IMPACTS OF AGRIBUSINESS EXPANSION IN THE MATOPIBA REGION:
COMMUNITIES AND THE ENVIROMENT

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The picture portrays a typical Cerrado cashew nut tree. In that region, 12.42 miles (20 km) away from Balsas-MA, one may walk up to 24.84 miles (40km) without finding any shadow other than that of the cashew nut tree.

SUMMARY

INTRODUCTION

The expansion of the agricultural and cattle-raising frontier in the *Cerrado*, Brazilian savannah, has led to full vegetation loss or degradation of 52% of the land in the region over the last four decades, creating imminent threats to the future of the biome and traditional resident communities' ways of life. Since the 1970s, intensive and extensive farming activities, such as cattle-raising and soybean plantations, as well as sugarcane and eucalyptus, have fostered increased deforestation and soil degradation, changing the landscape and intra and extra biome ecological interactions dramatically. This has transformed, in a similarly abrupt fashion, the lives of the residents in traditional *Cerrado* communities. The demand for charcoal by the Brazilian iron and steel industry has also had severe impacts on the environment through increased deforestation. Finally, it also important to highlight that there are large mining and dam construction projects in the region, including those for crop irrigation. Consequently, an average of ten small rivers are going dry every year.

The government, prominent landowners, and national and transnational agribusiness portray the expansion of modern agriculture as sustainable and non-threatening to the environment. But it is important to emphasize that there has been fierce debate on the subject, due to the expansion of many development 'frontiers' converging in the region: agricultural, livestock, mining, hydroelectric, etc. Unfortunately, the voices of the communities being affected by the expansion of these frontiers are regarded as less important in the debate vis-à-vis business or governmental actors.

The expansion of commercial agriculture and cattle-raising leads to increased land concentration, which means that traditional communities suffer from having recognition of their land rights denied. For these populations, land rights are based on customary

and continuous land occupation over generations, rather than legal documents issued by the State. Informal land tenure is the norm in the region. agribusiness expansion, which is currently controlled by financial capital, leads to intensive use of resources, such as water. The expansion has caused ground water contamination, and transformation of the landscape by introducing not only farming but also the productive and marketing infrastructure needed for activities, such as roads and waterways.

In May 2015, for the purpose of fostering the expansion process, the Brazilian government created a special region known as MATOPIBA[1], located in the Northern *Cerrado* area (where, to this day, there still is original savannah vegetation). Designating that area for development allows for introducing the required legal framework for an even more aggressive takeover of the biome by financial and agribusiness capital, which aims to export agricultural and mineral commodities. Even though the Michel Temer Administration has revoked the original decree to create the MATOPIBA region[2], the expansion trend remained unchanged and there are increasing reports of lawless use of power and violence against local communities. The communities are the most affected victims of a downward spiral that has impacted the Brazilian countryside.

In spite of its extraordinary socio-environmental importance, the *Cerrado* is largely overlooked and regarded as inferior to other Brazilian biomes. It is still not considered as a reference point for Brazilian social and environmental diversity; it is portrayed as 'a place between places', and even as an uninhabited region. Therefore, this perception favors a mindset that allows for the destruction of the biome, and, consequently, land disputes in the area have become extremely intense. Invisible identities and denied

1. The acronym stands for the names of the following states: Maranhão, Tocantins, Piauí and Bahia, located in the region.

2. Following the preparation of this report, news circulated that the Brazilian Congress approved a bill to reactivate the state agency for the MATOPIBA region. The bill must still be approved by the legislative Plenary.

territories are still part of political trade-offs in Brazilian environmental planning. Moreover, the fact that there is no understanding of the interdependence between biomes allows for the *Cerrado* to be overlooked, and to be regarded as a less important biome; such a stance validates its destruction.

The previous process, in summary, resembles the accumulation dynamics on a global scale that threaten food and nutrition sovereignty, the land rights of traditional communities all over the world, the water supply of rural and urban populations, as well as adversely changing the climate of our planet. Expanding both agro-industrial farming and intensive animal farming leads to massive deforestation, changes in rainfall regime, rise in carbon emissions, and higher temperatures (SASSEN, 2016), with interconnected local and global impacts. The destruction of the *Cerrado* is a problem that extends beyond Brazil to the issues that currently face global civil society, governments, and climate and food governance institutions worldwide.

In this context, communities identified as traditional and their representative organizations, NGOs, and academic sectors interested in the socio-environmental dynamics in the *Cerrado*, and in protecting and preserving the area, face major obstacles. These communities seek to have their demands, world views, production practices, forest and land management, and traditional ways of life acknowledged and heard in an effort to make sure that people in the communities and other groups under threat in the area have their human rights preserved and have their rights to the land recognized. It is important to highlight that, currently, indigenous and traditional communities land are literally surrounded, creating intense land disputes. This is worsened by an inadequate framework for territorial rights because current categories overlook many

traditional *Cerrado* people that do not identify as indigenous nor as quilombola (Afro-descendants of former slaves). These traditional peoples are more easily defrauded of their land through expropriation, and that is the reality we are seeing at present.

Taking into account the aforementioned, ActionAid Brazil and Brazil's Social Network for Justice and Human Rights strongly believe that these voices need to be heard when designing and implementing development plans in the *Cerrado*, as, to date, the interests and points of view of governments, agribusiness, cattle ranchers, mining projects, and infrastructure expansion have prevailed to the detriment of indigenous and traditional peoples, and other affected groups, as well as the environment. The future of the 48% remaining *Cerrado* area cannot be regarded as something of minor importance. Its fate cannot be decided without the participation of civil society and indigenous and traditional peoples and without a deep appreciation of the diversity of the biome; the loss would be irremediable.

A national policy for the *Cerrado* must do more than simply foster agribusiness expansion as it has been as done in the past. A national policy must take into account the socio-environmental complexities of the biome and all stakeholders' interests, especially indigenous people and peasants, who throughout history are the ones who have suffered from the expansion of agroindustry and cattle-raising and, to date, are ignored in the debate, with harmful consequences for their reproduction and survival. Agribusiness expansion towards *Cerrado* areas that still have not been used for agroindustry or extractive industries must be avoided and, in any case, the human rights of traditional communities must be protected. In areas already taken over by agribusiness expansion, it is important that prior demands and claims from community groups

are respected, so that traditional practices and production methods remain and receive support from public policies designed for that purpose. We can no longer turn a blind eye to the enormous challenges faced by Brazil as regards the use and preservation of the *Cerrado*.

The aim of this report is to analyze the impacts of agribusiness expansion in the MATOPIBA area, especially on traditional peoples and communities in the region. However, considering that the MATOPIBA is a recent expansion area in the *Cerrado* as a whole, it is necessary to have a broader perspective of the entire biome, in order to properly understand the issue.

PART 1

CERRADO SOCIO ENVIRONMENTAL CHARACTERISTICS

Properly describing the socio-environmental profile of the *Cerrado* is crucial to understanding the current issues caused by expanding several 'frontiers' in that Brazilian biome. Therefore, we aim to briefly profile the *Cerrado* without attempting to be exhaustive in this report.

WHAT IS THE *CERRADO*? WHAT ARE ITS ENVIRONMENTAL CHARACTERISTICS AND ECOSYSTEMIC IMPORTANCE?

The *Cerrado* biome is the second largest Brazilian biome (the Amazon is larger). It covers an area of approximately 786,000 mi² [2.036 million km²] (24% of Brazilian territory)[3], it is home to 5% of the biodiversity on Earth. Its core area encompasses the federal District and ten Brazilian states: Goiás, Mato Grosso, Mato Grosso do Sul, Tocantins, Maranhão, Bahia, Piauí, Minas Gerais, São Paulo, and Paraná, with nearly 1,500 municipalities in Brazil and reaching the Northeast of Paraguay and the East of Bolivia. (MMA, 2009, p. 4).

3. Other estimates suggest that the Cerrado covers 37% of the Brazilian territory, should all transition areas between biomes and areas covered by Cerrado vegetation in the Amazon biome be taken into account. (SILVA, 2009, p. 31.

TABLE 1 | **PERCENTAGE OF BRAZILIAN STATES ORIGINALLY COVERED BY THE *CERRADO* BIOME**

FEDERATED UNIT	PERCENTAGE OF *CERRADO*	FEDERATED UNIT	PERCENTAGE OF *CERRADO*
FEDERAL DISTRICT	100	MATO GROSSO	40
GOIÁS	97	PIAUÍ	37
TOCANTINS	92	SÃO PAULO	33
MARANHÃO	65	BAHIA	27
MATO GROSSO DO SUL	61	PARANÁ	2
MINAS GERAIS	57		

SOURCE: MINISTRY OF THE ENVIRONMENT, (MMA stands for Ministry of the Environment in Portuguese), 2009.

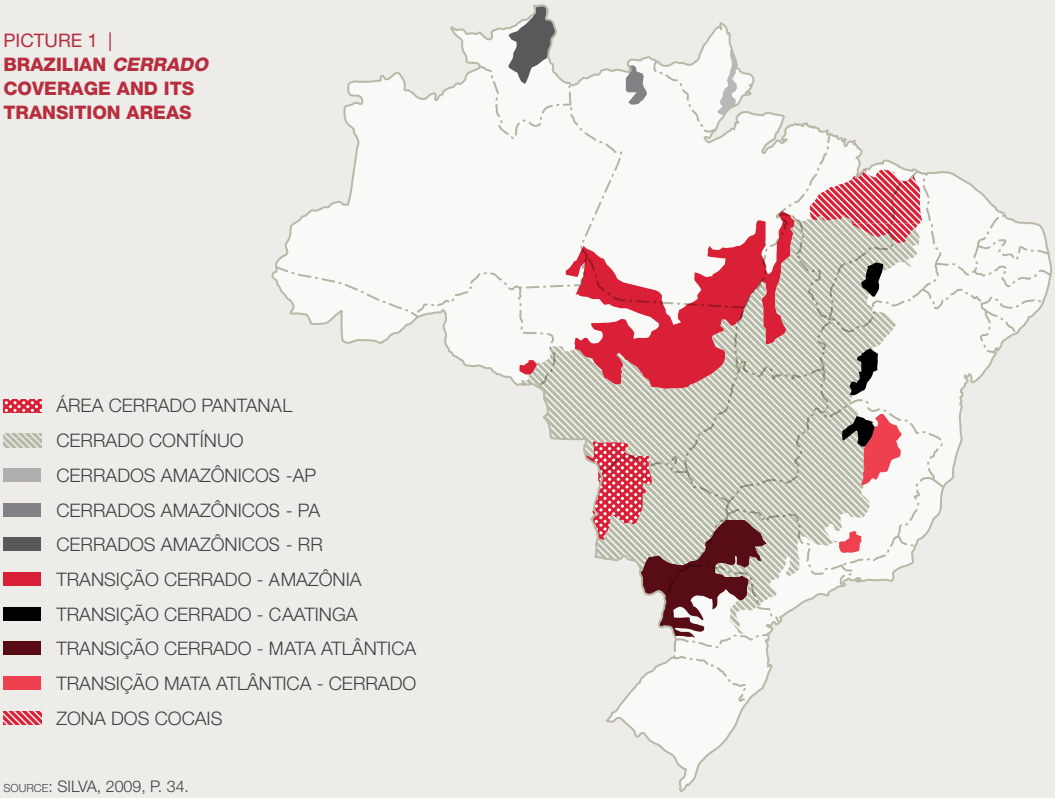
For those reasons, the *Cerrado* is regarded as the richest savannah in the world as far as biodiversity is concerned. Also, there are three large aquifers in the *Cerrado* area (Guarani, Bambuí, and Urucuia), which are important not only to Brazil but also to South America. Two-thirds of Brazilian hydrographic regions are formed by those aquifers: Amazon Hydrographic Basin (4%), Araguaia-Tocantins Hydrographic Basin (71%), Western Atlantic and Northeast Atlantic Hydrographic Basins (11%), São Francisco Hydrographic Basin (94%), East Atlantic Hydrographic Basin (7%), and Paraná and Paraguay Hydrographic Basin (71%). An Open Letter from Extractivist and Agro-Extractivist Peoples, released by social movement organizations in 2012, questions why the threats to the *Cerrado* biome and its communities have been ignored*:*

> Is it not in the *Cerrado* that the rivers that make up the biggest Brazilian hydrographic basins, such as the São Francisco, the Doce, the Jequitinhonha, the Jaguaribe , the Parnaíba, the Araguaia/Tocantins, the Xingu, the Tapajós and Madeira (located in the Amazon Basin) are all formed, as well as, the rivers that make up the Paraguai Basin and the Paraná/Prata Basin? [...] Is it not known that the *Cerrado* is linked to the two largest continental wetland areas on Earth, the Brazilian Pantanal and the wetland of the Araguaia River's lowlands? (ECODEBATE, 2012)

The *Cerrado* consists of a mosaic of various vegetation types, such as plains and gallery woodlands. The extraordinary diversity of phyto-physiognomies stems from soil diversity, varying topography, and different climate regimes in the Brazilian Mid-western region. Thus, the *Cerrado* is home to many types of herbaceous plants, shrubs, trees, and lianas, amounting to 12,356 species that grow spontaneously and native vascular flora (pteridophyte and phanerogams) with 11,627

species (MMA, 2009, p. 15), 250 mammal species, 837 bird species, 1,200 fish species, and 150 amphibian species; quite often, the species are endemic (for instance, 44% of the flora is endemic). Yet, that represents only a portion of its native diversity, as estimates point out there are roughly 320,000 animal species in the *Cerrado*, especially considering the big insect diversity in the biome, which accounts for 28% of all *Cerrado* biota (MMA, 2009; BENSUSAN, 2016).

PICTURE 1 |
BRAZILIAN *CERRADO* COVERAGE AND ITS TRANSITION AREAS



SOURCE: SILVA, 2009, P. 34.

Considering its size and natural complexity, protecting the *Cerrado* is crucial for preserving another great Brazilian biome: the Amazon. The *Cerrado* and the Amazon, apparently so different, make up a dynamic unit whose interactions are frequently ignored, unknown, or underestimated. Actually, other Brazilian biomes face the same problem, because the *Cerrado*, for being located in mid-western plateaus, are closely linked to the Brazilian Pantanal, the Caatinga (dry forest), and the Atlantic Forest; due to those links, the *Cerrado* is the point of balance between all of those biomes. (BARBOSA, 2008). In areas where the *Cerrado* connects with other biomes, known as transition areas or ecotones (MMA, 2009, p. 12), the complexity and the biological diversity is even greater due to the subtle interactions between them. According to Altair Sales Barbosa, one of the most renowned Brazilian researchers specializing in the *Cerrado*, the biome must be construed as a **bio-geographic system**, formed by many interdependent subsystems (BARBOSA, 2017, p. 5).

