Transnational corporations and land speculation in Brazil

NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS

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Text: Network for Social Justice and Human Rights
Administrative assistance: Marta Soares and Claudia Felippe
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Introduction

Since the early 2000s, the Network for Social Justice and Human Rights (*Rede Social de Justiça e Direitos Humanos*) has been conducting research and publishing reports, books, and articles on rural Brazil and the impacts of policies on rural communities. The analysis in this report follows from previous studies we have produced on the economic, social, and environmental impacts of the expansion of monocropping of commodity crops and agrofuels, with special attention on the new mechanisms that national and transnational corporations are using to exploit farmland as a financial asset.

The region known as MATOPIBA[1], most of which is located in northeastern Brazil, is being targeted for speculation in farmland and the expansion of agribusiness. Agribusiness relies on tax incentives and subsidized credit from the state to finance soybean, corn, eucalyptus, cotton, and sugarcane production. The surge in land prices in MATOPIBA has made it an area of particular interest to land speculators. These speculators are able to acquire the land at low prices through a process where farms are established on "*terras devolutas*" or public lands of common use[2], often through an illegal practice known as *grilagem*[3]. The process is causing deforestation of much of the native *Cerrado* biome. Once farms are converted to commodity production, the price of the land tends to rise.

The territorial expansion of monocropping is spurred on by financial actors, mainly foreign pension and investment funds, with ties to Brazilian agribusiness. The interests of these international financial companies are not in conflict with those of the local landowning oligarchy. On the contrary, the well-known mechanism of *grilagem* is used in the new frontiers of agricultural expansion, often to facilitate the entry of these international actors into the local land market. This process intensifies the exploitation of labor and the violence against indigenous peoples, *quilombola,* and peasant communities.

In our recent research on the expansion of monocropping for the production of agrofuels (www.social.org.br), we noted that after the global economic crisis of 2008 (especially since 2014), there has been a downward trend in the prices of agricultural commodities on the international market. At the same time, however, the price of farmland in Brazil has continued to rise, revealing how the land market has become "detached" from the agricultural commodities market. This, together with our studies of the rural real estate companies created during this period, enabled us to observe the process of land speculation that is the focus of this research report.

The Network for Social Justice and Human Rights would like to thank the organizations, social movements, and university colleagues that contributed to this work. We would like to give special thanks to the *Comissão Pastoral da Terra* (CPT, Pastoral Land Commission) for its key historical role in the defense of rural peoples' right to land and territory.

[1]MATOPIBA is the acronym for the Brazilian states of Maranhão (MA), Tocantins (TO), Piauí (PI), and Bahia (BA). It was coined in media reports and government projects. In academic works, however, the term BAMAPITO is more commonly used, as this refers to the historical process through which soybean was introduced to the plateaus of the Cerrado biome in the states discussed in this text. It should be noted that the state of Tocantins belongs to the northern region of Brazil.

[2]"Terras devolutas" are parcels of public land that are often used by small farmers who do not have the title to the land. As they have used the land for years, they acquire the right to own and use it by occupation (usucapion). The official term "terras devolutas" or "vacant land" gives the erroneous idea that the land is unused and/or unoccupied. In this article, we will use the term "public land of common use".

[3]"Grilagem" is an illegal form of land appropriation in Brazil that has existed for many years. Considered a crime under Brazilian legislation, "grilagem" consists of fencing off large plots of public land and legalizing ownership by falsifying land titles. The term comes from the practice of storing counterfeit documents in boxes with crickets ("grilos"). The insects make the falsified documents look old so that they appear to be legitimate. Normally, this strategy involves state representatives, such as notary offices and judges, who are responsible, respectively, for registering and legalizing ownership of a given plot of land in Brazil. The public land illegally appropriated by "grileiros" has often been used over decades by peasant, indigenous, and quilombola communities for their livelihoods and subsistence.

1. The socio-environmental characteristics of the *Cerrado* biome

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

The *Cerrado* is the second largest biome in Brazil (after the Amazon). It has an area of approximately 2.036 million km² (24% of the national territory) and is home to 5% of the planet's biodiversity. It covers the Federal District and ten states: Goiás, Mato Grosso, Mato Grosso do Sul, Tocantins, Maranhão, Bahia, Piauí, Minas Gerais, São Paulo and Paraná. Totaling around 1,500 municipalities, it extends to the northeast of Paraguay and eastern Bolivia (MMA, 2009, p. 4).

Table 1: Percentage of Brazilian states originally covered by the Cerrado biome

State	Percentage covered
Federal District (DF)	100
Goiás (GO)	97
Tocantins (TO)	92
Maranhão (MA)	65
Mato Grosso do Sul (MS)	61
Minas Gerais (MG)	57
Mato Grosso (MT)	40
Piauí (PI)	37
São Paulo (SP)	33
Bahia (BA)	27
Paraná (PR)	2

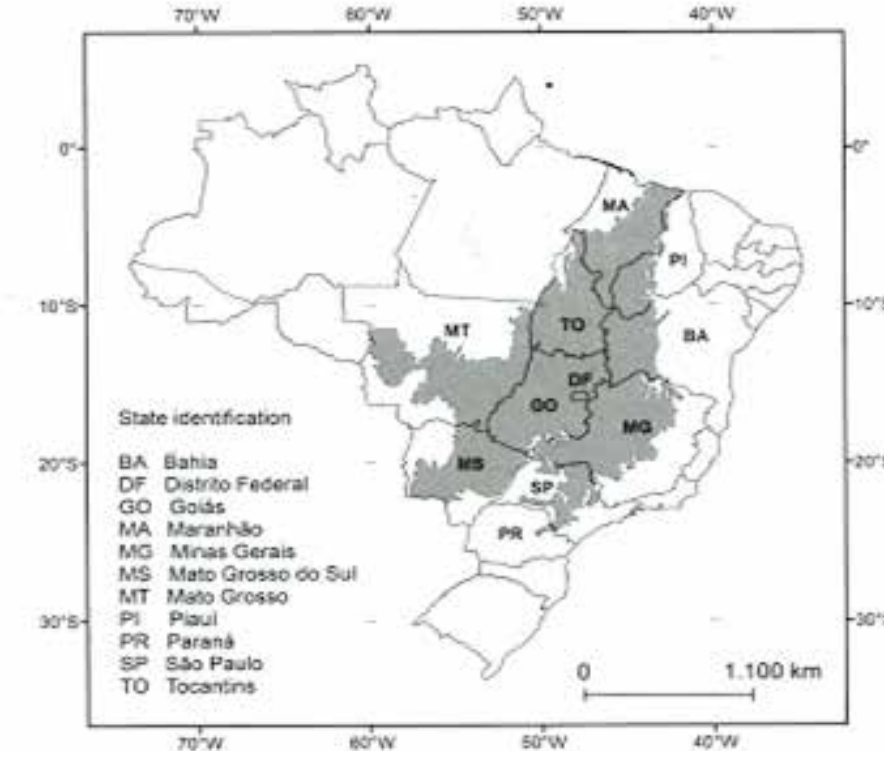
Source: Ministério do Meio Ambiente (MMA, Ministry of the Environment), 2009.

The *Cerrado* is considered the richest savannah in the world due to its biodiversity and size. Three large aquifers — Guarani, Bambuí and Urucuia — are located in it. They contribute to the formation of two-thirds of Brazil's hydrographic regions: Amazon (4%), Araguaia-Tocantins (71%), Western Atlantic and Northeastern Atlantic (11%), São Francisco (94%), East Atlantic (7%), and Paraná and Paraguay (71%). According to the *Carta dos Extrativistas e Agroextrativistas do Cerrado* (Letter from Extractivists and Agri-extractivists of the *Cerrado*):

> The rivers that form Brazil's large hydrographic basins – the São Francisco, Doce, Jequitinhonha, Jaguaribe, Parnaíba, Araguaia-Tocantins, Xingu, Tapajós, and Madeira (in the Amazon) river basins – originate in the *Cerrado,* as are the ones that form the Paraguay and the Paraná-Prata basins. [...] The fact that two of the largest continental wetlands on the planet - the Pantanal and the Araguaia – are connected to the *Cerrado* is often ignored (ECODEBATE, 2012).

A wide variety of vegetation thrives in the *Cerrado*, including different types of "*campos*" (grasslands) and gallery forests. This extraordinary diversity is the result of the multiple types of soil, topography, and climates that exist in central Brazil. The *Cerrado* is home to numerous kinds of native herbaceous plants, shrubs, trees, and vines that together total 12,356 species, plus 11,627 species of native vascular plants (pteridophytes and spermatophytes) (MMA, 2009, p. 15), 250 mammal species, 837 bird species, 1,200 fish species, and 150 amphibian species. Many of them are endemic (44% of the flora, for example, is endemic). This describes only a part of the biome's wealth, as it is estimated that 320,000 animal species exist in the *Cerrado*; this number is especially due to the tremendous diversity of insects that make up 28% of its biota (MMA, 2009; BENSUSAN, 2016).

