mitigation measures of Belo Monte which included distributing money to the indigenous communities in Volta Grande.

“When the indigenous people realized that every time they protested publicly they would get money, they began to do it. Norte Energia gave them money and noted it all down. Here they built white man-style houses because the Indian’s houses are made of clay and thatched with palm leaves. Now we have 25 houses, a school and, a health clinic, all made of brick. The company helped by supplying people with basic food packages so they would eat and then go and sleep. They distributed tools and machines as well. Many people thought that would last forever. I said that we needed to look after our fields. Today many of them are left with nothing. They have sold the motors and the boats... and gone back to their fields,” he said.

5. Synergistic effects between Belo Sun and Belo Monte



Aerial view of the Belo Monte hydroelectric plant (photo Todd Southgate)

The social and environmental impacts generated by the construction and operation of the Belo Monte hydroelectric dam have triggered discussions regarding the capacity of local ecosystems to endure yet another large-scale venture such as the Belo Sun project.

Even the environmental authorities are unsure what conditions will be like on the Volta Grande in the next few years due to the drastic reduction in the flow of the Xingu River after the dam was constructed. It has been calculated that 80% of the water in a 100km stretch of the river was diverted to operate the dam's turbines.

Upstream from the dam many riverside families have lost their dwellings or their fishing spots and have had to be moved to the city after the flooding of the river banks and islands. That means their means of subsistence have been affected as well.

In February 2016, the federal environmental institute IBAMA decided to carry out complementary studies on the fishing conditions in the stretch of the Xingu River affected by the hydroelectric dam. It also agreed to request additional compensation for fishing families to be paid by the Belo Monte consortium *Norte Energia*. Rodrigo Santos, one of the

directors of the licensing board of IBAMA, publicly committed to request this compensation at a seminar on the issue held in Altamira.

Water is not the only element susceptible to synergistic and cumulative effects between Belo Monte and Belo Sun. SEMAS requested that the mining company make its environmental impact study as broad reaching as possible and to include the planning of mitigating actions.

Norte Energia also sent an official document to SEMAS warning that agency about a series of risks associated with Belo Sun. The consortium that administers Belo Monte pointed out that the stretch where the mining company intends to install its operations is inside Belo Monte's area of direct influence.

For that reason, it demanded that Belo Sun have the responsibility of carrying out studies on the risks to water quality, of undertaking a seismic evaluation of the risks to the dam structure that could stem from the mining-related explosions, and also of evaluating the impact of the increase in river traffic between Altamira and Vila da Ressaca. It further requires that the Belo Sun company should hear IBAMA's opinion and that it should finalize its analyses of the impacts on indigenous communities.

In this context, the idea that no other large-scale venture should be allowed in the Volta Grande region, without first guaranteeing that the regional ecosystem stabilizes, is gaining momentum. The MPF considers that IBAMA, the licensing body for Belo Monte, and the *Norte Energia* consortium, need to create and present what it calls a Life Plan for the people who live along the stretch of the Xingu River that has had its flow drastically reduced. The theme was discussed at a public hearing held in March, 2017 in Altamira.

Prosecutor of the Republic Thaís Santi, who is involved in the case, states that the riverside families constitute “a group that is still almost invisible,” and need to actively participate in the Life Plan process. However, formulating a plan still depends on the monitoring information gathered by IBAMA and FUNAI in the Volta Grande. This monitoring process is still in course. Without this component she argues that the installation of Belo Sun's Volta Grande project should not occur at all.

6. Conclusion: what the future holds for the Xingu's Big Bend



Open cast mine in Pará (photo Verena Glass)

Belo Sun promises that the impacts of mining activities on the Xingu River's Big Bend region will have positive impacts – such as creating jobs and generating tax revenue for the state – and that the mine's negative impacts will be monitored and mitigated as far as possible. Yet when these claims are weighed against the data presented in this study it can be seen that the tendency will actually be for the mine's operations to aggravate the already serious environmental, social, cultural, and economic problems caused by the Belo Monte dam.