Thus, in analyzing the *Cerrado*, it is important to take into account its enormous diversity. It is not a homogenous area; on the contrary, it has a set of different environments (both as regards vegetation characteristics, and animal life diversity), each of those making up one biome subsystem as a whole. In short, the *Cerrado* subsystems are: *Cerrado* Plains Subsystem; *Cerrado* Subsystem; Cerradão Subsystem; Woodlands Subsystem; Riparian Woodlands Subsystem; and Swampy Plains and Muddy Wetlands Subsystem.

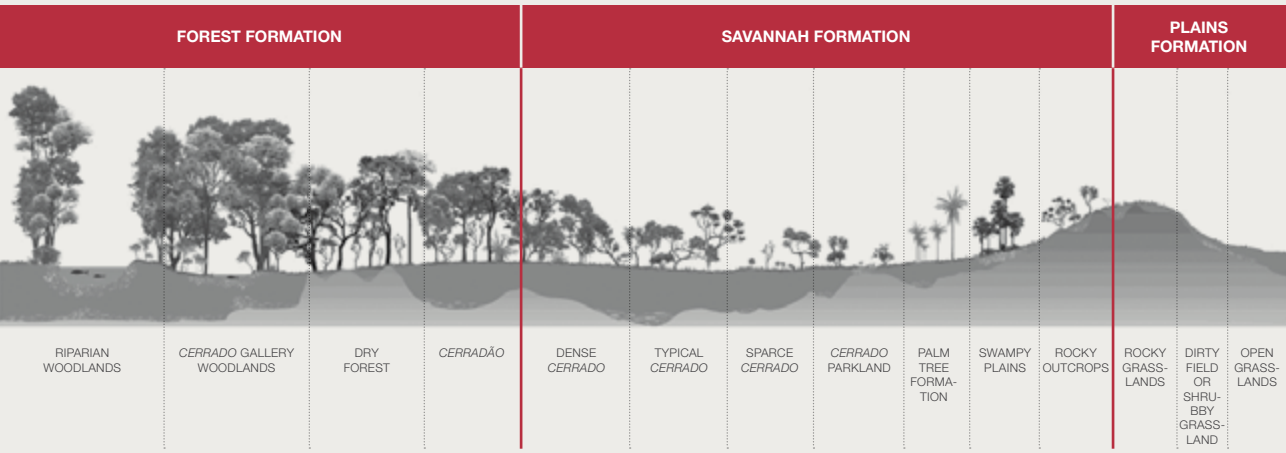
TABLE 2 | ***CERRADO* BIOME SUBSYSTEMS**

SUBSYSTEM	CHARACTERISTICS
CERRADO PLAINS SUBSYSTEM	Covers the highest Cerrado plain morphology lands regionally called ***chapadões*** (plateaus) or ***campinas*** (grasslands). There are strong winds during most of the year, and the temperature is usually cooler than in other subsystems. The drainage system is poor. Sometimes, small lagoons are formed, some of them are perennial. The vegetation consists of straggled shrubs, and there are grasses widely and heavily spread in the area.
CERRADO SUBSYSTEM	It is *Cerrado's* main landscape. It has grasses; however, it is different from the plains because there are small-sized, crooked trees. The drainage system is good and the soil naturally has low fertility levels, but it is not homogenous.
CERRADÃO SUBSYSTEM	It is physiologically thicker than the Cerrado Subsystem. Trees are 33 to 49 ft. tall and the soil has more natural fertility. Grasses are less predominant that in the Cerrado and there are bigger crowns of trees. The drainage system is quite significant.
WOODLANDS SUBSYSTEM	This system grows in soil with good natural fertility. Sometimes, it looks like an island with just the borders in the middle of dominant Cerrado landscape, known as capões, which sometimes make up extensive, compact, and homogeneous areas. The typical example is Mato Grosso de Goiás.
RIPARIAN WOODLANDS SUBSYSTEM	This subsystem is located in the headwaters of streams and rivers. The subsystem spans along water bodies in narrow tracks. Such tracks vary as regards their arrangement. In some areas, they are as wide as a grove of trees, and in others, they almost disappear, for instance, in some parts of Middle Tocantins.
SWAMPY PLAINS AND MUDDY WETLANDS SUBSYSTEM	The headwaters of some streams and rivers sometimes have muddy wetlands from flows of ground water flooding, or due to soil impermeable characteristics. In those areas, swampy plains are quite common, which are landscapes where buriti coconut and buritirana, which sometimes, grow along water bodies, up to the middle part of some rivers, making up a very beautiful landscape, known as veredas. There are grasses, which are green all year long. In some areas, ground water flooding creates actual lagoons surrounded by buritis (*Mauritia vinifera*).

SOURCE: BARBOSA, 2008.

As one can imagine, the *Cerrado* has many landscapes. There are eleven different types of vegetation in the subsystems, which are categorized as in three main types: forest formation, savannah formation, and plains formation, according to the picture below.

PICTURE 2 | **MAIN *CERRADO* BIOME VEGETATION TYPES**



SOURCE: REDE CERRADO, 2017.

That is why texts explaining the *Cerrado* arrangement describe it as a mosaic with rich fauna and flora, such fact makes it a very special environment, extremely different from other savannahs in Africa and Australia (BENSUSAN, 2016, p. 6). Such rich environment has only recently started to be treasured, and, it is important to state that, it is deeply endangered since half the biome

has already been dismantled. According to an official document issued by the Brazilian government:

> is one of the most endangered Brazilian biomes as regards remaining vegetation cover loss. Deforestation and forest fires have caused changes in the landscape, fragmentation of habitats, species extinction, invasion of exotic species, soil erosion, aquifer contamination, aggradation, and imbalance in the carbon cycle, among other damages to the environment. In a short period, technology advances developed for agriculture and cattle raising use enabled fast and extensive destruction. Agriculture and cattle raising, together with steelmaking have led to the loss of roughly half of the original native vegetation. Between 2002 and 2008, deforestation rates in the *Cerrado* have increased more than in the Amazon, as regards the proportion of the total area of the biomes. (MMA, 2009, p. 7)

However, in spite of the extraordinary biological and cultural importance of the *Cerrado*, only 2.94% of its area is under the protection of Federal Conservation Units, in which 0.92% is for sustainable use, and 2.02% is for full protection. The State Conservation Units, in turn, account for 4.98% of the biome area. Conservation Units account for 7.92% of protected areas in the *Cerrado*. Nevertheless, such protected areas are no guarantee for effective conservation of sociobiodiversity because they consist of a mixture between public and private land, and governmental monitoring is often ineffective.

With regards to *Cerrado* geomorphology, the biome is located on top of sedimentary plateaus, which make up large homogeneous blocks separated by a network of peripheral depressions. Such geomorphological variation would help explain, at least partially, gradient distribution of vegetation types, previously described, in the region. The top of plateaus (1,640 to 5,577 ft. / 500 to 1,700 m) is usually

plains and mainly covered *sensu stricto* by *Cerrado* phyto-physiognomy. Riparian forests, in turn, make up linear corridors along water bodies. In contrast, peripheral depressions (328 to 1,640 ft. / 100-500 m), in spite of being plain and having residual relief, are far more heterogeneous as they are covered by different kinds of vegetation, such as savannahs, mesophytic forests, and extensive riparian forests (MMA, 2009, p. 15).

Although the *Cerrado* is often portrayed in governmental and corporate stances as a vast empty area (as regards population), human presence in the *Cerrado* is old, dating back to at least 13 thousand years (BARBOSA, 2017, p. 8-13). Currently, over 25 million people live in the area and account for approximately 15% of the Brazilian population, living in around 1,500 municipalities, as aforementioned. Indigenous and traditional peoples in the *Cerrado* are, in many ways, cultural heirs of the first inhabitants. From the 18th century on, indigenous peoples faced increased colonial occupation, intensified by *bandeiras* (expeditions carried out by impoverished Portuguese settlers), in pursuit of precious metals and gems; such expeditions resulted in genocide and/or enslavement of indigenous people. In the 18th century, the first *vilas* (villages / colonial settlements) were settled in the mid-western region; such *vilas* would later become the first cities in the region, such as Vila Boa, the current city of *Goiás*. (MMA, 2009).

Yet, only in the 1930s occupation in the mid-western region was intensified (with initiatives, such as Vargas Administration's "*Marcha para o Oeste*" [March to the West]) aiming to foster national territory integration by means of stimulating domestic migration, creating a domestic consumption market, and building infrastructure and cities, such as building Goiânia and Brasília as well as large road hubs, such as BR 163 and BR 364 (Belém-Brasília road and Cuiabá-Porto

Velho road, respectively). Such integrationist advances led to deep changes that were met with resistance and violence. One good example of the resistance was the Trombas and Formoso peasant revolt[4], which we are not able to elaborate on here. The revolt has shaped the core characteristics of peasant struggle for land ownership in the context of "modernization" in the Brazilian Mid-Western backlands, that is, capital attempts to get hold of vast lands made available by the government for land income extraction in a region almost 'unexploited'.

Finally, due to the extraordinary flora and fauna diversity in the *Cerrado* there is also an extraordinary cultural heritage associated to the different ways humans interacted with the main ecologic characteristics of each region. The biome is home to over 80 indigenous ethnicities, such as Karajás, Avá-Canoeiros, Krahôs, Xavantes, Xerentes, Xacriabás, and Tapuias, as well as diverse peoples known as "traditional" for their specific cultures (rural peoples or peasants who use the land as a means of production). These include *quilombolas* (descendants of runaway slaves), geraizeiros (peasants from northern Minas Gerais), *vazanteiros* (river bank peasants in the *Cerrado*), *quebradeiras de coco babaçú* (*babassu* nut processors), *povos de fundo e fecho de pasto* (communities where there is shared ownership of the land as well as collective use of resources), *barranqueiros* (a people who live along São Francisco River banks), *sertanejos* (cattle herders). There are also extractivist communities, family farmers, encampments of landless peasants demanding agrarian reform, as well as people who were settled in plots assigned according to agrarian reform guidelines. All these peoples live and interact with the *Cerrado*, preserving it and making sustainable use of resources in the area. Techniques, knowledge, and customs of those peoples are indispensible not only to their own survival but also to protecting the biome where they live.

4. The Trombas and Formoso Peasant Revolt was a long process in which peasants and *grileiros* (land grabbers) fought over land in the North of Goiás between 1950 and 1957. The dispute consisted of both political-institutional and armed struggle. It was a successful peasant movement, however, after the 1964 military coup, the leaders were persecuted, tortured, and went missing.

HISTORICAL BACKGROUND ON ESTIMATE SETTLEMENT PERIOD AND CHARACTERISTICS OF COMMUNITIES: INDIGENOUS, *QUILOMBOLAS*, ***QUEBRADEIRAS DE COCO BABAÇÚ***, ***VAZANTEIROS***, AMONG OTHERS

In order to understand **who and how** rural communities in the MATOPIBA region live, especially the ones which, over the last decades, have been exploited and marginalized in many different ways by the expansion of capitalist production in the Brazilian countryside, we need to analyze the historical process that created such communities.

In this report, we do not intend to produce a full historical record, however it is important to state that the Portuguese Colonization (1500 – 1822) of the lands that would later become Brazil is the result of occupation on the coast by means of plantations authorized by the Portuguese Crown under the sesmarias regime to produce goods later supplied to Portugal and Europe. In the Northeastern backlands, after occupation of the coast, sesmarias were large land properties with permission to use slave labor, contributing taxes to the crown from sesmeiros profit and monopolist commercial relationships with Portugal. Large property owners carried out a religiously sanctioned war against indigenous peoples who were trying to reclaim their territory. Colonial times were marked by displacing and exterminating indigenous peoples in order to establish the colony's territory.

As in Pernambuco, in the Northeastern coast sugar was the main product. The states located in the so called sertão (backlands) specialized in producing basic goods to supply the coastal plantations dedicated to export production. Cattle grazing without fences was also done in large properties located close to the riverbeds,

but with large common areas separating properties so that cattle would not mix (ALVES, 2006).

These common areas were used for hunting, fishing, small livestock keeping, among other activities. They included the area known today as MATOPIBA, the aforementioned plateau areas. Vacant lands became occupied by peoples that for one reason or another had disputes with large land property owners, including quilombos, created by afrodescendant escaped slaves, who even did trade with the sesmeiros, allowing, from that moment on, for a kind of settlement on untitled landholding that became widespread after slavery was abolished in Brazil in 1888, known as "possessions" or *posses*.

In 1850, the Empire of Brazil (1822 – 1889), by then a fully sovereign nation, enacted the Land Law, which was a key development in the process of legally defining private property in Brazil that set conditions in preparation for the ending of slavery and transition to "free labor." The law stated that lands officially declared vacant at that time belonged to the government. They were categorized as *terras devolutas* (unoccupied government lands) and could only be occupied if sold by the government. The Law was intended, when slavery was brought to an end, to prevent former slaves, acculturated indigenous people, and other persons not subject to the master-slave relationship, from occupying the lands and working to support themselves instead of working for a landowner and for accumulation of capital.

In the late 19th century, when coffee was at its prime, the Brazilian government fostered a program called *colonato* (a system in which workers are allowed to work in a land plot and expected to give part of their harvest to the landowner). Landowners recruited workers in Europe, with governmental funding, to participate in a

mixed work scheme, based both on paid work and partial access to the land as a means of production, which would allow the workers to maintain themselves. This type of access to the means of production has shaped the concept of peasant in Brazilian social sciences. It is important to highlight that the Crown had a deliberate policy toward racial whitening in the Brazilian society, for that reason European immigration was stimulated (BOECHAT, 2009).

In other regions of Brazil, including the Northeast and what we now call MATOPIBA, there was no deliberate policy of territorial occupation with these characteristics. Former slaves (freed since 1888), indigenous populations, *quilombolas* and other immigrants, either remained inside the plantations or they occupied areas that had not been part of the old sesmarias, which were turned into private properties. Those who continued on the plantations were considered free, but were dependent on the landowners for access to plots of land to survive (LEITE, 2010). Another part of this population, originating the regime of slavery and without a status in Brazilian society, occupied and worked in the "vacant" lands, selling the products of their small farms at local markets for survival.