Map 1. The Brazilian Cerrado



Source: JICA, 2017

Due to its size and natural complexity, the *Cerrado* is fundamental to the preservation of the Amazon. Though apparently very different from one another, the *Cerrado* and the Amazon form one dynamic unit. The interaction between the two is often ignored, unknown, or underestimated. The same can be said of the other Brazilian biomes. Because of its location on the central plateaus of Brazil, the *Cerrado* is intimately tied to the Pantanal, the Caatinga, and the Atlantic rainforest: it is the point of equilibrium between these biomes (BARBOSA, 2008). At the meeting places between the *Cerrado* and the other biomes, known as "transition areas" or "ecotones" (MMA, 2009, p. 12), biological complexity and diversity is even greater as a result of the delicate interactions between them. According to Altair Sales Barbosa, one of the most renowned Brazilian specialists on the *Cerrado,* this biome should be seen as a bio-geographical system made up of several interdependent subsystems (BARBOSA, 2008).

It is important to take its enormous diversity into account. The *Cerrado* is not a homogenous unit, but rather a diversified set of environments (because of the composition of the vegetation and the diversity of wildlife) that constitute different subsystems: plains, *Cerrado*, "*Cerradão*", woodland, riparian woodland, wetland, and swamps.

Photo: Vicente Alves, January 2017

Table 2: Subsystems of the Cerrado biome

Subsystem	Characteristics
Cerrado Plains	Flat areas found in the most elevated parts of the *Cerrado,* regionally known as *chapadões* (plateaus) or *campinas*. There are strong winds almost all year round and temperatures are usually much lower than in the other subsystems. Drainage is negligible. Small lakes sometimes appear, some of which are permanent. The vegetation is characterized by sparse shrubs and dense grasses spread over the area.
Cerrado	This is the predominant landscape of the *Cerrado* biome. While it too has a stratum of grasses, what distinguishes it from the plains is the presence of small, twisted trees. Drainage is good. The soil is not naturally fertile, nor is it homogenous throughout the entire area.
Cerradão	This subsystem is physiognomically more robust than the *Cerrado* subsystem. Trees grow to between 10 and 15 meters high and the soil is more fertile. A grassy stratum is predominant, as in the *Cerrado,* and the trees have larger crowns. Drainage is significant.
Woodland	They occur in naturally fertile patches of soil and sometimes appear as an island in the middle of a predominantly *Cerrado* landscape, known as *capões*. They may form large, compact, and homogenous areas. Classic examples are found in Mato Grosso and Goiás.
Riparian woodland	This subsystem develops as narrow strips near the headwaters and along the banks of streams and rivers. The configuration of these strips varies significantly. In some places, they spread out to form a forest, while in others, they almost disappear, as can be seen in several places in Tocantins.
Wetland and swamps	The areas near the headwaters of some streams and rivers are sometimes waterlogged due to the overflow of the water table or certain characteristics of the soil that render it impermeable. In these areas, one can often find *buriti* and *buritirana* palm trees growing along the edges of the waterway – and even into the middle of some rivers – and composing a beautiful landscape. There is also a lower stratum of grassland that remains green throughout the year. In some areas, the overflow of the water table may even form lakes surrounded by *buriti* trees (botanical name: Mauritia vinífera).

Source: BARBOSA, 2008.

There are eleven types of vegetation in the different subsystems, classified as types of forests, savannah, or plains. This is why texts describing the *Cerrado* depict it as a rich *mosaic* of vegetation and fauna that form a special environment, which is different from the savannahs of Africa and Australia (BENSUSAN, 2016, p. 6). This wealth is under serious threat, as half of the biome has already been destroyed. According to a document by the Ministério do Meio Ambiente (MMA, Ministry of Environment):

> The *Cerrado* is one of the biomes in Brazil under the greatest threat of losing what remains of its vegetation cover. Deforestation and forest fires are changing the landscape, fragmenting habitats, and causing the extinction of species, the invasion of exotic species, soil erosion, the pollution of aquifers, the sedimentation of rivers, and an imbalance in the carbon cycle, among other kinds of damage. Advances in the technologies designed for its exploration by agriculture have allowed it to be exploited rapidly and intensively in a short time. The activities of the farming and steel industries have already led to the loss of approximately half the original native vegetation. Between 2002 and 2008, the rate of deforestation was higher than in the Amazon, when the proportion of the biomes' total area is taken into account (MMA, 2009, p. 7).

Despite the extraordinary biological and cultural importance of the *Cerrado,* only 2.94% of its area is protected by federal conservation units, of which 0.92% can be exploited for sustainable use and 2.02% is under full protection. State conservation units cover an additional 4.98%, which means a total of 7.92% is officially protected by conservation units. Nevertheless, these protected areas do not guarantee that its socio-biodiversity is effectively protected, as government monitoring is weak.

As for the *Cerrado's* geomorphology, according to the Ministry of the Environment's description, the biome is situated on sedimentary or crystalline plateaus that form large, homogenous blocks separated by a series of peripheral or inter-plateau depressions (known as *baixões*, or lowlands). This geomorphological variation helps explain the distribution of different types of vegetation. The top of the plateaus (500 to 1,700 m above sea level) is generally flat and covered by the vegetation of the *Cerrado* subsystem. Riparian forests form galleries along the banks of rivers and other waterways. In contrast, although flat and interrupted by residual reliefs, the peripheral depressions (100-500 m) are much more heterogeneous, as they are covered by different types of vegetation, such as that of the *Cerrado,* mesophytic forests, and large riparian woodlands (MMA, 2009, p. 15).

Although it is common for government and corporate discourse to depict the *Cerrado* as a vast "empty" area, in reality, its occupation by humans dates back at least 13,000 years. The *Cerrado* is currently home to 25 million people, or 15% of the Brazilian population, living in approximately 1,500 municipalities. The indigenous people of the *Cerrado* faced the violence of the colonial occupation, which was intensified by the "*bandeiras*" – that is, the expeditions of Portuguese fortune hunters in search of slaves and precious stones and metals. In the 17th century, the first villages were established in the mid-west region, which later gave rise to the first cities (MMA, 2009).

In the 1930s, the occupation of the mid-west intensified with initiatives such as the Vargas government's "March to the West". The goal was to promote the integration of the national territory by providing incentives to stimulate migration to the region, for the creation of an internal market, and the building of cities (such as Goiânia and Brasília) and infrastructure, such as large highways (BR 163, which connects Belém and Brasília, and BR 364, which connects Cuiabá to Porto Velho). This integrationist strategy caused major changes, conflict, and violence. The Trombas and Formoso rebellion in the north of Goiás from 1950 to 1957 is an important historical moment in Brazilian peasants' fight for land.

The biome is home to over 80 indigenous ethnic groups, including the Karajás, Avá-

canoeiros, Krahôs, Xavantes, Xerentes, Xacriabás, and Tapuias, as well as various "traditional" peoples (peasants whose means of production is land). The latter group includes *quilombola* communities (descendants of Afro-Brazilian slaves), *geraizeiros* (traditional peoples living in the *Cerrado* in the state of Minas Gerais), *ribeirinhos, vazanteiros,* and *barranqueiros* (people who live off the rivers), babassu nut breakers, *povos de fundo e fecho de pasto* (people who collectively own the land and share resources), *sertanejos* (cattle farmers), extractivist communities, family farmers and people living in land reform occupations and settlements. These people inhabit and interact with the *Cerrado,* preserve it, and sustainably use its resources (BARBOSA, 2016). The practices, knowledge, and customs of these people are fundamental to the biome's survival.

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

2. Occupation of the *Cerrado* and the indigenous and peasant communities (*quilombolas*, babassu nut breakers, *vazanteiros*, and geraizeiros)

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

The colonization of Brazil by the Portuguese (1500 –1822) began with the establishment of farms along the Atlantic coast. Under the *sesmarias* regime, the crown authorized the farms to produce goods to supply the coastal areas and Europe. The occupation spread from the coast to the interior of the northeast of the country, where "*sesmarias*" were established as estates that had concessions to produce goods while using slave labor and the profits from monopolistic trade relations with the metropolis to pay taxes to the crown. These landowners promoted a "holy war" to exterminate indigenous peoples who attempted to reclaim their territories.

The farms on the coast of northeastern Brazil produced mainly sugar. In the *sertão* or the interior of the region, foodstuffs were produced to supply landowners with export goods. Landowners raised cattle in the open in the common areas along the riverbanks (ALVES, 2006). Located in the region known today as MATOPIBA, these areas were also used for hunting, gathering, and fishing.