According to Belo Sun's technical opinion document issued in November 2012,¹² the mine's cumulative and synergistic effects with those of Belo Monte have been analyzed in environmental impact studies and, irrespective of the level of investment in mitigation measures, the negative effects are serious and unavoidable. To this effect, the company listed the increase in the number of vehicles used by the project which multiply, cumulatively, the number of cases of animals being killed on the road. The vehicles used in the project will lead to the loss of species, increase in the volumes and impact of particulate matter (dust and others); migration and disturbance of fauna resulting from the noise and

¹² <https://www2.mppa.mp.br/sistemas/gcsubsites/upload/41/Nota%20Tecnica%20PVG%281%29.pdf>

the suppression of fragments of forest vegetation; increased pressure on natural resources from the increased number of people in the area attracted by the venture; accumulated losses of flora species leading alterations to the terrestrial communities and hence to the landscape; alterations to plant metabolism due to the accumulation of particulate material on the upper leaf surfaces; alteration to the ecological dynamics of the aquatic community and associated fauna; cumulative alterations to the aquatic environment stemming from mining activities that generate effluents or alter the flows of the river and streams; alterations to the landscape associated to the piles of waste and the removal of wood.

The document states that all artisanal mining activities lead to contamination (with cyanides, mercury or tailings) and the removal of layers of soil. According to the company, the use of cyanide in artisanal mining will stop but, in regard to Belo Sun, because it is an industrial scale venture, “obviously, the consumption of cyanide by the Volta Grande project will be far higher than that of the present-day artisanal mining. However, that consumption will occur in an industrial environment and in a controlled manner with continuous monitoring” under the responsibility of the Ministry of Defense.

But what kind of legacy will this project leave for the population of Big Bend? In regard to the communities and municipalities in its area of influence, the project foresees that, just like Belo Monte, it will attract large numbers of people looking for work and that will put great pressure on local public health, education and security services as well as on urban infrastructure and sanitation systems.

Belo Sun alleges that mining will bring with it “new labor relations in a region typified by subsistence crop and livestock farming, illegal logging and illegal artisanal mining, so that will be reflected in the popular imagination as a positive factor and stimulate a desire for new forms of labor relations in the region’s young people.” Contradictorily, it goes on to admit that after 12 years when all the gold has been extracted, the prognosis for the region is that “the de-activation of the mine will tend to increase the numbers of loggers and illegal miners unless public authorities make investments designed to generate new jobs for the population.”

Bearing in mind the legacy of the construction of the Belo Monte hydroelectric dam, there is little hope that grandiose projects will bring with them any positive modifications to the economy and living

conditions of the population of the Xingu's Big Bend. According to the Employment/Unemployment Map produced by the Inter-unions Department of Socio-economic Studies and Statistics in Pará (*Departamento Intersindical de Estatísticas e Estudos Sócio-econômicos no Pará* – Dieese/PA) published at the beginning of 2017, the biggest municipality in the region, Altamira, was the state's champion of unemployment in 2016. That was a direct effect of the completion of Belo Monte's construction. This negative repercussion should also be considered alongside the 2017 "Atlas of Violence," produced by the Institute for Applied Economic Studies (IPEA), which places Altamira in first place as the most violent cities in Brazil and among the Brazilian cities with over 100 thousand inhabitants that has the highest numbers of homicides and violent deaths.¹³

The truth is that Belo Sun's promise that it will be a vector of development for the Big Bend and the Altamira region runs counter to the harsh reality being faced by the local population as a result of its predecessor mega-project, Belo Monte. There is widespread mistrust of Belo Sun, as a result. Prior to the construction of Belo Monte, the bottom line of its planners' discourse was that it would usher in a new era. Today the Xingu River can no longer offer people fish to eat.

¹³ <http://g1.globo.com/pa/para/noticia/altamira-lidera-ranking-de-cidades-mais-violentas-do-brasil-diz-ipea.shtml>