Thus, between the end of slavery and the creation of the wage labor market in Brazil, from about 1940/1950, work in the Brazilian rural areas was constituted by what the Brazilian social science researchers have called peasantry. This refers to laborers who were not completely separated from the means of production and had distinct ways of working to support themselves, such as acting as non-related household members or residents of the farm and living as squatters outside it.

In the Northeast and in the current region of the MATOPIBA, cattle ranching in large agrarian properties shared space with

peasants who lived outside the farms in vacant lands. From their socio-cultural characteristics, these peasants are now regarded as *quilombolas* (Afro-descendant peasants), caboclos (peasants of mixed indigenous and non-indigenous heritage), *ribeirinhos* (riverine peasants), *babassu* nut processors, *vazanteiros* (flood plain peasants in the *Cerrado*), among others (we will discuss their characteristics later). In this way, it should be highlighted that the constitution of the so-called peasantry in Brazil is a consequence of the end of slavery and the transition to a wage-based labor market – however, the introduction of wage labor did not result in the end of peasantry, but it changed its social place in Brazilian capitalism.

Untitled landholders (*posseiros*), who occupied on lands claimed by the state, inhabited (and still do) the so-called baixões, or downspout areas, where rivers flow from the plains, from which water and fish could be obtained and where they could build their houses, grow produce (manioc, rice, corn, beans), have pigs, chickens and other poultry. The higher plains, with intermittent rainfall and water, were not good places to live, but they were useful for cattle raising, hunting, fruit and medicinal roots planting. I**n other words, the relationship between the use of the shared commons on the plains (chapadas) and their occupied claims in the baixões made livelihood possible for these** *posseiros* (ALVES, 2006).

The expansion of capitalist livestock production in MATOPIBA, which also used the communal lands of the chapadas to release the cattle in addition to occupying large plots of land in the baixões on the banks of the major rivers, established an important relationship with the peasants (both the *posseiros* and those who worked as ranch hands). As ranches accumulated livestock, the ranch owners released their cattle in the areas occupied by the peasants, in a process of appropriating their land, causing them

to move, deforesting the region and opening new spaces to be turned into private properties or into new production areas, inside the farm. Wealth accumulation on the ranches between 1888 and the 1950s corresponded to **the constant appropriation of peasant work as well as the accumulation of the state land they had previously settled**.

Thus, the Land Act of 1850 operated in a very particular way: while it was possible for peasants and ranchers to continue creating new properties and ranches on vacant lands, the State kept recognizing the claims of the ranchers, who made their wealth out of livestock and other commodities as well as out of the lands that they appropriated from the peasants – lands that the peasants had already cleared and now were claimed for free as expansion areas for the ranches (BOECHAT, 2009).

As the territory was occupied, the mechanism of capitalist production and accumulation in the Brazilian rural areas was transformed. Between 1940 and 1960, with the completion of the occupation of the agricultural frontier, that is, with the reduction at national level of areas to be opened and occupied free of charge by the capitalist companies that accumulated wealth and horizontally expanded their production, we can observe a two-way movement:

1. 1. On the one hand, by reducing the possibility of appropriation of new areas at zero cost, a land market was created at national level, in which the land became a marketable commodity like any other, its price being the income that it would generate if it were being used for production, over time, now valued (capitalized) in the time of sale.

2. 2. Peasants were removed both from within the ranches and their settlements and had to migrate and sell themselves as waged workers, since they had no other means of survival except to trade themselves as commodities.

This dynamic is at the root of that period's great rural conflict, as in the example of the Trombas and Formoso revolt mentioned earlier. Peasants were compelled to **become a migrant labor market, to be overexploited in the Brazilian agricultural estates**. By not making workforce available all the time on farms and by acquiring it in the labor market, capitalist production could mechanize and hire such migrants only for the stages of the productive process that needed living labor more intensively, as is the case of cane productions in the northeast coast of Brazil and in the Southeast of Brazil, using what came to be known as the bóia-frias. This a slang term for migrant and overexploited agricultural workers which makes reference to the cold lunch they needed to carry for themselves.

On the other hand, the context of peasant formation in Brazil and their expropriation and transformation into waged workers did not mean the end of the peasantry in Brazil. Many are the cases where peasants maintained a portion or all of their possessions or small properties of land and migrated (and continue to do so) in order to survive. Waged work and peasant livelihood began to form the basis of work possibilities related to both urban industrialization and Brazilian agriculture itself, from the 1950s and 1960s (LEITE, 2015).

The process of expropriation and territorial occupation did not cover the territory as a whole and at once. The present MATOPIBA region of the *Cerrado*, in the Brazilian Northeast, as well as the border formed by the Amazon forest in the Northwest, are currently

experiencing an intense capitalist expansion, now agro-industrialized and mechanized, combining intensive capital influx and overexploited wage work, in addition to promoting the ongoing expropriation of peasants and small farmers, but now in ways different from those we highlighted earlier. So the question now is this: who lives in the Brazilian *Cerrado* today?

PEOPLES CURRENTLY LIVING IN THE *CERRADO*

The peoples and indigenous and traditional communities of the *Cerrado* aare the contemporary heirs of this long history. They represent the social diversity of the biome, and at the same time they are the guardians of the ecological and cultural heritage of the region. There are more than 80 ethnicities of indigenous peoples. The traditional peoples and communities are comprised of *quilombolas* (Afro-descendant communities including those originally formed by escaped slaves), traditional geraizeiros (peasants originating in northern Minas Gerais), *vazanteiros* (river bank peasants in the *Cerrado*), quebradeiras de coco (*Babassu* nut processors), among others, who live in the *Cerrado*, conserve and respect the biome.

Family agriculture and extractivism are important allies on the conservation of the agro-ecosystems since they create productive landscapes, enabling the continuing environmental services provided by the *Cerrado*, such as maintenance of biodiversity, of hydrological cycles and of carbon stock. This entire complex human profile is part of what Barbosa (BARBOSA, 2017) calls Homo cerratensis, the humanity of the *Cerrado*, with specific cultural traits that must be understood in its long formative process, especially due to the current context of social dismantling and fragmentation that the traditional and indigenous communities currently suffer in this biome.

As regards indigenous peoples, according to Professor Altair Sales Barbosa, the system of chapadões (tablelands or plateaus) in Central Brazil is currently inhabited by an indigenous population of around 44,118 scattered mainly in the states of Maranhão, Tocantins, Goiás and Mato Grosso do Sul. This population encompasses 26 nations of different cultural traits, whose current situation and fragmentation does not reflect the importance that the geographic area of the *Cerrado* had in their past, nor the real history of the occupation of this space by the population. In the *Cerrado*, indigenous groups historically developed important cultural processes that molded well-defined societies, in which the hunter-gatherer economy has imprinted spatial and social organizational models with unique characteristics. (BARBOSA, 2017)

Some studies identify the many indigenous groups of the *Cerrado* nowadays as part of the linguistic groups Je and Macro-Jê. On the first group, we can point out the Timbira (which includes Canela, Krinkati, Pukobyé, Krenjé, Gavião and Krahô), the Kayapo (including Kubenkranken, Kubenkrañoti, Mekrañoti, Kokraimoro, Gorotire, Xikrin and Txukahamãe), the Xerente, Karajá, Xavante, Xakriabá, Apinayé (nowadays considered part of the Timbira group), the Suyá, the Kreen-Akarôre, the Kaingang and Xokleng. The biggest linguistic group (Macro-Jê) would also include the Pataxó, Bororo, Maxakali, Botocudo, Kamakã, Kariri, Puri, Ofaié, Jeikó, Rikbatsá, Guató and Fulniô. (SILVA, 2009, p. 51).

There are also the Guarani Kaiowá, who have been targeted with expulsion and, in consequence, ethnocide in many territories of the state of Mato Grosso do Sul, being one of the best known cases, albeit not the only one, of state and landowners violence against the indigenous peoples of the *Cerrado*[5]. It must be also noted that the indigenous inhabitants of the *Cerrado* formed, in 2006, the "Mobilization of the Indigenous Peoples of the *Cerrado*" (MOPIC), whose goal is

5. The *Guarani Kaiowá* have been suffering many attacks from landowners and murderous militias in an astounding scale, as recognized by the National Council of Food and Nutrition Safety (CONSEA), that visited them in the second half of 2016, as well as by the Special Rapporteur of the UN on the rights of the indigenous peoples, Victoria Tauli Corpuz, who conducted an extensive visit to the Brazilian indigenous communities during the first months of 2016 and also noticed growing violence against those peoples.

6. http://trabalhoindigenista.org.br/mopic/.

"to promote a political front to guarantee the rights of the Indigenous Peoples of the *Cerrado*"[6].

The peasants present in the *Cerrado*, in turn, demonstrate the cultural diversity among groups, and it is important to highlight the direct interaction with the indigenous cultures in the biome in the process of the formation and establishment of peasantries. As Silva points out: "The knowledge of the indigenous people of the Macro Jê branch has been transmitted, largely, to the 'Sertaneja (backland or peasant) society' that settled in the *Cerrado*". (SILVA, 2009, p. 55). Doubtlessly, a large part of the peasants' knowledge and practices has an intimate relationship with many aspects of the indigenous culture. A few examples of the peasant groups who live in interdependence with the *Cerrado* are the geraizeiros (people from the North of Minas Gerais), the geraizenses (from Gerais de Balsas, state of Maranhão), the retireiros (people from Araguaia river flooded areas, state of Mato Grosso), the barranqueiros and *vazanteiros* from river banks and islands in the São Francisco River in Minas Gerais, the quebradeiras de coco (*Babassu* nut processors in the palm grove regions of Maranhão, Piauí and Tocantins), the pantaneiros (people who live in the wetlands of Mato Grosso and Mato Grosso do Sul), the camponeses dos vãos (peasants "from the gaps" in southern Maranhão), and other general denominations, such as varjeiros and *ribeirinhos* (people who live on the banks of the following rivers: São Francisco, Paraná and Grande), caipiras (people from the triangle of Minas Gerais and São Paulo) and sertanejos (people from the North of Minas Gerais, Maranhão and Piauí). (SILVA, 2009)

These peasants developed survival and coexistence strategies within the *Cerrado* over the centuries, maintaining an organic relationship with the ecosystem in which they live. What stands out among the activities of those groups is the primary biological production

(extractivism, hunting, fishing) in combination with agricultural strategies that use, in a diverse and complex manner, the different units of the *Cerrado* landscape: slope and valley bottom agriculture, free-range cattle and extractivism at the hills, for example.

The culture of the communities and peoples of the *Cerrado* is still considered to be "backwards" by many segments of the Brazilian society. This prejudice, in addition to a mistaken understanding of the *Cerrado* as a biome with a "poor" soil, characterized by a "demographical void", has led to the formation of a mental picture of *Cerrado* that fails to appreciate its richness. Such a stance has been, for years now, one of the main arguments to legitimize the expansion of the agricultural frontier over the biome (with the same thing is happening nowadays in the MATOPIBA region), and, thus, over top of a huge number of communities and peoples who inhabit and coexist in the *Cerrado*. The discourse that the region is "backward" is a pretense for imposing "progress" and "development" as a solution for the region, which nowadays means agribusiness.

Nevertheless, although the peasants are considered to be backwards, resistant to innovations, traditional, irrational and many other things, one must note that questions of self-sufficiency, autonomy, use-value, emphasis on small-scale, low capital availability, risk reduction, integrated/non-fragmented knowledge, family work and management, and strengthening of the local and internal resources are characteristics, values and strategies of peasants that differ from the modern capitalist logic of agribusiness. They are derived from historical processes that tend to be quite long, as a result from the coevolution of the social and the natural systems. (SILVA, 2009)

TABLE 3 | **. PEASANT CATEGORIES IN THE *CERRADO***

CATEGORY	MAIN CHARACTERISTICS
ENCAMPMENTS	An encampment is formed by organized landless families. The encampment is the space of struggle for land access. The black tarpaulin tents, placed at the margins of the roads speaks out against the capitalist system that has expropriated peasant lands. Encampments are the space of critical conscience formation, despite the inherent hardships to that way of life.
SETTLEMENTS	These are formed by families that have been benefited, after the process of struggle and demands, from a governmental settlement project. The agricultural production of the settlement is, usually, by hand. But, alongside animal traction, there may be new technologies being incorporated with agricultural implements, such as tractors and harvesting machines. In some settlements, the implements are used collectively and coordinated by a cooperative, union or association. Surplus produce is sold in the neighborhood or on the local market. Settlement associations are also spaces for political organization.
UNTITLED LANDHOLDING PEASANTS (POSSEIROS)	Untitled landholding peasants (posseiros) have worked their land and have often held possession of it for years, earning their subsistence from it. The struggle of the posseiros is for the legal recognition of their tenure over the land they are working. Their legitimacy comes from the work they have invested. They suffer from a relentless process of expropriation by alleged landowners, most of them land-grabbers, or companies undertaking large infrastructure projects.
RURAL LABORERS AND ENSLAVED WORKERS	Thousands of workers, mainly in the Brazilian northeast, migrate every year to work on the sugarcane plantations with indecent working conditions, sometimes even in degrading conditions similar to slavery. Sugarcane workers and other laborers are forced to work in conditions similar to slavery in different parts of Brazil. It is estimated that there are around 25,000 enslaved workers in the country. Mostly are between 25 and 40 years old with low levels of literacy who work in sub-humane conditions, without access to a decent wage, proper housing or drinking water, and with curtailment of their freedom.
TRADITIONAL *GERAIZEIRA* PASTORALIST COMMUNITIES	Traditional communities of geraizeira pastoralists in the Cerrado mostly live in the West portion of the state of Bahia and are formed by families that have lived and occupied large stretches of National State's unclaimed lands for centuries. They preserve a way of life based on the collective occupation of the lands organized by zones, and their main economic activity is the raising of free-range cattle that feeds on the native grass. They also harvest the native fruits of the Cerrado and use local herbal medicine for treating many diseases. The main struggle of these societies is to preserve their territories that are threatened with expropriations by the big ranchers, supported by gunmen and the State apparatus.