Quilombos were established in unoccupied areas by Afro-descendants who negotiated access to land with *sesmeiros.* This gave rise to a type of occupation that became widespread after slavery ended in 1888: "*posse*", or land tenure in English.

In 1850, the Empire of Brazil (1822 –1889) passed the Land Law. A landmark in the process of legally constituting private property in the country, the law paved the way for the end of slavery and for "free" labor. The new law stipulated that land that was not officially in use would become property of the state ("*terras devolutas*"). This was intended to prevent former slaves, migrants, and indigenous people from occupying these lands after the abolition of slavery.

Shortly before 1888, in southeastern Brazil (initially in São Paulo), the crown developed

a land program called "*colonato*", whose goal was to ensure that public land would be used to produce coffee, Brazil's main export in the mid-19th century. The program established peasants as the basis of labor in the Brazilian countryside by providing financial incentives to transport and employ immigrants on farms. In the *colonato* scheme, workers were brought over from Europe to work in a mixed "free labor" system that combined both wages and partial access to land as a means of production (BOECHAT, 2009).

Other regions of Brazil did not adopt this kind of land use policy. Slaves freed after 1888, indigenous peoples, and other immigrants stayed on the farms where they had been working, or settled in areas that had not been occupied by the *sesmarias,* which would later become the private property of the *sesmeiros*. While the workers who continued on the farms were supposedly "free", they remained at the landowners' disposal in exchange for access to parcels of land (LEITE, 2010). The others occupied vacant land to survive. From the time that the abolition of slavery was declared until a wage-based labor market was created and functioning (around 1940 and 1950), several types of laborers existed in the countryside, such as workers living on the farms and *posseiros* (tenure holders) who did not live on the landowners' farms.

In the northeast, and the region currently known as MATOPIBA, cattle raisers on large estates shared the land with peasants living on land that had not been occupied by landowners. These peasants were a heterogeneous group made up of *quilombolas, caboclos*[4]*, ribeirinhos,* babassu nut breakers, and *vazanteiros*, among others. The constitution of the peasantry in Brazil was the result, then, of the abolition of slavery and the transition towards a wage labor market in the country. This transition did not mean the end of the peasantry, but rather the transformation of its social role. Peasants who did not live on the farms – *posseiros* - constantly suffered from the violent expropriation of their land by large landowners.

The *posseiros* of unclaimed land still live in the MATOPIBA region today, in the lowlands into which the rivers originating on the plateaus flow. These communities fish, farm cassava, rice, corn and beans, and raise pigs, chickens and other birds for a living on the plateaus, which were originally unclaimed and unoccupied areas. Intermittent rain and water supply made them unsuitable places to live, but they could be used for cattle raising, hunting, and collecting fruit and medicinal roots. It was the combination of the usage of the common areas on the plateaus and the establishment of their settlements in the lowlands that allowed *posseiro* peasants to live and survive (ALVES, 2006).

Cattle raisers in MATOPIBA, who also used the common land on the plateaus and occupied the large flat areas on the riverbanks in the lowlands, constantly expropriated land from the peasants (*posseiros,* residents, and those who lived on the farms). The state did not sanction them for this (BOECHAT, 2009). The transition towards wage labor in rural areas and industrialized agriculture was not advancing in the region, as the landowning class was able to accumulate land at zero cost. The occupation of more and more of the territory gradually led to the transformation of the mechanism for accumulation in rural areas. Between 1940 and 1960, the number of opportunities to appropriate new areas at zero cost decreased and a national land market was created.

Peasants were expelled from both the farms and the public land of common use, forcing them to migrate for salaried work, as they had no others means of survival. This dynamic is still at the root of conflicts in rural areas today. Peasants were overexploited on the farms and in the cities. Even so, this did not eliminate the peasantry in Brazil entirely, as many managed to keep their *posses* or small parcels of land (LEITE, 2015).

[4]"Caboclo" was the term used to refer to people of mixed indigenous and non-indigenous descent.

3. The peoples of the *Cerrado* today

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

The indigenous and traditional communities living in the *Cerrado* biome today are the contemporary heirs of this long history. Guardians of its ecological and cultural heritage, they constitute the vast social diversity of the biome. There are 80 indigenous peoples and *quilombola, geraizeiro, vazanteiro,* and babassu nut breaker communities in the region. Small-scale farming and extractivism[5] are also important for the conservation of this agri-ecosystem because through their actions to preserve the forest, they help maintain biodiversity, water cycles, and carbon stocks.

According to researcher Altair Sales Barbosa, an indigenous population of approximately 44,120 individuals currently live on the central plateaus in the states of Maranhão, Tocantins, Goiás, and Mato Grosso do Sul. This population is made up of 26 indigenous peoples with distinct cultural characteristics. The current situation in which this population is fragmented and spread over increasingly restricted areas does not reflect their original occupation of the area and the importance of the *Cerrado* to the reproduction of their communities. These peoples went through important cultural processes that molded well-defined types of societies, in which hunting and gathering served as the basis for the development of spatial and social organizational models with unique characteristics (BARBOSA, 2017).

There is great linguistic diversity among the indigenous people of the *Cerrado*: Timbira (which is spoken by the Canela, Krinkati, Pukobyé, Krenjé, Gavião, and Krahô

[5] We are referring here mainly to the harvesting of the forests' products, such as fruit and nuts, and not mineral extractivism.

indigenous peoples), Kayapó (Kubenkranken, Kubenkrañoti, Mekrañoti, Kokraimoro, Gorotire, Xikrin, and Txukahamãe), Xerente, Karajá, Xavante, Xakriabá, Apinayé, Suyá, Kreen-Akarôre, Kaingang, and Xokleng. The largest linguistic trunk - Macro Jê – is spoken by the Pataxó, Bororo, Maxakali, Botocudo, Kamakã, Kariri, Puri, Ofaié, Jeikó, Rikbatsá, Guató, and Fulniô peoples. There is also the Guarani Kaiowá people, who continuously suffer from repression and are being forced off their land in Mato Grosso do Sul. The knowledge of these indigenous peoples is fundamental for preserving the biodiversity of the *Cerrado.*

A large part of peasants' knowledge and practices is intimately related to indigenous cultures of the *Cerrado.* For centuries, these peasants have been developing strategies for survival and coexistence with the *Cerrado* and maintaining ties to the ecosystem through production (small-scale mining, hunting, and fishing) and diversified agricultural practices, such as farming on hillsides and in valleys and cattle grazing on the plateaus.

The culture of the communities of the *Cerrado* is unknown to many sectors of Brazilian society. As a result, people often have the wrong impression that the *Cerrado* is a biome with unfertile soil and therefore, void of people. This discourse has been used to justify the expansion of monocropping in the region, which is causing major environmental destruction. The peasants possess important holistic knowledge on self-sufficiency, risk reduction, and maximizing resources that they have accumulated through long historical processes.

The *Cerrado* has a culture rich in festivals, traditional dress, food, and community relations. Festivals such as the *folias, reisados, catira, sussa,* and *modas de viola* are part of a vast repertoire of rhythms and dances. Pequi, buriti, and mangaba are central to the *geraizeiros*' food traditions. Babassu is the main source of food and the raw material for close to 400,000 nut breakers in Maranhão and the north of Tocantins. The strategy to conserve the biome must strengthen these communities and their ways of life by guaranteeing them access to and control over land and its resources.

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

4. The expansion of agricultural business in the *Cerrado* and the appropriation of peasant land from the 1950s onwards

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

The industrialization of agriculture began in the 1950s in Brazil and had devastating consequences for salaried workers (both urban and rural) and rural populations in general. The state intervened in the process by guaranteeing subsidized credit and tax exemptions, setting prices, and providing land to agribusiness. This transformed rural areas, as it combined technical changes with the exacerbation of historically asymmetrical property and power relations. A determining factor was the availability of international financial capital that, through increased state debt, financed the acquisition of machinery and chemical supplies from transnational corporations.

During the military dictatorship (1964–1985), the modernization of rural areas became a priority. In 1965, the *Sistema Nacional de Crédito Rural* (SNCR, National Rural Credit System) (SNCR, 1965, Delgado, 1985) was created. This was followed by the adoption of the first *Plano Nacional de Desenvolvimento* (PND, or National Development Plan, from 1968 to 1973) during the period known as the "economic miracle" and then, a second PND for the 1975-1979 period. They all increased public debt (DAVIDOFF, 1984), fueled inflation, and stimulated the overexploitation of labor (both urban and rural) and the expropriation of peasant land.