TABLE 3 | **COUNTRY-DWELLER CATEGORIES IN THE *CERRADO***

CATEGORY	MAIN CHARACTERISTICS
QUILOMBOS (AFRO-BRAZILIAN COMMUNITIES DESCENDED FROM ESCAPED SLAVES)	These are territories settled by of Afro-descendants, originally formed by fugitive slaves or, formed after the abolishment of slavery on distant unclaimed lands. The Quilombo communities are characterized by a deep historical relationship with the space in which they live, by the collective occupation of the land, solidarity among community members, and a harmonious relationship with nature with ethno-cultural and religious dimensions.
ARAGUAIA RIVER DWELLERS *(RETIREIROS DO ARAGUAIA)*	The *retireiros* of the Araguaia river are a social group that is currently being recognized as such following an intense debate over the protection of their territory and the relevance of their identity. They have organized themselves to create a conservation unit, the Sustainable Development Reserve of the Araguaia's Retireiros. Their peculiar way of life is linked to extensive livestock farming in the flooding areas of the lower and middle Araguaia river, in a regime of common property.
VAZANTEIRO COMMUNITIES	The *vazanteiros* live in islands and slopes of the São Francisco River with agriculture linked to the cycles of ebbs and flows of the river. They live by fishing, agriculture, gathering and livestock raising. They are showing themselves more and more as a traditional society looking for support for maintaining their productive and cultural practices, as part of a wider struggle for the recognition of their land rights. They are constantly threatened and at the brink of being evicted for the implementation of State Parks, the construction of dams and projects of mineral extraction.
RIBEIRINHO COMMUNITIES	The *ribeirinhos* live alongside the margins of rivers. Each community has its own peculiarity, with its own beliefs, tales and distinct ways of handling animals, managing plants among other things. These peculiarities make each community unique. Apart from fishing, they grow plants in the yards, which are spaces that contribute for families' subsistence, with a considerable economic impact in people's lives where one can find different species of native and exotic plants, small edible plant gardens and the raising of small animals.
QUEBRADEIRAS DE COCO BABAÇU (BABASSU NUT PROCESSORS)	In the babassu palm region (which encompasses part of the states of Pará, Piauí, Tocantins, and mainly Maranhão), a region of transition to the Amazon forest, one can find many peoples and societies living from the agroextractivism of a few natural resources, such as the more than 300 thousand babassu nut processors (or breakers). The extraction of the babassu nut is a cultural and traditional activity passed on from generation to generation. They are also farmers, living out of the land, producing food for their families' consumption.

SOURCE: SILVA, 2009; ACTIONAID, 2015.

As shown in the previous table, from a socio-cultural point of view, the *Cerrado* shelters a rich universe of traditions, expressed in the relationship of its traditional peoples and communities with its territory, in the festivals, clothing, food, and community relations. The folias, reisados (religious and folk festivals), catira, sussa (types of dance), guitar ballads, among many others, are part of the repertoire of parties, rhythms and dances of the peoples of the *Cerrado*. Now pequi (native tree), buriti (variety of palm tree), and mangaba (fruit) are guaranteed food at the tables of geraizeiros (people from the state of Minas Gerais), while *babassu* (a Brazilian palm tree) is the main source of food and raw material for about 400 thousand *babassu* nut processors, located in Maranhão and the North of Tocantins.

Therefore, the strategy of conservation of the biome must necessarily be to strengthen these communities and their ways of life, which implies guaranteed access to land and its resources. However, these populations do not even find land security in Brazil today, with various projects and threats being handled in the National Congress that have the potential of annihilating these peoples and their rich socio-cultural heritage.

PART 2

AGRICULTURE MODERNIZATION AND COUNTRY-DWELLERS FORCED OUT OF THE BRAZILIAN *CERRADO* SINCE THE 1950'S

From the 1950s, a process of industrialization of agriculture began in Brazil, in an attempt to compete with the other capitalist nations. This would have catastrophic consequences for wage workers (urban and rural) and for traditional rural populations in general. In this process, the support of the Brazilian State, which established subsidized credit policies for the establishment and reproduction of the agro-industry, as well as fiscal exemptions, price management and promotion of the occupation of vacant lands (already occupied by peasants, as we saw earlier), was fundamental. In a matter of a few years, the Brazilian countryside was substantially transformed, thanks to a dynamic that combined technical change with the maintenance and deepening of historical relations of asymmetric power and property in the countryside.

It is worth noting that a determining factor for this role of the Brazilian State was the availability of capital from the international financial system, mainly from the USA and Europe, which, through the external borrowing by the Brazilian State, provided subsidized credits tied to the purchase of machinery that was in excess supply, needing to be sold by the foreign companies that produced them in the centers of capital accumulation. In other words, capitalist crisis and expansion contributed decisively to the formation of the Brazilian agribusiness.

Beginning with the governments of the military dictatorship (1964-1985), the modernization of the countryside became one of the flagships of public policy. From the creation of the National Rural Credit System (SNCR, 1965), through the First National Development Plan (PND, 1968-1973), corresponding to what was known as the "Brazilian economic miracle", international public debt (DAVIDOFF, 1984), inflation, overexploitation of labor (both urban and rural) and **the expropriations in the countryside** intensified and exploded in Brazil.

The establishment of agro-industries in Brazil to produce commodities (currently the main ones are soy, corn, sugar, cotton and concentrated orange juice), intended mainly for export, entailed the implementation of the so-called "Green Revolution" in the field. The package of technology adopted, combining the use of industrialized chemical inputs and machinery for production, cultivation and harvesting, implied a constant increase in the capital invested necessary to start agricultural production and the availability of the wage labor force to carry out such production.

To give an example, the production of sugarcane between the 1960s and 1980s partially mechanized sugarcane planting and most cultivation practices, but continued with manual cane harvesting. In the 1960s, approximately two million workers were employed in the fields in the state of São Paulo, the largest sugarcane producer in the country. By the end of the 1980s, with cane production becoming dominant in the state and making use of the labor of the bóias-frias (migrant farm workers), the number of workers employed fell to five hundred thousand (PITTA, 2011), the majority of which were the bóias-frias. Today, after the commodity price boom of the first decade of the 21st century and after the almost complete mechanization of sugarcane cutting (PITTA, 2016), the number of workers fell to ninety thousand.

The same happened with soybean production, in its expansion from the states of Paraná and Rio Grande do Sul to the state of Mato Grosso between the 1970s and 1980s (BERNARDES, 2007). Currently, with the no-till system of production, manual labor is reduced to brief periods of slave-like work, for example manual stone gathering, which is necessary to protect the combine machines which harvest the soy.

The modernization of agriculture was seen as necessary in capitalist terms as Brazil attempted to approach the productivity levels of the central countries of capitalism. Since the 1960s, this has meant **the repeated expropriation of peasants** and the expulsion of the wage labor force from the productive process, impeding the survival of the expropriated peasants and the migrant workers who had to sell their labor. This process of capitalism is applicable to the city as well the countryside, and it is the explanation for the "structural unemployment" that today is worldwide (KURZ, 1999), with misery and poverty as its direct consequences. The expulsion of labor from the production process of commodities occurs because of the third industrial revolution, characterized by microelectronics and the consequent robotization and automation of industries, both urban and agricultural (KURZ, 1999).

Saskia Sassen has used the term "expulsions" (SASSEN, 2016) to name the fundamental characteristic of expropriations in the world today. In addition to relating them to the speculative movements of financial capital as including globalized capitalist accumulation, she highlights that current capitalism expels labor from the productive process and forms a mass of excluded people living on plots of land that are insufficient for their reproduction and survival (e.g., the situation of indigenous peoples and peasants in MATOPIBA), in addition to creating other conditions of extreme precariousness such as the global process of mass incarceration, refugee camps, and the peripheries and slums of global metropolises (SASSEN, 2016) hus, we could say that for the Brazilian working population, including peasants and wage earners, the labor market, since the third industrial revolution and the industrialization of agriculture, has required them to accept the worst existing working conditions, since competition has lowered and made precarious the conditions of work itself.

In this way, the overexploitation of the worker, working conditions analogous to slavery, unemployment and appropriation of the land or the work of the peasantry are not the result of "backwardness" but of the indebtedness of Brazilian modernization. This picture has not changed; the current continuous process of uncontrolled modernization is a consequence of the unfolding of transnational capitalist competition.

For the capitalist enterprise, in turn, in particular the case of agro-industry, with less and less labor to be exploited and transformed into profits, it was increasingly difficult to make profits, unless they were "simulated"[7] by financial mechanisms, using subsidized credits, tax exemption, price policies above corporate costs, and rollover or amnesty of already subsidized debts (THOMAZ, Jr., 2002). This is precisely the framework that we have found in Brazil since the times of the National Development Plans (PNDs) I and II.

In fact, since the 1970s, support of capitalist enterprise has been increasingly related to the circulation and creation of money in the financial system, especially after the end of the relationship between the dollar and the gold decreed by Richard Nixon (1969-1974) in 1971. After this the International Monetary Fund (IMF) adopted the fluctuation of exchange rates between the countries of the world, with the dollar as a reference point, which continues to be the world standard as fiduciary money. It is worth mentioning here that this fluctuation, coupled with the accumulation of idle financial capital seeking profit in the capital markets, started to allow speculation with prices in a way that was previously unprecedented. Several mechanisms of price speculation and their necessary correlation of price protection were created and developed, promoting the emergence of derivatives markets in foreign exchange, commodity prices and interest rates, among others.

7. The term "simulated" here refers to Marx's (1985) concept of "fictitious capital", to refer to a critical accumulation made by means of money that becomes more money, as in the use of financial mechanisms, without exploitation of sufficient labor in the form of added value for capital accumulation. We will use this term in the rest of this report.

In Brazil, the second National Development Plan stimulated policies of expansion and industrialization in an attempt to "remedy" the trade deficit, deepened by the oil crisis of 1973. PROÁLCOOL (1975, **aiming at the substitution of oil for ethanol**) was created, and PRODECER (1979, **for the expansion of soybean production in the** *Cerrado*, export-oriented), with abundant resources coming from SNCR (National Rural Credit System). The programs were fundamental for the industrialization of Brazilian agriculture, using extensive US and European financing (with guarantee and endorsement from the Brazilian State), subsidized credits, price policies, tax exemptions and building of infrastructure. With the process of mechanization and the expulsion of labor from the commodity production, it was only possible to keep companies profitable while international interest rates remained low because of the international crisis. When interest rates began to rise in the international market, the mechanism that "simulated" corporate profits, namely the inexorable increase in foreign debt and the roll-over of corporate debt, ceases to function and thus both urban industries and the agribusiness, went bankrupt (PITTA, 2011).

For the creditors in the centers of capitalism this meant the reduction of their interest income, which led to changes in their financial structures, mainly from what was known as the **flexibilization of the financial markets** from the securitization of debts and constitution and deepening of secondary (derivative) markets for commodity prices, shares and rates (foreign exchange, interest, insurance), and debt packages. We will return to this in the next chapter, but it is worth mentioning that it was Brazil's participation in this new structuring that allowed the transfer of its external debt to domestic debt (PITTA, 2016 and OLIVEIRA, 2016), the appreciation of Brazilian currency and the commodity boom of the 21st century, responsible

for the inexorable expansion of agribusiness (DELGADO, 2012) in a new round of territorial expansion and expansion over MATOPIBA.

In order to understand the particularities of the **soy agribusiness expansion in the MATOPIBA region, which combines the states of Bahia, Maranhão, Piauí and Tocantins**, we must go back to two major programs related to Brazil's 2nd National Development Plan (II PND): the *Cerrado* Agricultural Development Program (POLOCENTRO), in effect between 1975 and 1979, and the Japan-Brazil Cooperation Program for the Agricultural Development of the *Cerrado* Region (PRODECER), effective between 1979 and 2001. Both aimed at **increasing soy productivity and yield**, in order to try to solve Brazil's balance of trade problem. Investments in infrastructure to reduce freight costs, as well as in research on genetic adaptation of seeds and application of agricultural inputs, also depended upon the contributions of the Brazilian State. This set of measures made it possible for **the takeover of the** *Cerrado* **by soybeans**.

Soy production has taken over the *Cerrado* region, starting with the central-west region of Brazil, in the states of Mato Grosso, Mato Grosso do Sul and Goiás, as well as the state of Minas Gerais; and later with PRODECER, western Bahia, as well as southern Maranhão, southern Piauí and, more recently, southern Tocantins. The expansion of soy planting has driven the occupation of the *Cerrado* since the 1970s and intensified land expropriation processes, both in terms of directly forcing peasants, indigenous populations, and small farmers out of that area, as well as in terms of concentrating and centralizing the many different parts of production and processing in the hands of a few businesses and trading companies (MENDONÇA, 2013).

In Paraná, Mato Grosso do Sul and Mato Grosso, we must definitely highlight the intensification of the expropriation process of Guarani populations (Kaiowá, M'byá, Ñandeva and Avá ethnicities)[8] from the lands where they lived. Many were arrested and forcibly relocated to meager patches of land in the outskirts of towns in those states. The settlements they were taken to were created in the first half of the 20th century by the public office responsible for indigenous policy (the Indian Protection Service, SPI) and were characterized by their small area and insufficient resources to support the Guaranis' livelihood, who end up having to sell their over-exploited labor to agribusinesses producing commodity crops in the Brazilian countryside.

The enormous expansion to the *Cerrado* areas of Mato Grosso do Sul and Mato Grosso as of the 1970s led less-productive soy farmers to sell their lands and yields and migrate to places with cheaper land prices that were not yet taken over by industrial agriculture, thus promoting an expansion of the soy frontier both north to the Amazon forest and northeast to the *Cerrado*, including to what we call the MATOPIBA region today.

Tax incentives and the construction of local infrastructure, and especially the promotion of land occupation at low prices (i.e., the State encouraging illegal land grabbing) have constituted a mechanism of expansion and occupation in which the land was a key element of accumulation with respect to the expanding soy frontier: expropriations were done to create ranches, wait for soy plantations to arrive and sell the land for that purpose[9]. At that moment, land became a commodity and was made part of a national land market, beginning in 1950, as we saw previously. This trading of land as a commodity in a land market was called

8. On the expropriation of the Guaranis, watch documentary films *The Dark Side of Green* (*À sombra de um delírio verde*, 2011) and *Martírio*, 2016. Also see the following research reports by Brazil's Social Network for Justice and Human Rights: *The Sugarcane Industry and the Global Economic Crisis* (XAVIER, NAVARRO, PITTA & MENDONÇA, 2012) and *Empresas Transnacionais e Produção de Agrocombustíveis no Brasil* (XAVIER, NAVARRO, PITTA & MENDONÇA, 2014).

9. To better understand that process in the MATOPIBA region, specifically Piauí, see Alves, 2006.

by Ariovaldo Umbelino Oliveira "the rent-seeking of capitalism in Brazil" (OLIVEIRA, 2010, p. 84).

After taking over the *Cerrado* areas of the country's central-west region, in the 1980s the expansion reached Bahia and, as of the 1990s, arrived in Maranhão and Piauí[10]. After the introduction of industrial soy production, its expansion depended on new access to the borrowing and mechanisms of financial accumulation, feeding back into promises of new expansion in order to access new funding, and continuing the process of land occupation. As shown in a debate at the Chamber of Deputies (the lower house of Brazil's National Congress) in the early 1980s, the establishment of PRODECER was criticized and attacked.

> (...) desperate with an overwhelming external debt, which is nothing more than the result of a flawed economic policy, the Brazilian Government – unable to staunch its external indebtedness – now uses as a tactic, a plan to increase its debt as a way to pay that very debt. Part of that plan is our agriculture internationalization program materialized in the Brazil-Japan Cooperation Program [Prodecer] (...). Handing over our territory to the Japanese to create a new Jari Project, this time, the '*Cerrado*'s Jari Project' will cost the Nation – according to a report by the JAPAN INTERNATIONAL COOPERATION AGENCY – JICA – one billion, three hundred, twenty-eight million dollars, to implement railways, highways, ports, silos and warehouses, in addition to tax measures regarding land acquisition, access to credit, provisions to create agricultural co-operative operations, etc. so the product can get to Japanese consumers at cheaper prices, reducing their food dependence of the United States (CHAMBER OF DEPUTIES, 1980, p.1-2)[11].

10. We highlight, in the case of Maranhão, that land grabbing in the chapada (plateau) areas in the city of Balsas, as thoroughly described in Roberto Miranda's doctoral dissertation (2011), was the starting point for the agricultural modernization processes in that area. In 2015, Brazil's Social Network for Justice and Human Rights released the report *A empresa Radar S/A e a especulação com terras no Brasil* (PITTA & MENDONÇA, 2015) [a shorter version of it, called *Foreign Pension Funds and Land Grabbing in Brazil*, is available in English], in which it showed how trans-national rural real estate companies were interested in speculating with land as financial assets in this very chapada area in Balsas. We will address this case later on.

Based on the need to support the financial "simulation" (see note 5 above) for commodity production, we may infer both the expropriation of Brazil's peasantry and the over-exploitation of their salaried workforce were not, from the mid-1960s on (in Brazil and abroad) enough to allow for capitalist accumulation (SCHOLZ, 2016), even though that also happened as a consequence of this modernization process.

The financialized expansion of the soy agribusiness to Bahia, Maranhão, Piauí and Tocantins led to the expropriation of indigenous populations and peasants in many different ways. The high and plains areas of the chapadas were top priority in terms of occupation. It's where crops could have access to an appropriate rainfall regime, and also where the *Cerrado*'s river springs are located. Being plains areas, the chapadas were also appropriate for mechanization, thus enabling center-pivot irrigation in some cases. Because these lands were commonly used both by peasants and herders, but were not usually a place where the local population would live, the narrative was often that they were empty and uninhabited. But, as we have seen, the chapadas were extremely important for the livelihoods of the local population, because it is where they would pick fruit and medicines, hunt and graze their cattle in certain periods of the year, according to temperatures and wet and dry seasons.

The (mostly illegal) occupation of the chapadas through soy planting expansion made it impossible for the local populations to continue to use the land, and closed the frontier that allowed them to continue to move around as the industrial agricultural production advanced. These populations were thus displaced from the chapadas. Many were communities that ceased to exist, especially the ones who lived on top of the chapada plateaus. The community members

11. In Portuguese: *"(...) desesperado com uma dívida externa avassaladora que nada mais é do que o resultado de uma política econômica errônea, o Governo brasileiro — incapaz de estancar o débito com o exterior — usa agora como tática o plano de aumentar a dívida como forma de pagar a dívida. Insere-se nesse plano o projeto de internacionalização de nossa agricultura materializado no Acordo Brasil Japão [Prodecer] (...). Essa entrega de nosso território aos japoneses para criação de um novo Projeto Jari, desta feita, o "Projeto Jari do Cerrado" custará aos cofres da Nação — de acordo com relatório feito pela JAPAN INTERNATIONAL COOPERATION AGENCY — JICA — um bilhão, trezentos e vinte e oito milhões de dólares, para implantação de ferrovias, rodovias, portos, silos e armazéns, além de medidas fiscais relativas à aquisição de terras, créditos, providências concernentes à criação de operação de cooperativas agrícolas, etc. para que o produto possa chegar mais barato ao consumidor japonês, diminuindo sua dependência na compra de alimentos dos Estados Unidos."*

permanently migrated to the outskirts of cities, went on to live in the slums of major urban centers and sell their labor when they could find a job.

The communities who lived in large lowlands known as baixões were often allowed to continue informal land tenure. Sometimes they were also displaced from the baixões and migrated as well. Those who were able to retain a place to live were only allowed areas that were not enough to support their livelihoods, because the chapadas were no longer available for common use. The members of these communities who lived in the baixões started to join the labor market as migrant / short-term rural workers. During growing seasons, for example, they migrated to industrial agricultural production areas where wage workers were hired under miserable work conditions, as is the case of sugarcane production in Brazil's center-south region and the exploitation of rural workers known as boias-frias.

By the end of the sugarcane harvest, short-term migrant workers would go back to their homeland in the baixões and tend their own crops while they waited for the next harvest season to begin. It is worth pointing out that most of the time men were the ones to migrate, while the women stayed taking care of their families and crops. In this way, we would argue that the takeover of the agricultural frontier by the expanision of soy planting made it impossible for peasants to maintain the livelihood conditions they had beforehand. But we will see that this situation further deteriorated in the 21st century, as commodity prices boomed in international markets, even though that did not mean the end of these indigenous populations and peasants.

The expropriation of small farmers from the plains of the so-called Gerais de Balsas, in the south of Maranhão, is accentuated by the

expansion of soy monoculture in MATOPIBA. In his doctoral thesis, Roberto Miranda (2011) recovered the history of land grabbing in this region, deforestation, the formation of big farms and the sale of land to soybean farmers from the Center-South. The promise of the arrival of soy production speculatively promotes the beginning of land grabbing in the Gerais de Balsas.

According to Miranda (2011), the supposed scheme to access vacant lands occupied by peasants would have led to their expulsion - according to the reports of these peasants collected by the author in field work (MIRANDA, 2011), allegedly by security guards hired by businessmen which would have promoted the illegal appropriation of land, and maintained relations with local authorities (MIRANDA, 2011). A second round of alleged land appropriations would have occurred, as Miranda (2011) suggests, through three South-South business enterprises: CODECA (Colonizadora De Carli), Terra Soja (from the same group), and AGROSERRA. Miranda describes the possible land acquisition procedure as the action to raise a number of "stakeholders" who would have given their names and documents so that companies could register land in their names as squatters, regularize possessions, and transfer them by proxy to the companies. At the same time, Miranda (2011) claims that company officials pressured the peasants of the Gerais de Balsas to informally sell their land. We reproduce here the research of Miranda (2011):[13]

> Between 1993 and 1995, the (...) agronomist working for Terra Soja was able to legitimize 9,000 hectares of land around the springs of the Tem Medo River as owned by 46 claimants of land tenure, none of them actually from there; right after that, he was able to turn all titles into one sole property in his own name.

12. The land-grabbing scheme known in Brazil as *grilagem* is the forgery of land ownership with the purpose of simulating an illegal land grab was legitimate. The term *grilagem*, which comes from the Portuguese word *grilo*, or *cricket*, refers to the practice of keeping forged documents with crickets so that they would worn out the papers and make them look like old and legitimate.

13. Reports on the violence inflicted abound in Roberto Miranda's dissertation (2011). In response to the allegations made by Miranda (2011), the company CODECA, consulted for this report, stated: "It is important to note that CODECA company was constituted 22 years ago, with the aim of promoting the development of the Brazilian agriculture. On the other hand, the company TERRA SOJA worked in the real estate and business advisory business, being inactivated since the year of 1999. TERRA SOJA never possessed a handful of land in its existence. We have no relationship with AGROSERRA. The company CODECA or any of its partners is not related to actions of land grabbing in any State of the Federation. On the

> He used the names of straw men who were his employees. He would come with their Taxpayer ID Number (CPF) and as soon as the poor devil handed over his CPF to get that title, he'd already sign the power of attorney document with the office of the notary public, handing over all powers to him. Then, he [the agronomist] would get their CPF and the power of attorney document. With the title, he'd register it with the office of the notary public and transferred it to himself. Altogether (...) in that area [CODECA] managed to get hold of something like 140 land titles (...) (MIRANDA, 2011, p. 156).[14]

After they were able to grab certain patches of land, these land grabbers used – and still use to this day – a practice known as abraço, or hugging, i.e., they ended up fencing an area thousands of hectares larger than what was stated in their previously-secured forged documents (OLIVEIRA, 2016, p. 392). Because they had relationships with members of the Executive, Legislative and Judicial powers, as well as with local offices of the notary public, it was easy to legitimize those "hugged" lands. This is still a common practice today, as we will see further on.

In the 1990s, SLC (Schneider Logemann Company) Agrícola S/A was established in the region of Gerais de Balsas. SLC Land Co., a real estate arm of SLC Agrícola S/A in partnership with the English investment fund Valiance Capital, owned some of the farms acquired in the 1990s. Radar Propiedades Agrícolas, a joint venture between Cosan S/A and the TIAA-CREF (Teachers Insurance and Annuity Association of America – College Retirement Equities Fund), also acquired lands in the region of Balsas Gerais and where ranches were set up in the 1980s and the 1990s. We will discuss these transnational real estate corporations later in this report. However, it is worth

contrary, they have contributed decisively to the development of areas located in the State of Maranhão, generating hundreds of jobs (direct and indirect). As an example of this pioneering action, see the installation of the Batavo Cooperative in the Municipality of Balsas-MA, with the decisive support of CODECA, which acquired private lands, donated lots, lands, areas where they built their houses and warehouses, donated lands to construction of silos, schools, churches, community centers, made roads, deployed telephony, set up a modern water distribution system and as them had no power, set up a large generator set to supply power until the government fulfilled that commitment. "

Given the divergence between the available information and the possible impacts generated by the alleged irregular land acquisition, it is not for us to establish the judgment nor the affirmation of absolute truth about these allegations, but to make explicit concern with its possible social and environmental consequences. We suggest that the divergent statements should be checked by the responsible bodies.

mentioning that Radar S/A acquired its lands from CODECA, in the 21st century, and **these lands can be most likely characterized as grabbed, as previously explained**.

Alves (ALVES, 2006) analyzes the expropriation and land grabbing in western Bahia in the 1980s and southern Maranhão in the 1990s; however, the author focuses on the expropriation processes in the south of Piauí, with an emphasis on the 21st century. For example, both SLC Agrícola, SLC Land Co. and Radar S/A owned lands in the south of Piauí, in the city of Santa Filomena. The Radar S/A lands were also bought from the same owner of CODECA and Terra Soja, in Balsas-MA, Alto Parnaíba-MA and Santa Filomena-PI.

The prospect of agro-industrial production expansion due to the Brazilian external debt rollover drove expropriation and land-grabbing processes in MATOPIBA in the 1970s, 1980s and up to the 1990s. The promise of new infrastructure in the form of railroads and roads boosted expropriation and land-grabbing processes, as in the cases we have discussed thus far, because it created opportunity for differential income taking advantage of natural soil productivity in new locations and reduced freight costs.[15]

The promise of implementing the Northern Export Corridor (with roads, rail and shipping connecting through the Itaqui Port in São Luís, in Northern Maranhão) in 1990, after initial soybean production was deemed feasible in the region, contributed to the deepening of expropriations, creating a speculative relationship between new ranches set up and the demand for land to expand soy production. Such relationship was strengthened with the emergence of agricultural real estate transnational companies that demanded land as financial assets in MATOPIBA as of the first decade of the 21st century.

In the first half of the 1990s, after the Brazilian moratorium of 1986 and the Real Plan, the State's subsidies for agricultural

14. In Portuguese: "*O (...) agrônomo a serviço da Terra Soja, conseguiu, entre 1993 e 1995, regularizar 9.000 ha de terra na cabeceira do rio Tem Medo em nome de 46 posseiros, nenhum deles da localidade e, logo em seguida, converter todos os títulos em uma única propriedade no seu nome.*

Ele usou nome de laranjas empregados dele, vinha com o CPF e imediatamente quando o cabra dava o CPF para fazer aquele título já assinava procuração no cartório para ele com todos os poderes, então ele pegava o CPF e a procuração. Com o título ele registrava no cartório e transferia para ele. Ao todo (...) [a CODECA] conseguiu naquela região (...) mais ou menos 140 títulos de terra (...)."

15. Defined by Marx as "Differential I Income".

industrialization dried up and several companies went bankrupt, which also led to a decrease in the prices of agricultural land in the country (DELGADO, 2012). However, in the second half of the 1990s, the BNDES resumed credit for agricultural production, resulting in a new wave of land occupation in the Brazilian *Cerrado* fed by a cycle of higher commodity prices in global futures markets (KURZ, 2011 and DELGADO, 2012). Such cycle occurred between 2001/2002 (with falling prices after 2008/2009 and a sharper fall in the 2012/2013 harvest season). In this new and more recent phase of soybean production territory expansion, the invasion of the MATOPIBA *Cerrado* was even greater, encompassing Bahia and Maranhão again, but finally reaching the south of Piauí and Tocantins, as we shall see in the next chapter.