Agricultural industries were created to produce export commodities[6] based on the "Green Revolution" model. These technology packages involve the intensive use

[6] Currently, the main agricultural commodities produced for export in Brazil are soybean, corn, sugar, cotton, and concentrated orange juice.

of chemical inputs, machinery, and capital (MENDONÇA, 2013). Between 1960 and 1980, sugarcane planting and processing were mechanized, but harvesting continued to be carried out manually. In the 1960s, there were approximately two million rural workers in the state of São Paulo and by the end of the 1980s, there were only 500,000 (PITTA, 2011). Now, since the boom in commodity prices in the 2000s and the subsequent, almost total mechanization of sugarcane harvesting (PITTA, 2016), the number of workers has fallen to 90,000.

The same happened with soybean production as it expanded from Paraná and Rio Grande do Sul to Mato Grosso in the 1970s and 1980s (BERNARDES, 2007). Manual labor is now limited to some direct planting, manual weeding, and stone removal to protect the combine harvesters from damage, often under slave-like conditions.

The modernization of agriculture intensified the expropriation of peasants' land and expelled the workforce from the countryside. This explains the so-called "structural unemployment" and poverty in rural and urban areas. The overexploitation of labor, slave labor, unemployment, and the expropriation of land are not the result of "backwardness", but rather of debt-fueled modernization. To compensate for the reduction in the amount of labor to be exploited, corporations resort to financial mechanisms as a way to simulate (fictionalize) their profits (see NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015). These mechanisms include subsidized credit, tax exemptions, above-cost pricing policies, and the cancellation of already subsidized debts (THOMAZ JR., 2002).

The international economic crisis of the 1970s led to "stagflation". Since then, the financial system has taken on a central role, especially after Richard Nixon put an end to the gold standard in 1971. In Brazil, this was when the second PND was drafted, which proposed policies for the expansion and industrialization of production in an attempt to eliminate the trade deficit. Two key programs were created at the height of the SNCR: PROÁLCOOL (1975-1990), whose goal was to substitute oil with hydrated alcohol (ethanol), and PRODECER (1979-2001), which promoted the expansion of production of soybean for exports.

These were the main programs adopted during the military dictatorship to promote the industrialization of agriculture in Brazil. They took advantage of low international interest rates to offer subsidized credit and tax exemptions, implement pricing policies, and finance the construction of infrastructure. When interest rates increased on the international market, this mechanism enabled the "simulation" of corporate profits, caused the external debt to explode, and allowed companies to roll over their debts (PITTA, 2011). Brazil was unable to refinance its debts, became dependent on the International Monetary Fund (IMF) during the Latin American debt crisis, and declared a moratorium in 1986.

The international crisis led to greater flexibility on the financial markets through the securitization of state debt, the expansion of secondary markets (derivatives), increases in commodity and share prices and rates (exchange, interest and insurance), and debt packages. This structure allowed Brazil's external debt to be internalized (PITTA, 2016 and OLIVEIRA, 2016) and the Brazilian real (R$) to appreciate and paved the way for Brazil's insertion into the commodities boom of the 21st century, which was responsible for the territorial expansion of agribusiness (DELGADO, 2012).

The expansion of soybean monocultures to MATOPIBA was dependent on the financial mechanisms used to rollover agribusiness's debt. POLOCENTRO (*Programa de Desenvolvimento Agrícola do Cerrado, or* the Program for Agricultural Development in the

Cerrado) and then, PRODECER (*Programa Nipo-Brasileiro de Desenvolvimento Agrícola da Região dos Cerrados,* the Japanese-Brazilian Program for Agricultural Development in the *Cerrado* Region) supported this expansion from 1975 to 1979 and from 1979 to 2001, respectively (SANTOS, 2016). These programs included funding for infrastructure and research. The territorial expansion of agribusiness to the *Cerrado* affected the states of Mato Grosso, Mato Grosso do Sul, Goiás, Minas Gerais, Bahia, Maranhão, Piauí, and Tocantins and intensified the expropriation of peasants, indigenous people[7] and small-scale farmers. In Paraná, Mato Grosso do Sul, and Mato Grosso, this had enormous impacts on the Guarani people (Kaiowá, M'byá, Ñandeva, and Avá)[8]. The agricultural frontier also expanded to the Amazon and regions where land was cheaper, fueling land speculation. Yet, what was really at the core of this process was speculation in the land market.

The expansion of agribusiness reached the states of Maranhão and Piauí in the 1990s[9] thanks to financial mechanisms that stimulated new loans. As the debate in the Chamber of Deputies in the early 1980s reveals, PRODECER was the target of criticism and opposition:

> (...) desperate [to resolve the problem of] and incapable of stemming its overwhelming external debt, which is nothing more than the result of misguided economic policy, the Brazilian government is now using the tactic of adopting a plan to increase the debt as a way of paying off the debt. The project to internationalize our agriculture, set out in the Brazil-Japan Agreement [Prodecer], is part of this plan (...). According to the report by the JAPAN INTERNATIONAL COOPERATION AGENCY (JICA), the handing over of our territory to the Japanese through the creation of a new *Projeto Jari* project - this time, the "*Projeto Jari* of the *Cerrado*" - will cost the nation's coffers one billion, three hundred and twenty eight million dollars for railways, highways, ports, silos, and storage facilities, as well as tax measures related to the acquisition of land, credit, and steps to create agricultural cooperatives, etc. All of this is so that Japanese consumers can receive cheaper products and reduce their dependence on buying food from the United States (CHAMBER OF DEPUTIES, 1980, pp. 1-2).

The financialized expansion of the soybean agroindustry to Bahia, Maranhão, Piauí, and Tocantins drove the expropriation of indigenous people and peasants' land in a number of ways. The high, flat areas of the plateaus were given priority due to the adequate rainfall levels there and the fact that this is where the sources of the rivers were located. The flat plateaus made mechanization and the use of center pivot irrigation systems easier. Even though peasant communities were using these lands collectively, the official discourse promoted the idea that they were unoccupied and vacant. The plateaus, however, were of fundamental importance to the reproduction of the local population, who used them to collect fruit and medicinal plants, hunt, and let their cattle graze freely, depending on the time of the year and season. Agribusiness's occupation (mostly illegal) of the plateaus made it impossible for local communities to use them. The expropriation of peasants' land forced them to migrate to the outskirts of the cities, where many now live in *favelas*.

Some communities in the lowlands were able to keep possession of their land. Others parts of the lowlands were also expropriated, though, which intensified migration. The

[7] For more information on the process in MATOPIBA, especially the case of Piauí, see Alves, 2006.
[8] For more on the expropriation of the Guaraní, see the documentaries *À sombra de um delírio verde*, 2011; and *Martírio*, 2016. See also the following research reports by the Network for Social Justice and Human Rights: *The Sugarcane industry and the global economic crisis* (XAVIER, NAVARRO, PITTA, & MENDONÇA, 2012) and *Transnational Corporations and Agrofuels Production in Brazil* (XAVIER, NAVARRO, PITTA, & MENDONÇA, 2014).
[9] In the case of Maranhão, grilagem in the plateau regions of Balsas, described by Roberto Miranda in his doctoral thesis (2011), marked the arrival of the modernization of agriculture in the region. In 2015, the Network for Social Justice and Human Rights produced a report entitled A empresa Radar S/A e a especulação com terras no Brasil (NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015), which exposes the involvement of transnational land corporations in speculation in farmland on the plateaus in Balsas.

communities that continued living in the lowlands did not have enough land to survive, as the common usage of the plateaus was fundamental for them. Many members of these communities entered the labor market as traveling workers or migrants. At harvest time, for example, they would migrate to areas of agro-industrial production where they worked and lived in degrading conditions, such as in the sugarcane industry in the center-south region of Brazil. The men would often migrate and the women would stay behind to take care of their families and their crops. The boom in commodity prices on the international markets in the 21st century exacerbated this situation.

One area in MATOPIBA where the expansion of soybean monocropping intensified the expropriation of small-scale farmers was the plateaus known as the *Gerais de Balsas* in the south of Maranhão. In his doctoral thesis, Roberto Miranda (2011) retraced the history of *grilagem*, deforestation, the establishment of farms, and the sale of land in this region to soybean producers originally from the center-south of Brazil. The news of the arrival of soybean production in the area is said to have fueled the onset of *grilagem* in Gerais de Balsas.

We will now present a résumé of the findings of Miranda's doctoral thesis (2011). Miranda found evidence to suggest that a scheme to gain access to public land occupied by peasants and force them off their land existed. According to testimonies that the author gathered from peasants in his field work (MIRANDA, 2011), the evictions were carried out by security guards hired by local business people who are said to have sponsored the potentially illegal appropriation of the land and who have ties with local authorities (MIRANDA, 2011).