PART 3

AGRIBUSINESS EXPANSION IN THE MATOPIBA REGION AS THE 'LAST FRONTIER' FOR AGRO-INDUSTRIES IN THE CONQUERING OF THE *CERRADO* IN THE 21ST CENTURY

From the late 1980s and early 1990s, the international financial system underwent profound changes with regard to its ability to create money, i.e. making money that becomes more money without directly using work to generate it. After the Latin American debt crisis and the moratorium on countries such as Mexico (1983) and Brazil (1986), the financial system developed mechanisms to securitize debts and to negotiate the prices of financial assets (so-called derivatives) in secondary markets. Such mechanisms enabled the increase in market liquidity and the overall advantage of companies, while, most importantly, strengthening the dependence between production of goods and financialization of the economy.

> This opened a financing circuit that leveraged the resources offered to borrowers in general, via the capital market. This circuit starts with the generation or "origination" of assets by the capital market, also in charge of promoting securitization and negotiation, with which new resources are obtained and later used to generate new assets, re-feeding the circuit. Thus, the so-called technological revolution simultaneously reduced the competitive advantage of banks in lending activity, boosting the capital market. Finally, the growth of institutional investors, especially that of pension funds, is another competitive force operating in a market previously restricted to banks. The origin of this type of fund is related to the privatization processes of the social security systems of several countries, as well as the development of the complementary pension industry. It is worth mentioning that the banks reaction to this fierce competition also had an expansive effect on the capital market. The diversification towards off-balance sheet activities, especially in the derivatives market is an example (SILVA, 2007, pp. 8 and 9, apud Oliveira, 2016, p.91).

In the excerpt above, it is important to emphasize what the author characterized as "circuit feedback". The securitization of debts meant that financial institutions could pass on credit risk to high ranges of investors, since they started to sell several types of debt as financial assets in the capital market. In addition, the possibility of trading the prices of such assets in the secondary derivative markets (i.e. capital markets capable of trading securities prices or debt packages, interest rates, foreign exchange, credit insurance, as well as futures Commodities) increased exponentially the liquidity of these markets and the demand for part of financial capital over accumulated for such types of investments.

In sum, this process spiked price inflation of the world financial assets and drove back the creation of new assets to be invested. The financial "simulation" of corporate profits, including those of commodity producers, was no longer created via a debt rollover; instead, it was based on the inflation of financial assets.

Delgado (2012) explains how the 2001/2002 so-called commodity price boom drove the expansion of agro-industries in Brazil, thanks to the incentives resumption through the BNDES during the second term of Fernando Henrique Cardoso's government (1999-2003):

> This reinvigoration effort, reinforced by the exchange rate situation of 1999, was well received by global traders in the 2000s in regards to half a dozen rapidly expanding commodities, soy and corn, sugar-alcohol, meat (beef and poultry) and cellulose industries, which along with the mineral products grew strongly and dominated the Brazilian exports during the 2000-2010 period (DELGADO, 2012, page 95).

At this point, it is important to revisit the logic of financial assets inflation described above, which began to dominate the movements of capitalism, from the mid-1990s, so that we understand the exponential expansion of agribusiness in Brazil from that moment on. It was the technology companies' stock prices inflation, in the Nasdaq stock exchange, which drove the US capitalist accumulation in the 1990s – and the rest of the world economy from this central point. The logic of inflation of financial assets, in turn, is related to a speculative rise in the price of a certain asset, which attracts new investors in search of income, but which eventually leads to abrupt deflation (such as the financial bubble burst) of such asset and to bankruptcy of companies associated to the asset in question, including productive ones.

From 2001, technology companies' prices plummeted (BRENNER, 2003) and idle financial capitals began to seek value in new assets that could absorb a quick and profound inflation. The two main ones were commodities and US and European real estate (DELGADO, 2012 and KURZ, 2011), with their inflated prices traded in futures markets (commodity derivatives).

The feedback process of asset inflation driven by interweaving capital markets with the productive sectors of the capitalist economy became explicit in the US housing crisis. Securitized investments, both for construction of real estate and for personal credit for their acquisition, spiked up real estate prices. In addition, homeowners could mortgage their real estate at rising prices and still keep consuming, which boosted and inflated the US economy in the first decade of the 21st century. Along with their mortgages, homeowners could even buy new properties, turning them into a "cash machine", thus boosting price hikes – which made the process seem endless.

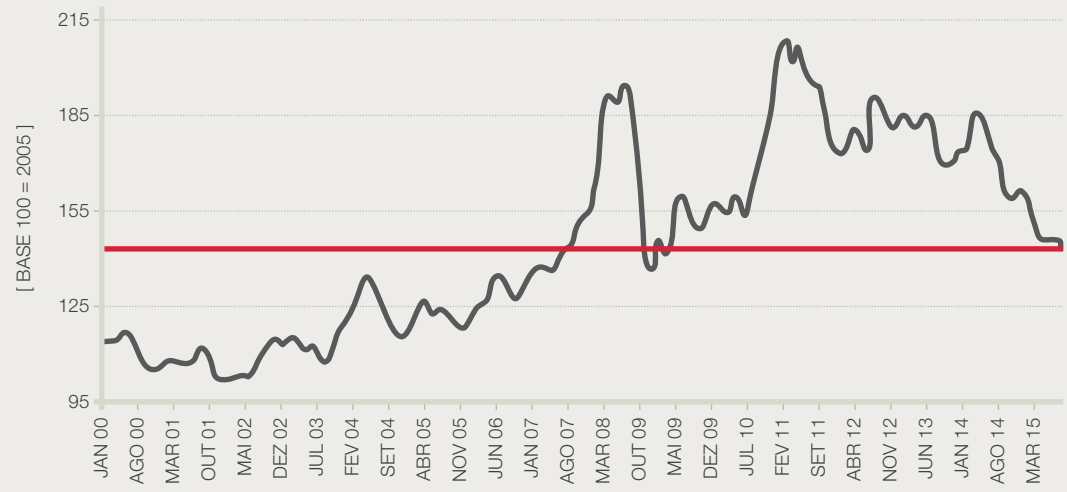
On the other hand, the structural unemployment of the world capitalist economy, due to the high mechanization of productive processes, does not lead to an increase in work, nor does it promote the sufficient increase of wages to pay the debts acquired through asset inflation. This consequently leads to a deflation of the asset prices when the financial expansion is unable to feed the momentum of a given speculative bubble. In fact, the capitalist economy has become a casino, with asset prices in secondary markets that began to influence the transnational production of goods in the world (PITTA, 2016 and SASSEN, 2016, p. 100).

The exorbitant amounts of financial investment in real estate in the US and Europe also occurred with respect to the overall commodity markets. Pension funds and so-called hedge funds, with enormous pots of money in search of gains, also drove the speculative rise in the prices of tradable commodities in futures markets, where a price promise is negotiated for a future transaction.

Given that from these futures prices it is possible for commodity producers, trading companies, and the processing industry to gain financing in cash on the promise of production to be delivered in the future, we are faced with a feedback scenario on tendency of the price increases in these markets. In a sense, one could say that the greater the ability to produce a commodity (the financial assets of commodity producers and trading companies), the greater the ability to acquire advances on a promise of future production. When large commodity-producing companies open their stock markets and add their stocks as financial assets, the possibility of feeding back into the inflation processes of financial asset prices increases exponentially, as is the case of companies such as SLC Agrícola S/A (a soybean producer) and Cosan S/A (producer of sugarcane, sugar, ethanol and electric energy from the burning of sugarcane bagasse).

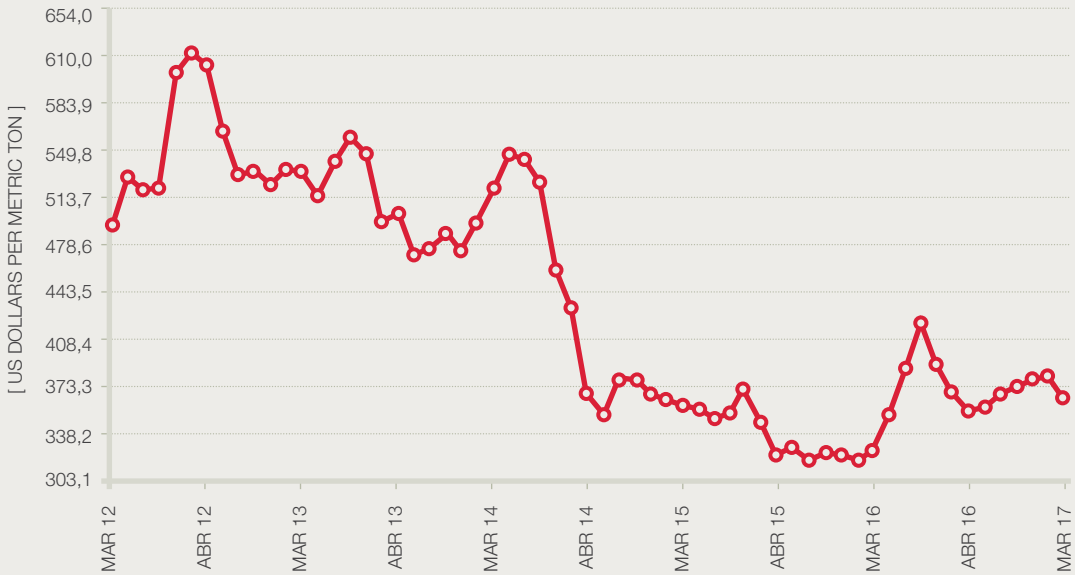
It should be pointed out here that the passage from the "simulation" of capitalist accumulation through debt rollover to asset inflation through the (financial) capital market is still much related to actual of commodity production: but it treats any and all commodities as financial assets, determining which should be produced and which will not be based on the speculative logic of the financial bubbles. This applies to the production of sugar, soybeans, iron ore, oil and even to land (SASSEN, 2016, p. 100).

PICTURE 3 | **INDEX OF AGRICULTURAL COMMODITY PRICES DEFLATED BY NORTH AMERICAN INFLATION**



SOURCE: SERIGATI, 2015.

PICTURE 4 | **INTERNATIONAL SOYBEAN PRICE [2012-2017]**



SOURCE: SERIGATI, 2015.

With the global economic crisis starting in 2008 (KLIMAN, 2012), there was a sharp drop in commodity prices (KURZ, 2011 and DELGADO, 2012), as speculative capital migrated to low-risk and low-yield securities such as US government bonds. After a first fall, prices resumed an inflationary process, falling sharply, however, from the middle of the 2012/2013 harvest. Much is said about the rise in commodity prices immediately prior to the 2008 crisis (OLIVEIRA, 2016). Given the functioning of this futures market, prices tend to rise with promises to expand future production, just as it happened between 2007 and 2008, when the Food and Agricultural Organization (FAO) announced a food crisis for the following years. It is worth mentioning, however, that this bullish trend was soon reversed by the impacts of the global economic crisis on investor funds in the commodity futures markets.

At that first moment of price deflation in these markets, several companies went bankrupt. Many had been speculating on currency exchange, making use of the loans made on promise of future production (FARHI & BORGHI, 2009). Many sugarcane mills went bankrupt because of their high indebtedness, backed by rising sugar prices in the previous years. After 2012 and 2013, the situation deepened even further (PITTA, 2016; CERDAS, 2015) and the current Brazilian economic crisis has an important connection with the movement of global capital presented here.

> Thus, the Brazilian prosperity of the last years rests on feet of clay. Export success is mainly based on industrial and agricultural raw materials, such as iron ore, sugar, ethanol (biofuel from sugar cane), coffee, and meat. The sharp rise in prices boosted growth and foreign exchange reserves. With a global recession, this process can be quickly reversed (KURZ, 2011, p.1).

The rise of commodity prices, as we have seen, resulted in extremely increase in areas of cultivated land, and the production and productivity rates in the Brazilian agribusiness. In that period, soybean expansion finally reached the MATOPIBA region, which combines the states of Bahia, Maranhão, Piauí and Tocantins (PITTA & MENDONÇA, 2015). This was no longer a settlement of the agricultural frontier to develop the Brazilian labor and land markets, as we saw in the years 1950/1960. **Now it was for the accumulation of financial assets** to back up the new promise of expanding the production of such assets, driven by their inflated prices in the global derivatives markets. From 2000 to 2014, soybean and sugarcane farmed land in the MATOPIBA region rose by **253% and 379%, respectively**. (CERDAS, 2016). In the case of soybeans, the farmed land soared from 1 to 3.4 million hectares.

This shift in the Brazilian agribusiness then required exponentially higher levels of expansion capacity in the financial markets, and this did not only entail increased productivity, but also more land planted with these commodities. The combination of increased production and productivity at these levels has also driven the inflationary rise that we have seen in the price of land.

Even after the decline in commodity prices, land prices were still going up, causing discrepancies between the earnings from the production of commodities on a certain type of soil and the capitalized income from the land deriving from the trading of land as a type of financial asset (DELGADO, 2012; PITTA & MENDONÇA, 2015).

Sassen (SASSEN, 2016, p. 100), looking into the transformation of land into financial assets as a result of the creation of a global land market and the creation of transnational real estate farming companies (PITTA & MENDONÇA, 2015), makes the following point

about the acquisition of land by these transnational organizations, exponentially more relevant after the 2008 downturn:

> The acquisition of foreign land is not an isolated event. It requires and, in turn, fosters the creation of a vast global land market. It involves developing a likewise vast service infrastructure to allow for sales and purchases, to obtain title or lease rights, to develop appropriate legal instruments and even to push for new laws that can better accommodate these purchase transactions in a sovereign country. This infrastructure goes far beyond supporting the purchase itself. Not only does it make it easier, but also encourages new land acquisitions by foreigners. This increasingly sophisticated specialized service industry makes up new types of contracts and forms of ownership and creates innovative accounting, legislation and insurance instruments. As it develops, it depends, in turn, on new acquisitions of foreign land as a source of profit. This is the emergence of large-scale commodification, which may lead to the financialization of a commodity that we continue to call "land" (SASSEN, 2016, p. 100)

Today we see an actual rush to conquer the lands in the *Cerrado* region, and this comes prior to the expansion of infrastructure. As agribusiness evolves, so do investments in highways, railways, hydroelectric plants, etc., much of which is purely speculative, yet it leads to further expansion of other sources of capital accumulation in the biome. To get an idea, EMBRAPA has found 3,970 potential projects in the MATOPIBA region alone, including power, transport, logistics and urban/social projects, which, if successfully completed, would involve massive intervention in an area that already is a major investment in itself. (CERDAS, 2016).

Not surprisingly, many transnational commodity producers, such as Cosan S/A, SLC Agrícola S/A, BrasilAgro, Sollus Capital, TibaAgro through VisionBrazil Gestão de Investimentos e Participações Ltda., from mid-2008/2009[16], set out to invest in land as the main financial asset of their businesses. In some cases, publicly traded companies, such as Cosan S/A and SLC Agrícola S/A, have set up branches of transnational real estate farming corporations in order to trade agricultural land as an exclusive business. These include companies such as Radar Propriedades Agrícolas S/A and SLC LandCo., respectively owned by the two companies mentioned above, in partnership with pension funds (including the aforementioned TIAA-CREF) or other international investors (PITTA & MENDONÇA, 2015).

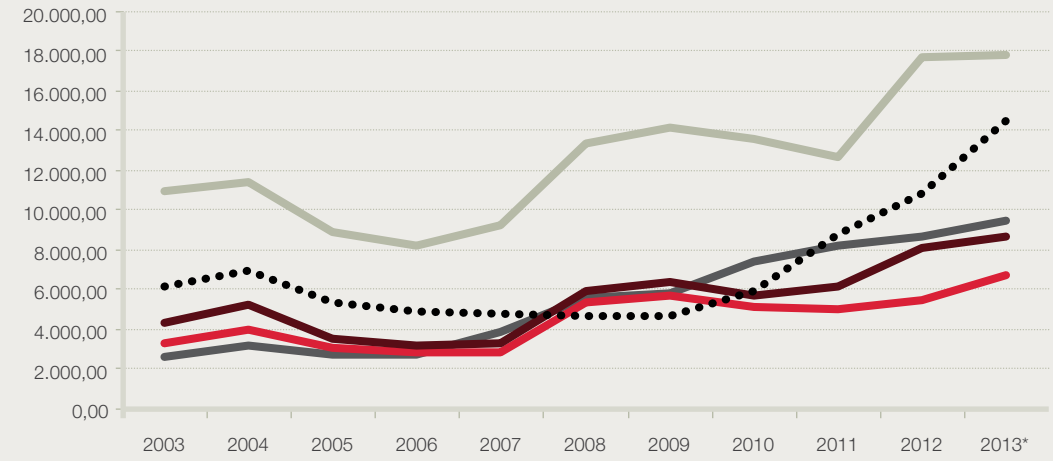
As we have seen, the rise in commodity prices on international futures markets has driven the expansion into new areas to produce these commodities. They achieve relatively high productivity, due to high mechanization rates and low incorporation of labor in the production process. This was how soybean production has massively reached the plains (chapadas) of MATOPIBA and taken over untitled chapada lands, **many of which have been used by peasants and small farmers throughout the centuries**. When these areas, including native *Cerrado* lands commonly used by local rural populations, are deforested and put up on the land market as legalized properties, they can be developed at a very low cost and priced accordingly, raising capitalized income from their sales, once productivity is increased by tilling the soil and establishing soybean production infrastructure in the area.

It is true that MATOPIBA features very favorable conditions for increasing the productivity of soybean cultivation, allowing the producers to earn good type I differential income (taking advantage of natural fertility and location) and type II differential income (income deriving from the incorporation of technology into the original

16. See the following news: "Megaprodutores consolidam a última fronteira" [Giant producers establish the last frontier] (*Valor Econômico*, April 1, 2013) and "10 grupos têm um terço da nova fronteira da soja" ["10 groups have one third of the new frontier of soy"] (*Valor Econômico*, April 1, 2013).

characteristics of that soil). This raises land market prices and makes it a very relevant business for the soybean industry, which, by opening up new areas and pricing them by implementing soybean production, secures a major financial asset for its business, with the possibility of selling the land afterwards or incorporating it into its portfolio as an asset to inflate the corporations' stock prices. It is worth noting that the rise in stock prices can back up further debt that can be used for investment, and the promise of future production spurs on the expansion of areas and the incorporation of new lands, which then feeds into the companies' rising stock prices.

PICTURE 5 | **LAND PRICES IN THE MATOPIBA REGION**

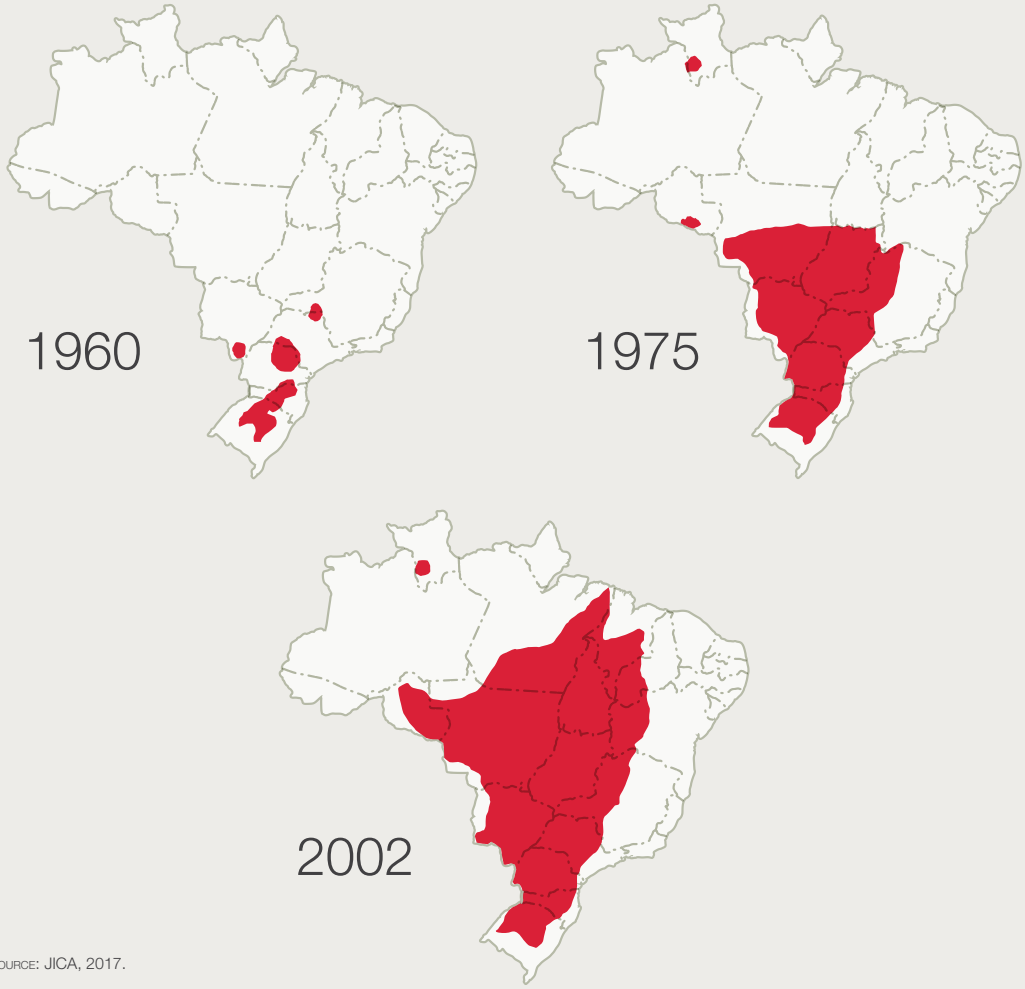


SOURCE: FNP.
ORG.: Débora Lima. Prices recalculated by September 2014 IGPM value.

The consequent rise in land prices resulting from the rise in commodity prices on the international futures markets, in turn, has also triggered further land grabbing, either directly by transnational landowners illegally taking over lands or by third parties planning to sell those lands because of the speculative rises in the land prices. The rise in the land prices driven by the growing demand from transnational agribusiness corporations promotes more cases of land-grabbing, expropriation of peasants and deforestation of *Cerrado* areas, as in the MATOPIBA case studied here, with the social and environmental consequences that will be presented below.

As for the occupation of the *Cerrado* by soybean agribusiness in the decades that preceded the commodity boom, the chapada lands, ideal for the planting of soy monoculture, were mostly already taken. There had been a rotation of crops including corn, eucalyptus, sugar cane and cotton. However, in western Bahia, southern Maranhão, southern Piauí and southeastern Tocantins, many of the chapada areas still had native *Cerrado* vegetation. These were taken over by the expropriation and grabbing of untitled lands, and subsequent deforestation by ripping up trees from the ground using chains stretched between tractors. Figure 7 shows this process, and how, until 2002, just at the beginning of the price boom, there was a soybean rush in the *Cerrado* as a whole, including the MATOPIBA region:

PICTURE 6 | **SOYBEAN EXPANSION IN BRAZIL, 1960-2002**



SOURCE: JICA, 2017.

In 2002, with soaring prices and the biggest surge in soybean farming in MATOPIBA, rural communities were even more surrounded and pressured by the big farming corporations, with less land to produce than they once had, in some cases "constricted and confined" (KLUCK, 2017, P. 18, note 6) to small blocks of land. The widespread and recent impacts are devastating, as we saw in more than one field investigation carried out in the region, notably in communities from the region of Santa Filomena, in Chapada Até que Enfim in southern Piauí; and in Balsas, in Gerais de Balsas in Southern Maranhão. In both of these areas, SLC Agrícola and Radar S/A have landholdings and soybean production activities. In Santa Filomena, Insolo also operates.

IMAGE 1 | **CHAPADA ATÉ QUE ENFIM / SANTA FILOMENA (PI), 2001**

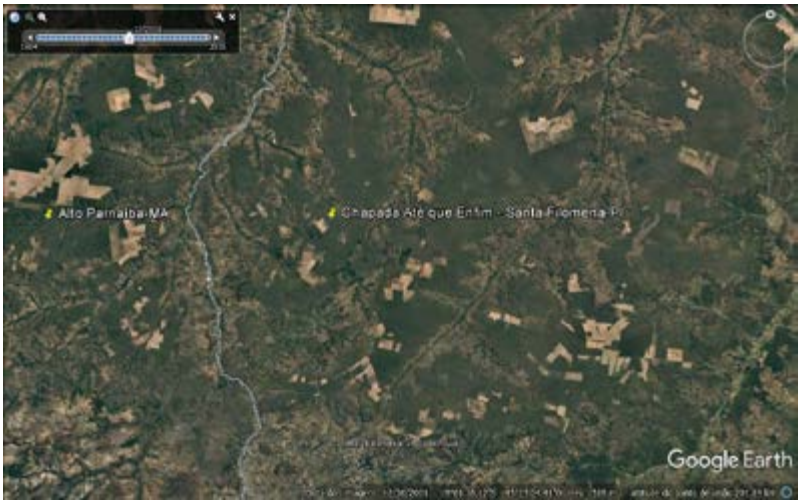


IMAGE 2 | **CHAPADA ATÉ QUE ENFIM / SANTA FILOMENA (PI), 2008**

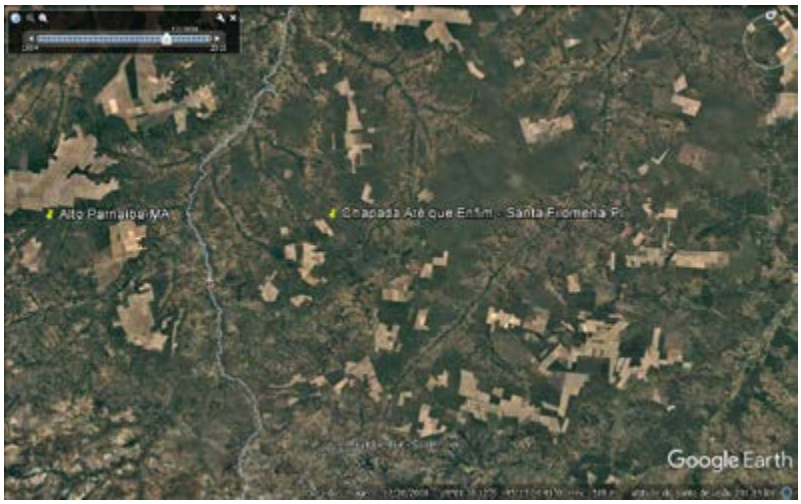


IMAGE 3 | **CHAPADA ATÉ QUE ENFIM / SANTA FILOMENA (PI), 2017**

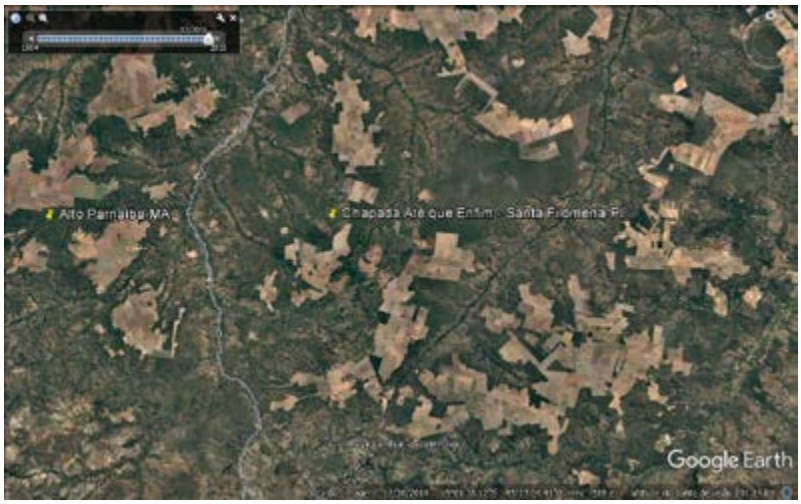


IMAGE SOURCE:
PICTURES 1, 2 AND 3:
GOOGLE EARTH,
May 2017.

The widespread deforestation of the *Cerrado* areas in the chapadas, as visible in the historical sequence of satellite photos, changed the local rainfall levels and made the dry season longer than it used to be. Many rivers dried up, as their springs have been destroyed by the soybean plantations, and water table depletion also reduced the amount of water going down to the lowlands, locally known as baixões. Note that the peasant communities live in these lowlands, where they need water to drink and grow their produce, and where they fish to feed their families. Without rivers and wetlands, living in those areas is impossible.

The use of pesticides by agribusiness has caused other serious socio-environmental problems. Agrotoxins are often sprayed from airplanes, contaminating rivers and the water table, killing fish and the crops of rural populations. Because of this, there is a growing number of reported cases of people with cancer and contaminated food. The technological package used by agribusiness disperses pests and diseases that spread to the fields of the rural population, often destroying their crops, making livelihoods unviable.