Miranda's findings (2011) also indicate that there was a second round of land

Photo: Samuel Frederico / Yuri Saweljew, Abril 2017.

appropriations, orchestrated by three corporations owned by business people from the center-south region: CODECA (Colonizadora De Carli), Terra Soja (from the same group), and AGROSERRA. Miranda describes the procedure possibly used to acquire the land: it begins with an action taken to attract a number of interested parties, who supposedly provide their names and identity documents so that the land can be registered in their names as *posseiros* at a notary office. Once possession of the land is made official, the land is transferred by power of attorney to the corporations. Miranda (2011) affirms that at the same time, employees of the corporations also put pressure on the peasants in Gerais de Balsas[10] to get them to sell their land informally. An excerpt on this from Miranda's thesis follows below[11]:

> Between 1993 and 1995, an (...) agronomist working for Terra Soja managed to legalize the possession of 9,000 hectares of land located at the headwaters of the Tem Medo River in the names of 46 *posseiros,* none one of which were from the area. Immediately after this, he converted all of the deeds into a single piece of property in his name. He used the names of [...] his employees, brought their CPFs[12] and as soon as they handed over their CPF to register the title, they immediately signed a full power of attorney at the notary office. He then took their CPF and the power of attorney. He registered the deeds at the notary office and transferred them to himself. In total (...) [CODECA] managed to acquire in that region (...) approximately 140 land deeds (...) (MIRANDA, 2011, p. 156).

Oliveira (2016, p. 392) describes another form of *grilagem* in Brazil: the use of a practice called *abraço* (embrace). This is when business people incorporate new areas of land by fencing in thousands of hectares just outside the limits of the area registered on the falsified and/or acquired land titles. *Grileiros* using this scheme use their connections with the executive, legislative, and judiciary branches of government and municipal notary offices to get them to legalize their possession of the "embraced" land (OLIVEIRA, 2016).

In the 1990s, SLC (Schneider Logemann & Cia.) Agrícola S/A began to operate in the Gerais de Balsas region. SLC Agrícola S/A's real estate branch, SLC Land Co., owns some of the farms acquired in the 1990s as part of its joint venture with the British investment fund Valiance Capital. *Radar Propriedades Agrícolas*, a joint venture between Cosan S/A and the Teachers Insurance and Annuity

[10] Several reports on this type of procedure can be found in Roberto Miranda's thesis (2011).

[11] Consulted for the purposes of this report, CODECA responded to Miranda's affirmations (2011) by stating the following: "It is important to note that CODECA was created 22 years ago with the goal of promoting the development of the Brazilian agricultural sector. The TERRA SOJA corporation operated in the real estate and business consultancy fields and has been inactive since 1999. During its existence, Terra Soja never owned any land. We do not have any relation to the AGROSERRA corporation. Neither CODECA, nor any of its business partners have any links to grilagem activities in any state of the federation. On the contrary, it has made important contributions to the development of areas in the state of Maranhão and created hundreds of jobs (directly and indirectly). An example of this pioneering work is the establishment of the Batavo Cooperative in the Municipality of Balsas in Mato Grosso with the decisive support of CODECA, which acquired privately owned land and donated the lots, fields and small farms for the construction of houses and storerooms. It donated land for the construction of silos, schools, churches, and community centers; built roads; installed telephone services; set up a modern water distribution system and, as there was no electricity, installed a large generator to supply electricity until the government fulfilled its commitment."

In view of the discrepancies in the information from the different sources and the possible impact of the allegations on land acquisitions, it is not the place of the Network for Social Justice and Human Rights to pass judgment, nor to affirm the absolute truth about these allegations. However, we do wish to express our concern about the possible social and environmental impacts of these events, where they exist. We suggest that the bodies responsible for investigating the diverging statements do so. A lawsuit against the owner of CODECA in relation to his previous land acquisitions is currently before courts in Piauí (PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF PIAUÍ. Public Process no. 0000759-98.2016.8.18.0042; July 5, 2016). The accusations made against this businessman, cited in an official document available to the public (please consult it), appears to confirm the validity of concerns raised in this research.

[12] CPF or "cadastro de pessoa física" is an individual's taxpayer registration number in Brazil.

Association of America - College Retirement Equities Fund (TIAA-CREF), also owns land precisely in the region where farms were established between 1980 and 1990. Radar S/A acquired its land in the 2000s.

Vicente Alves's thesis examines land expropriation and *grilagem* in western Bahia in the 1980s and in the south of Maranhão in the 1990s, while focusing mainly on processes in southern Piauí, especially in the 21st century. SLC Agrícola, SLC Land Co., and Radar S/A all own land in southern Piauí. According to a declaration from the Radar S/A corporation itself, it bought its land in Balsas (MA), Alto Parnaíba (MA), and Santa Filomena (PI) from the same owner as CODECA did.[13]

The possibility of financing the expansion of agricultural production through debt rollovers fueled expropriation and *grilagem* processes in MATOPIBA in the 1970s and 1980s, and into the 1990s. News of new infrastructure projects for the region also contributed to this. One important project was the Northern Export Corridor, which consisted of building a highway and a railway to transport soybean to the Itaqui Port in São Luís de Maranhão in 1990. This project linked the establishment of new farms to the demand for land for the expansion of soybean production. The emergence of transnational agricultural real estate companies that appropriated land as a financial asset in MATOPIBA took this process even further.

In the early 1990s in Brazil, following the declaration of the debt moratorium in 1986 and the implementation of the *Plano Real*, state subsidized credit for the industrialization of agriculture dried up and a number of corporations went bankrupt. This led to a drop in farmland prices (Delgado, 2012). In the late 1990s, *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES, the Brazilian Development Bank) resumed its credit programs for agricultural production, which gave new momentum to the occupation of land in the *Cerrado.* The rush for land was also fed by the cycle of price increases for commodities on the world futures markets (Delgado, 2012) that began in 2001-2002. Prices fell after the global economic crisis erupted in 2008 and 2009, followed by an even sharper drop in the 2012-2013 harvest years. Agribusiness's recent phase of soybean expansion in MATOPIBA was even greater in scale and again, affected Bahia, Maranhão, and the south of Piauí and Tocantins.

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

[13] In the consultation process mentioned above, CODECA responded that they do not own land in southern Piauí and only sold land to Radar S/A in the state of Maranhão. Here, the corporations themselves are the source of contradictory information.

5. The expansion of agribusiness in MATOPIBA - the "final frontier" of the *Cerrado* - in the 21st century

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

In the late 1980s, the international financial system began to undergo structural changes and developed mechanisms for the securitization of state debt and the renegotiation of the prices of financial assets (derivatives) on secondary markets[14] (XAVIER, PITTA and MENDONÇA, 2012). These changes increased liquidity in the financial market, corporate leverage, and the mutual dependency between the production of goods and the financialization of the world economy.

> This created a lending circuit that leveraged resources, via capital markets, offered to borrowers in general. This circuit started with the creation or "origination" of assets by capital markets, which are also responsible for promoting securitization and trade. The assets are used to obtain new resources, which are later used to generate new assets, thus feeding back into the circuit. Therefore, the technological revolution reduced the banks' competitive advantage in providing loans while strongly boosting the capital markets at the same time. Finally, the growth of institutional investors, particularly pension funds, introduced another competitive force into a market that had been previously restricted to banks. The origin of this type of fund is related to the privatization of the social security systems of a number of countries, as well as the development of the private pensions industry. It is worth mentioning that the banks'

[14]For a more thorough description of these mechanisms, see research reports published by the Network for Social Justice and Human Rights: Xavier, Pitta, and Mendonça, 2012; Xavier, Navarro, Pitta, and Mendonça, 2014 and Network for Social Justice and Human Rights, 2015.

> reaction to the increase in competition also contributed to the expansion of the capital markets. The diversification towards the off-balance sheet, particularly in the derivatives market, is an example of this (SILVA, 2007, p. 8 and 9, *apud* OLIVEIRA, 2016, p. 91).

In this process of "feeding back into the financial circuit", the securitization of debts allowed financial institutions to pass their credit risk on to several investors operating on the capital markets. Furthermore, the possibility of trading assets on secondary derivatives markets – that is, capital markets on which bonds or debt packages, interest rates, exchange rates, credit insurance, and future commodity prices can be traded - exponentially increased the liquidity of these markets and financial capital's demand for these types of investment. This process inflated the prices of financial assets around the world even further and stimulated the creation of new assets for trade. The financial "simulation" of corporate profits, including companies that produce goods, ceased to rely on debt rollover, being based instead on the inflation of the price of financial assets.

The negotiations on the Brazilian debt moratorium in 1986 carried out under the framework of the Brady Plan[15], which allowed new private creditors to acquire Brazilian debt in the *Plano Real* in 1994, illustrate this change. Brady bonds were traded on secondary markets, which allowed bondholders to cash them in without having to wait for them to come to term. The state adopted an exchange rate pegged on the dollar with high interest rates, a major privatization program, and measures to deregulate transnational flows of capital. The state also reduced the amount of subsidized credit injected into the economy (DELGADO, 2012). Many companies went bankrupt when the country was opened to international competition and the possibility of rolling over corporate debt by increasing Brazil's external debt (which became predominantly internal and accumulated in Brazilian reals) diminished. Unemployment rates rose and job insecurity increased.

Until the international crisis in 1998 (BRENNER, 2003), which also hit the Asian Tigers and Russia and caused a massive devaluation of the Brazilian real in 1999, the Brazilian economy had modest accumulation rates. However, after this, in an attempt to compensate for the trade deficit caused by capital flight (DELGADO, 2012), which was related to the foreign exchange crisis, the state began to stimulate the export agricultural sector by offering subsidized credit. Although the expansion of soybean production had already reached Bahia and Maranhão in the mid-1990s, it was only in the late 1990s and the early 2000s that it arrived with force in Piauí and Tocantins.

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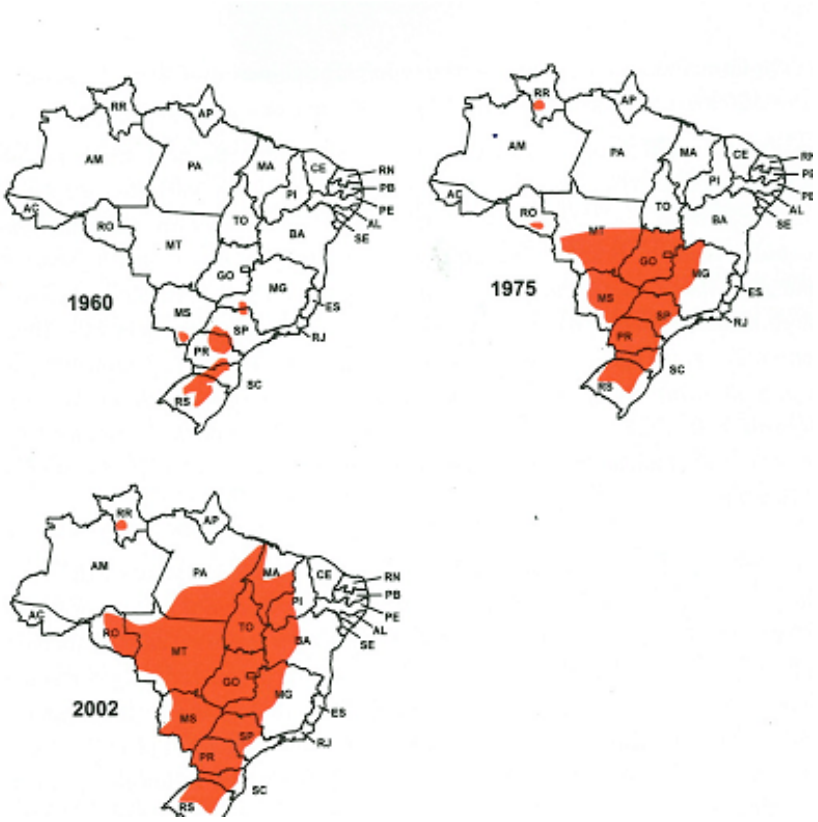
15 In April 1994, during the Itamar Franco administration (1992–1994) and with Fernando Henrique Cardoso as the head of the Ministry of Finance, Brazil signed an agreement on the renegotiation of its external debt. "...this agreement applied the principles of the Brady Plan to the case of Brazil. Launched in 1989 by the then-US Treasury Secretary Nicholas Brady, the Plan was used to renegotiate the debts of several Latin American countries, including Mexico, Venezuela, and Argentina. Although there were some differences with the cases of the other countries, in essence, the Brazilian agreement from 1994 followed the general guidelines that the US Treasury Department had set out in 1989.

As for the negotiations carried out between 1982 and 1988, the Brady Plan undeniably led to some progress [sic], as it forced creditors to accept the fact that the debt restructuring agreements would involve reducing some of the value of the external debt - in other words, a discount on the principle or interest rates. Furthermore, they began to accept considerable extensions of payment deadlines, as well as the replacement of securities with floating interest rates by bonds with fixed rates" (RANGEL and JÚNIOR, 1994, p. 40). It is worth noting here that although the principle of the external debt was reduced at that time through the Brady Plan, this does not mean that over the years, the charging of interest on interest has not made its total amount rise again (PITTA, 2016, p. 102, note 57).

Figure 1. The expansion of soybean production in Brazil: 1960-2002



Source: JICA, 2017

Delgado (2012) explains how the so-called boom in commodity prices in 2001-2002 drove the expansion of agri-industries in Brazil, which received state support during Fernando Henrique Cardoso's second term in office (1999-2003):

> The world trade scene was very receptive to the effort in the early 2000s to relaunch [the agro-industry's growth], which the foreign exchange situation in 1999 forced the government to make, especially for half a dozen commodities in rapidly expanding sectors. These sectors included feed grains (soybean and corn), sugar-alcohol, meat (beef and poultry), and wood cellulose, which, together with mineral products, would experience strong growth and begin to dominate Brazilian exports in the 2000-2010 period (DELGADO, 2012, p. 95).

The logic of financial asset price inflation began to dominate capitalism in the mid-1990s. The inflation of technology companies' share prices on the NASDAQ stock market was the driving force behind accumulation in the 1990s, which was based in this core economy. Financial asset price inflation is when there is a speculative increase in the price of a given asset that is attracting new investors, but then ends up dropping rapidly when a financial bubble bursts. In 2001, when technology companies' share prices plummeted (BRENNER, 2003), idle financial capital started to seek out new assets to increase in value, such as the US and European real estate sectors and commodity markets (DELGADO, 2012), whose prices became inflated on the futures market (derivatives and commodities).

The 2007-2008 crisis in the US subprime mortgage market drove banks (Lehman Brothers), insurance companies (AIG), other major corporations (GM and Sadia, in Brazil, for example), sugarcane and ethanol plants, and entire states (such as Greece and Iceland) to the verge of bankruptcy (Xavier, Pitta, and Mendonça, 2012). The crisis affected the global economy as a whole due to the interdependence between the spheres of finance and production.

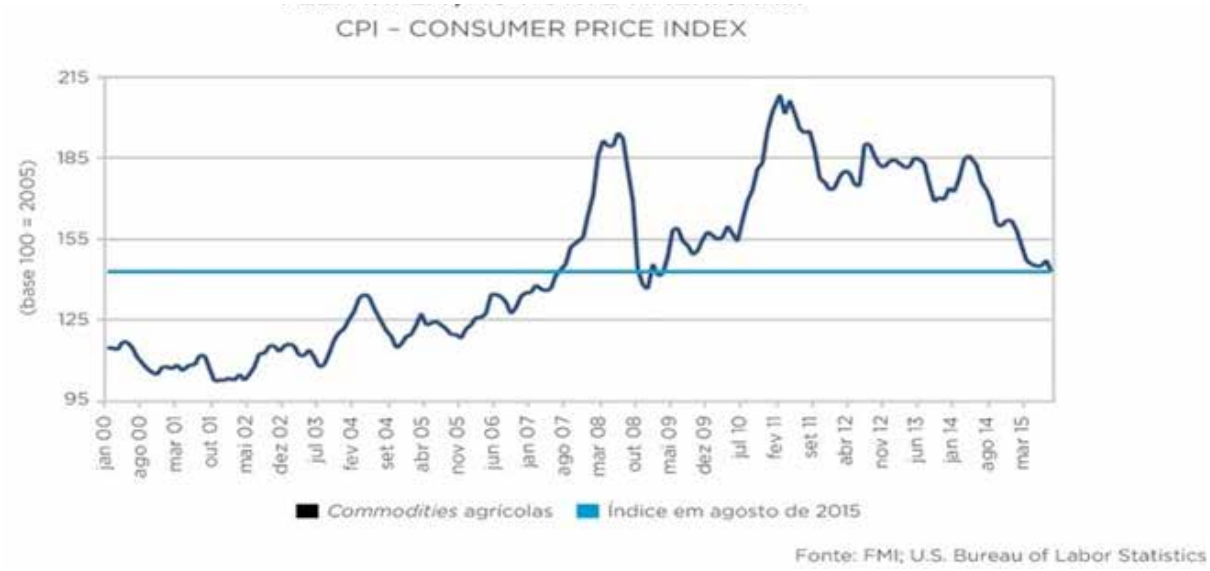
The feedback that asset price inflation causes when it links capital markets to productive sectors became clear in the US housing crisis. Securitized investments for both real estate construction and personal credit caused property prices to increase. Homeowners were able to mortgage their properties at rising prices and continue to consume, which heated up the US economy. Homeowners renegotiated their mortgages to buy new property, which fueled further price increases in the housing market.