Deforestation of the chapadas and the *Cerrado* vegetation extinguishes many species of the local fauna, which could be hunted to feed the rural populations, who no longer have this source of food.

Soybean farms increasingly use center-pivot irrigation from dams located in the chapada areas to compensate for the declining rainfall rates in the region, further worsening the drought that affects those areas.

Moreover, with regard to the continued harassment of the lands of Indigenous and Afro-descendant peoples and peasants, it should be emphasized that land grabbing and expropriation per se are still ongoing. In addition to the completely devastated chapada areas, the plantations are not complying with the laws requiring the

maintenance of a 35% preserved *Cerrado* vegetation, and farming corporations have started to buy, grab and fence some lowlands, which are precisely where the rural population live and do their farming activities:

> Peasants from the lowlands were the first to be impacted by the recent invasion, since the privatization of the chapada lands also included the bottom lands and valleys, which separate the plains. For modern agriculture, these lands are not currently relevant in terms of farming, but are used to comply with environmental laws, as it is required to set some areas aside for permanent preservation. Since the agribusiness owners want to remove the maximum amount of vegetation from the flat uplands for farming purposes, then the lowlands are the what remains to comply with the environmental laws.
>
> By acquiring plains that also hold lowland areas, business owners or real estate speculators often oppose peasant landholders remaing on the land, urging the families to leave, either by coercion or by trying to convince them to accept money (usually ridiculously low amounts of money) to clear the lands of human occupation (ALVES, 2006, p. 181).

In addition, flat lowlands are now being grabbed for the intensive industrial production of cattle, and for the implementation of center-pivot irrigated soybean farming. In fact, these forms of assault and invasion of lowlands are the most recent ones as reported by the rural communities through recent field research. We have heard very recent cases, in Santa Filomena, in Chapada Até Que Enfim, of communities that had entire lowland areas fenced and guarded by armed guards employed by soybean farmers. In those lowland areas, the communities would collect their firewood

and go hunting, while, at the moment, they cannot enter those places, under threat of death.

The practice of hugging or "abraço", previously mentioned, is still being used by land grabbers (grileiros). These land grabbers may be locals, prominent businesspeople from other regions, soy producing companies, or even transnational agricultural real estate companies. It is important to highlight that the land grabbing and expropriation process do not necessarily occur directly because of transnational agricultural real estate companies, but due to land asset inflation and the prospect of price increase in the land market, which is linked to the perception that such real estate companies or agro industrial companies will have more demand for land, leading to more expropriation and land grabbing in the area. For example:

> In the Piauí State *Cerrado* area, there are countless recent cases of rural workers who have been forced out. In Bom Jesus, several complaints were filed at the Municipal Rural Worker Union on expropriation of informal land tenure holders over the last few years. Moreover, there has been conflict between communities located in the lowlands, stimulated by land speculators interested in taking over land belonging to peasants. Documents with lowland residents' testimonies are archived at Bom Jesus labor union. Such testimonies show an accelerated growth of land trade between some informal land tenure holders and mechanized farmers resulting in losses to other residents in the area.
>
> In 2005, some complaints had already been filed with the labor union; the main complaint regarded a conflict in Serra do Pirajá, in Bom Jesus and Currais municipalities, an area consisting of uplands and lowlands. Part of that land, mainly the uplands, has

> been distributed by the Piauí State government to associations of so-called agricultural producers from other states, especially from Rio de Janeiro. (…). Long-term residents still hold ownership of the other part, located in the lowlands and also in the the plains. However, some informal landholder families complained that peer families were selling their land and other family's land to agribusinessmen. Whistle-blowers denounced a powerful real estate speculator who quietly incentivized some informal landholders to sell their part of the land or even to wrongfully increase their land area by taking over land from other families, allowing them to make more money. Even after closing the deal, the speculator would not only pressure other families to sell their land but also would expand the area of the property by means of counterfeiting agrarian documents. (ALVES, 2006, p. 182)

We are now facing **multiple approaches to land grabbing and expropriation of rural communities for land speculation**. It begins with the State, which, in distributing the public flatlands, **simply ignores the centuries-long communal use of these areas**, expropriating the communities of such uses, from areas that should be theirs by right, even if they do not hold titles to them, given the long period during which they have made their livelihoods there. Then, the land speculator, after accessing such areas, practices the so-called abraço ("hugging" or embracing of lands), illegally expanding its properties by means of enticement and persuasion, direct violence, and forgery (OLIVEIRA, 2016, p. 392). New increases in the price of land bring a return of those processes, since the opening of new farms at practically zero cost, which may only occur on public lands, as we have shown. These speculators, the direct land grabbers, will later sell these areas to larger real

17. MILU, 2015. Available at: <**https://youtu.be/uhrzWCj93SM**>.

estate companies, including transnational corporations, or they become part of an agribusiness or large real estate company.

As a result, the rural communities are increasingly confined to small plots of land, since both plains and shrub lands are now the targets to agricultural real estate speculation. When the members of those communities migrate to sell their labor, they cannot find work, given the level of industrialization and automation of the capitalist productive processes, which are the result of capital accumulation itself and its contradictions. Thus, there are countless reports of residents who, confined to small parcels of land, submit themselves to the worst working conditions available on the market. The fact that they must employ themselves as "slave-like" workers in the very agribusinesses that expelled them from their lands is one of the most tragic facets of this process: working on the spraying of chemical toxins, picking up stones and clearing stumps, or clearing the land for soybean crops (that is, assisting in the setting up of the same plantation that has expropriated them).

Many peasants migrate to the outskirts of the cities and maintain houses in the countryside and in the urban areas. In the cities, these workers make up the populations of the favelas (slums) and are subject to informal labor conditions, drug trafficking, and various forms of survival that although unlawful, are the only ones available. In many cases, they end up confined in prisons, becoming part the current process of global mass incarceration (SASSEN, 2016).

As for rural women, they often work in large cities as housekeepers or day laborers. In the cycle of commodity boom that Brazil went through, which related to a similar cycle of the automobile and real estate industry, many men went to work in construction, in major construction projects (such as the Belo Monte Dam) and in the stadiums built for the 2014 World Cup. When the global economic crisis

fully hit Brazil from 2013 onwards, with greater intensity in 2015, such possibilities of selling their labor were over for most of the population, with official unemployment rates amounting to 13 million workers (more than 12% of the work force). Official data, however, may not be accounting for the current extent of unemployment in Brazil.

Some forms of reclaiming land are still possible today. The documentary film 17 sonhos e uma cerca (MILU, 2015, https://youtu.be/uhrzWCj93SM) portrays the struggle of a rural community from the Rio Preto settlement in Bom Jesus, Southern Piauí, in an area close to the land-grabbing process reported in the excerpt from Vicente Alves (2016), quoted above. After years of struggle that includes instances of death resulting from the conflict against land-grabbers in the plateau, they obtained demarcation of their lands by the INTERPI (Piauí's Institute of Lands). Whether by mistake or in bad faith, these lands were officially demarcated in the wrong coordinates and in a smaller size than expected, therefore, the conflict with land-grabbers is still an issue today, although the lands have already been officially demarcated and ownership established. In other words, not even that process seems to have been enough to halt the assault by land speculators on rural lands.

It is important to be clear that community land rights should be recognized in the areas that have long have been their home (the land is theirs by right, even if they were grabbed years ago, as in the case of some the flatlands in MATOPIBA that were grabbed in the 1980s/90s). It is essential that communities be allowed to reclaim ownership. There is no statute of limitations, the forgery of land titles by land-grabbers does not expire as a crime, since the false documents continue to be used to this date, yielding large profits for land speculators, including transnational ones.

Current land regularization laws, such as the Piauí State Law No. 6709, of September 28, 2015, aimed at securing areas for rural communities, as well as, areas occupied by agribusiness production (soy, maize, sugar cane, cotton, eucalyptus, cattle, etc.), simply try to maintain the status quo of territorial occupation, which, as we have seen, is a scenario where the expropriation of previous forms of livelihood of indigenous and peasant peoples has already occurred. The current state of territorial occupation in the region has become, in many situations, a type of confinement (KLUCK, 2017) of rural communities, which are surrounded by agribusinesses, subjected to harassment by real estate speculators, and forced to accept the worst working conditions in a national labor market characterized by structural unemployment.

In fact, continuing demand for land as a financial asset requires us to question the outcome of land regularization, since it not only legitimizes the appropriation of illegal lands of the past, but also sets the conditions for the possibility of regularized evictions, since small land owners continue to be harassed by farmland speculators. This happens because the demand for land is determined by the "simulation" of accumulation through the financial logic of asset inflation (including land) in globalized monopoly capitalism (OLIVEIRA, 2016), a.k.a. the patriarchal commodity-producing world system (KURZ, 1999). As Sassen points out (SASSEN, 2016, p. 144), the financial system has the potential to swallow everything from small housing in suburban areas to large tracts of strategic resources, subjecting entire peoples, economies, and governments to the system's criteria of success.

CONCLUSION

In short, MATOPIBA presents itself as an area of recent expansion within a historical process of expansion of agribusiness in the Brazilian *Cerrado*. Over this time, the predatory process that has been going on for almost five decades, has led to the systematic expulsion and disruption of the rural communities in the region, developing diverse ways of life-based on land ownership. The Brazilian government, in turn, has taken no steps towards protecting peasants, traditional and indigenous people's rights. Such groups are being literally crushed by the advancement of capital in the countryside and finding no sustainable alternatives for survival in their former lands or in urban areas, which are unable to provide adequate services and housing to social groups whose existence cannot be reduced to a process of precarious and exclusionary urbanization. In urban environments, those traditional groups and communities are completely disfigured and their reproduction as groups is completely unfeasible, which ultimately leads to their extinction.

All this makes the case for agrarian reform and regularization of indigenous and traditional people's lands more urgent than ever. Such land regularization must be implemented in a way that actually protect the rights of those groups against the voracious advance of capital. The ongoing deterritorialization cannot be halted only by means of mitigation measures. It must be corrected by attacking the structural core of inequality in the countryside, namely the historical exclusion of peasants and indigenous and traditional peoples from land and territory, a process that runs through Brazilian history and has continued to express itself in the globalized, financialized contemporaneity, when new actors reproduce old structures and assure capital to control strategic resources for its seemingly endless reproduction. Land regularization of properties home to *Cerrado* peoples must take into account

each group's characteristics, as well as, taking into account the groups already covered by legal provisions (indigenous, *quilombolas*, *Babassu* coconut shellers), and those groups that still are not recognized as traditional peoples by the government. Yet, it is mandatory to aim at preserving such peoples and making sure their rights are fully protected.

Apart from the dramatic social consequences of agribusiness expansion and in all capital modalities in the Brazilian *Cerrado* (and especially in MATOPIBA), we must highlight the environmental impacts that excessive deforestation, intensive land use and water pollution are causing and will continue to cause in the coming decades. In the euphoria of agribusiness expansion and large enterprises, no one seems to have thoroughly weighed in that depletion of large aquifers, water tables and waterways already accounts for incalculable damage. Through an integral perspective that includes the fauna, the vegetation cover, and the human populations, one realizes that life can simply exist without an adequate water supply. Today, such fundamental resource is mainly used to cater for agribusiness interests, depriving society as a whole from benefiting from a common good that has increasingly been depleted and privatized.

The impacts of this scenario on climate change should also be studied because *Cerrado* devastation is potentially damaging to the hydrological cycle on a global scale. Out of the 204 million hectares that make up the *Cerrado*, 100 million have already been destroyed, with a rate of deforestation even higher than that of the Amazon. The way the *Cerrado* has been plundered makes it account for a large percentage of greenhouse gas emissions in Brazil, where 75% of emissions are caused by changes in land use, mainly caused by deforestation and controlled burns to open fields for farming soybean crops and/or cattle raising.

18. Available at: <**http://semcerrado.org.br/**>.

The ideas set forth herein reflect tendencies that are currently hegemonic, dominated by powerful state and private actors, national and transnational actors, which skillfully run mechanisms in the large financial markets on a global scale or those that serve them, including the State, the media, and various centers to legitimate their power. Nevertheless, we cannot end this document without mentioning the multiple *foci* of local resistance to the advances of agribusiness that are often neglected or ignored, but still reflect the fierce struggle for the survival of historically excluded peoples.

As aforementioned, since colonial times, indigenous peoples and peasants have struggled against being forced out of their lands and territories; yet, these groups have defended their ways of life and are organized in movements, networks and campaigns in an effort to have their voices and demands heard. As regards MATOPIBA, it is a region rich in experiences of social struggle, where local or regional movements have been working together and are gradually building mechanisms to defend, promote, and protect their rights.

MOPIC (Mobilization of the Indigenous Peoples of the *Cerrado*) has already been referred to, however, it is also important to highlight other organizations, such as MIQCB (Inter-State Movement for *Babassu* Coconut Shellers), the Traditional Peoples and Communities Network of Maranhão, as well as, various movements fighting for agroecology, rural workers unions and family agriculture, as well as, their respective federations, environmental associations and movements, women, *quilombolas*, social pastoral organizations, lawyers, the academia and the Public Prosecutor's Office in solidarity with the struggle of the peoples of the *Cerrado* and even the presence of international non-governmental organizations, including Action Aid, which is concerned about the future

of the *Cerrado*, its peoples, and Brazil. For instance, the National Campaign for the Defense of the Cerrrado[18] has already articulated more than 50 local, regional, and national players in Brazil, united with the objective of preserving this biome for present and future generations.

Thus, even in the face of an extremely worrying scenario, there is still time to articulate and act for the preservation of the *Cerrado*, making those who are devastating visible, and inviting citizens to mobilize in support of environment and traditional people's advocates. In recent years, there has been increasingly more room for articulating efforts to preserve the *Cerrado* due to the deleterious effects of agribusiness expansion in the delicate Brazilian biomes. We hope that this document will contribute to a better understanding of the current framework, its antecedents, as well as, the logic that supports the current wave of contemporary capitalism, so as to impose limits on it and assure that the entire society may benefit from common goods. Moreover, to assure that *Cerrado* peoples have the right to inhabit the lands and territories that have long provided for their survival. The Brazilian society depends on such survival. Should the current trends be not reversed in the near future, all Brazilians, in urban and rural environments alike, who may not feel affected now, shall suffer the effects caused by long-term damage to *Cerrado*.

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