At the same time, productive work or salaries do not increase sufficiently to pay off the debts acquired through asset price inflation, which eventually leads the prices to drop when this speculative bubble breaks. Speculation in the US and European real estate sectors affected the commodities market as a whole. Acting as huge savings accounts in search of valuation, pension and hedge funds caused the speculative rise in the prices of this type of commodity on the futures markets, where what is traded is the promise to use a specific price in a transaction in the future.

Based on these future prices, commodity producers, traders, and the processing industry acquire resources in exchange for the promise of future production, which, in turn, pushes prices in these markets to increase. The greater the capacity to produce a commodity, the greater the capacity to obtain advances with promises of future production. When commodity producers go public on the stock exchange, offering their shares as financial assets, the possibility that this will drive asset price inflation processes increases, as in the case of corporations such as SLC Agrícola and Cosan. These corporations follow the logic of the financial "simulation" of profit when exploiting land as an asset.

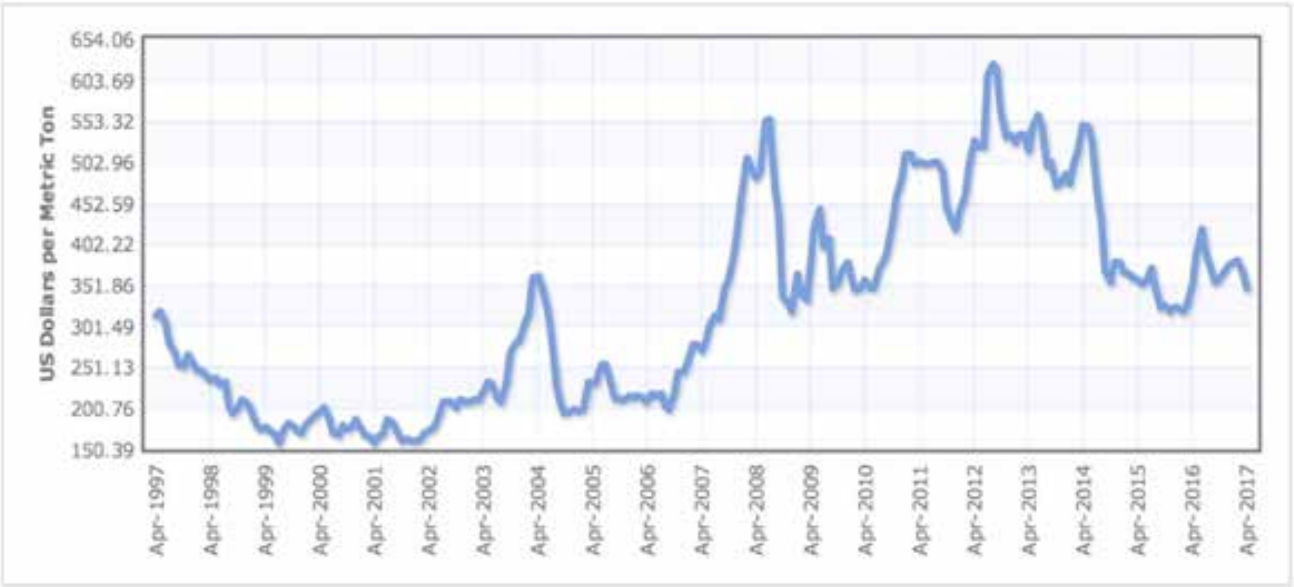
Photo: Vicente Alves, January 2017.

Graph 1: Agricultural commodity price index deflated by the US inflation rate



Source: SERIGATI, 2015.

Graph 2: Annual soybean prices, Chicago Exchange, in US dollars (1997-2017)



Source: The World Bank, consulted online in May 2017:
<http://www.indexmundi.com/commodities/?commodity=soys&months=240>.

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

Commodity prices began to decline when the global crisis erupted in 2008 (DELGADO, 2012), as speculative capital migrated to low risk and low profit securities, such as US government bonds. After the first fall, prices took up the inflationary process again, as investors continued to seek out the best yields. In the middle of the 2012-2013 harvest, however, they began to decrease again, especially from 2014 onwards.

When prices plummeted for the first time, several companies went bankrupt. Many had been using the loans they had taken out on the promise of future production to speculate on foreign exchange rates (FARHI and BORGUI, 2009). For example, a number of sugarcane plants went bankrupt due to the debts they acquired in previous years based on the high futures prices of sugar. After 2012 and 2013, the crisis deepened (CERDAS, 2015 and PITTA, 2016).

High commodity prices drove the territorial expansion of monocropping and the production of agro-industries in Brazil. It was during this period that soybean production arrived in MATOPIBA (NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015) as a result of asset price inflation's stimulation of the accumulation of financial assets and the acquisition of new debt in exchange for promises to expand production traded on the derivatives market. Between 2000 and 2014, the area used to grow soybean and sugarcane in MATOPIBA increased 253% and 379%, respectively (CERDAS, 2016). In the case of soybean, this area jumped from 1 million to 3.4 million hectares.

16 "What are currently the main factors that influence price formation for agricultural commodities? The fundaments of the real economy – that is, variables linked to the conditions of supply and demand of these commodities, or fluctuations on the financial markets, which mainly reflect speculative strategies? These issues became even more evident due the growing volatility of agricultural prices over the past decade. Periods of strong growth were interrupted by abrupt and sharp declines, which were then followed by intense recovery periods.

This dynamic can be clearly seen when we look at the evolution of the price index for agricultural and mineral commodities (excluding oil) published monthly by the International Monetary Fund (IMF). This index is an average of the prices of the principal commodities traded on the international market, while taking into account their respective volumes of trade. Analysis of this index's behavior reveals that between 1991 and 2003, agricultural and mineral commodity prices showed slight fluctuations, with an upward trend until 1995-1996 and a downward one until 2003. From 2003 on, however, prices show robust and constant growth until July 2008 (over these five years, the value of the index almost more than doubled). Due to the economic crisis in core countries, particularly the United States and the countries of the European Union, from August to December 2008 (in only five months), commodity prices fell an average of 30%, thus resuming levels seen in early 2006. It is interesting to note that although prices dropped sharply, the fall was short-lived; in March 2009, prices began to recover and grew steadily until April 2011.

It is also important to mention that in April 2010, the price index had already exceeded the peak reached in 2008, and at the beginning of 2011, it reached a new record high. However, as solvency of certain countries on the periphery of the eurozone deteriorated, commodity prices plummeted again and only resumed growth between December 2010 and April 2011. This period coincided with two rounds of low-interest loans that the European Central Bank offered to banks in the region. Once the euphoria of the loans had passed, commodity prices fell once again" (SERIGATI, 2012, apud, PITTA, 2016, p. 248).

"Although on average, agricultural commodity prices have shown a downward trend since they peaked in February 2011, this decline became more intense in the second half of 2014" (SERIGATI, 2015).

Table 1. Soybean production, area, and productivity in Brazil

From the 1976-1977 to 2016-2017 harvest year

Harvest year	Production (thousands of tons)	Production %	Area planted in soybean (thousands of tons)	% of the area	Productivity (kg/ha)	Productivity %
1976/77	12.145,0	-	6.949,0	-	1.748	-
1977/78	9.726,0	-19,9	7.780,0	12,0	1.250	-28,5
1978/79	10.200,0	4,9	8.151,0	4,8	1.251	0,1
1979/80	14.887,4	46,0	8.755,9	7,4	1.700	35,9
1980/81	15.484,8	4,0	8.693,4	-0,7	1.781	4,8
1981/82	12.890,9	-16,8	8.393,2	-3,5	1.536	-13,8
1982/83	14.532,9	12,7	8.412,0	0,2	1.728	12,5
1983/84	15.340,5	5,6	9.162,9	8,9	1.674	-3,1
1984/85	18.211,5	18,7	10.074,0	9,9	1.808	8,0
1985/86	13.207,5	-27,5	9.644,4	-4,3	1.369	-24,2
1986/87	17.071,5	29,3	9.221,7	-4,4	1.851	35,2
1987/88	18.127,0	6,2	10.706,6	16,1	1.693	-8,5
1988/89	23.929,2	32,0	12.252,8	14,4	1.953	15,4
1989/90	20.101,3	-16,0	11.551,4	-5,7	1.740	-10,9
1990/91	15.394,5	-23,4	9.742,5	-15,7	1.580	-9,2
1991/92	19.418,6	26,1	9.582,2	-1,6	2.027	28,3
1992/93	23.042,1	18,7	10.717,0	11,8	2.150	6,1
1993/94	25.059,2	8,8	11.501,7	7,3	2.179	1,3
1994/95	25.934,1	3,5	11.678,7	1,5	2.221	1,9
1995/96	23.189,7	-10,6	10.663,2	-8,7	2.175	-2,1
1996/97	26.160,0	12,8	11.381,3	6,7	2.299	5,7
1997/98	31.369,9	19,9	13.157,9	15,6	2.384	3,7
1998/99	30.765,0	-1,9	12.995,2	-1,2	2.367	-0,7
1999/00	32.890,0	6,9	13.622,9	4,8	2.414	2,0
2000/01	38.431,8	16,8	13.969,8	2,5	2.751	14,0
2001/02	42.230,0	9,9	16.386,2	17,3	2.577	-6,3
2002/03	52.017,5	23,2	18.474,8	12,7	2.816	9,3
2003/04	49.792,7	-4,3	21.375,8	15,7	2.329	-17,3
2004/05	52.304,6	5,0	23.301,1	9,0	2.245	-3,6

2005/06	55.027,1	5,2	22.749,4	-2,4	2.419	7,8
2006/07	58.391,8	6,1	20.686,8	-9,1	2.823	16,7
2007/08	60.017,7	2,8	21.313,1	3,0	2.816	-0,2
2008/09	57.165,5	-4,8	21.743,1	2,0	2.629	-7
2009/10	68.688,2	20,2	23.467,9	7,9	2.927	11
2010/11	75.324,3	9,7	24.181,0	3,0	3.115	6
2011/12	66.383,0	-11,9	25.042,2	3,6	2.651	-15
2012/13	81.499,4	22,8	27.736,1	10,8	2.938	11
2013/14	86.120,8	5,7	30.173,1	8,8	2.854	-2,9
2014/15	96.228,0	11,7	32.092,9	6,4	2.998	5,1
2015/16	95.434,6	-0,8	33.251,9	3,6	2.870	-4,3
2016/17[1]	101.862,61	6,7	33.442,81	0,6	3.0463	6,1
2016/17[2]	104.022,92		34.153,32	2,1	-	

(1) Forecast of lowest levels (estimated in October 2016)
(2) Forecast of highest levels (estimated in October 2016)
Source: CONAB (Companhia Nacional de Abastecimento, or National Supply Company). To consult the data, go to: <https://www.conab.gov.br>.
Org.: Cecilia Vecina

The expansion of commodity production is speculative in nature, as it "bets" on prices being high in the future. When traded on the futures markets, goods are not necessarily physically delivered to the buyer, as the deal is made based on the future price (see graphs 1 and 2).

When the BNDES began to offer subsidized credit again in 1999, Brazilian soybean production reached productivity levels (2000-2001 and 2002-2003 harvest years) that would only be surpassed after the price hikes in 2008, but were not permanent. Soybean producers increased their production and productivity levels by expanding into new territories and using the crop as a financial asset. The increase was linked, however, to the high price of land as a financial asset (see table 2 below). Before the financial crisis deepened in 2008, the inflation of the price of land on the market led to a rise in the share values of the companies producing these commodities on the stock, commodity, and future exchanges.

The 2008 crisis shows how the production of commodities is based on speculation and depends on financial "simulation" to survive. After 2008, soybean prices fell on the international futures markets (2008-2009 harvest year), as did the amount of soybean produced nationally and productivity levels. Even so, the area used to grow soybean expanded 2%, from 21.3 million to 21.7 million hectares:

> The restriction on credit affected the 2008-2009 harvest. Debts totaling R$10 billion in Mato Grosso alone greatly limited the liberation of public funds in the *Cerrado* area. [...] Nevertheless, producers who waited to purchase fertilizers until seeding time, due to a lack of credit or planning, should reduce their [technological] packages; even if they do, they may not make any profit. In some cases, returns may even be negative (COLLOSSI, 2009, p. 434).

Other variables of a speculative nature that determine production are exchange and interest rates. Because of the crisis and capital flight from peripheral markets to the supposedly "safe" US Treasury bonds, credit was reduced and interest rates and exchange rates against the dollar rose. The price of inputs - the majority of which are imported - increased significantly, which elevated production costs at a time when soybean prices were on the decline. This situation could only be compensated if the Brazilian exchange rate continued to fall. At the time, producers and trading firms expanded production to regions where land is cheaper to compensate for the advances (debts) they acquired on future prices.

In the harvest years that followed (2009-2010, 2010-2011, 2012-2013), while production, productivity, and the area planted in soybean grew, the crisis continued due to the recession in the US and Europe (KLIMAN, 2012). The financial "simulation" of accumulation also continued based on state credit often offered at subsidized rates. The state program called *Planos Safra*[17], for example, offers lines of subsidized credit with negative real interest rates, as the basic interest rate paid by the state to raise funds on the market (mainly via internal debt, in Brazilian reals) is higher than the rates charged by the development banks, such as the BNDES. In the 2009-2010 harvest, in an attempt to overcome the crisis, there was a 37% increase in farm credit.

> The ultimate factor contributing to the expansion of oilseed production is the increase in credit. Government resources went from R$75 billion to R$107 billion in the 2009-2010 period. […] At the new agricultural frontier, the expansion continues, as new farmland is cleared, particularly in the states of Maranhão and Piauí (COLLOSSI, 2010, p. 454).

The fiscal adjustment policies proposed by President Dilma Rousseff in 2015 led to a reduction in the amount of subsidized credit available. The flight of international capital caused the Brazilian real to fall against the US dollar. This generated speculation on the price of Brazilian soybean, which became more competitive internationally. The devaluation of the real in relation to the dollar pushed up the cost of imported inputs, but this was compensated by the lapse between the time inputs were purchased before harvest and the moment when soybean was sold. If Brazil's currency continues to decrease in value and the price of soybean on the international markets stabilizes, it will then become possible to make profits.

In recent years, global commodity prices have fallen[18], with soybean starting to follow this trend in mid-2014 (see graph 2 above). A decrease in the fluctuations in the

[17] For more on the history of the loans, rates and subsidies of the Plano Safra program, see: http://www.agricultura.gov.br. Consulted in June 2017.

[18] Commodity markets have gone through a period of boom in recent years. Since the beginning of the 2000s, commodity prices experienced strong growth and, in the third quarter of 2007, were operating at record levels, at least in nominal terms. Although agricultural commodities have been, on average, on a downward slide since they peaked in February 2011, this decline has intensified since the first half of 2014. The most common argument for this phenomenon is the slowdown in the world economy as a whole, and the Chinese economy in particular. Although very real, these events do not throw light on the entire process, as part of the dynamic of the price fluctuations is explained by the influence of financial transactions. Maintaining US interest rates at between 0.00% and 0.25% is the last game piece that sustained the boom in recent years. It will not be there next year. [...]

Commodities are a type of financial asset – that is, they are one investment option, just like public bonds, private securities, shares, currency, etc. If commodities start to offer better perspectives for return than other assets – for example, due to a situation where the fundamentals are favorable (forecasts of scarce supply or excess demand) – they will attract a higher volume of resources from investors, which will raise their prices on the futures market and subsequently, on the spot market. [...]

Signs last month that US interest rates will be increased soon [...] mean that the last game piece that allows commodities to be traded for such high prices will be eliminated (SERIGATI, October 2015).

Brazilian exchange rate caused problems, as Mauro Osaki shows in his study on soybean's relationship with speculation in the context of the 2016-2017 harvest year:

> [...] Soybean has stood out for its negative performance due precisely to the increase in production costs. Despite expectations of a bumper crop of around 107 million tons, it was noted that the price paid to producers fell and total net revenues were close to zero. […] Of the factors contributing to this decline in profitability, increased use of pesticides stands out the most, as it is normally the first product bought for harvest. In Mato Grosso, for example, the cost of this input has jumped at least 20% a year.
>
> If we consider the accumulated high for this period, the value spent on this product leaped from R$397,000 per hectare in the 2012-2013 harvest to a little over R$990,000 in 2016-2017, an increase of 151% or almost three times the initial price. This data is from the *Instituto Mato-grossense de Economia Agropecuária* (Mato Grosso Institute of Agribusiness Economy). "The price of pesticides has been increasing for the last five harvest periods. Last year, part of this hike was due to the exchange rate. Furthermore, another reason in the increase in use of selected products for specific pests, such as the white fly, which has been a problem in the regions of Mato Grosso and Goiás," said Osaki.
>
> In light of this observation, the researcher stresses that this situation should serve as a warning in the country, as it may compromise new investments. "Producers were compensated in the last two harvests, mainly because of the exchange rate that gave the false impression of profitability, but they are now starting to face reality," he affirmed (SOJABRASIL, April 23, 2017).

As shown in table 1 above, even the harvest years in which soybean production and productivity fell – such as 2008-2009, 2011-2012, 2013-2014 (fall in productivity) and in 2015-2016 with a 0.8% decline in production and 4.3% in productivity – the area used to plant soybean continued to grow.

When new areas of farmland are cleared for soybean production, which involves the deforestation of the *Cerrado,* it takes 5 to 10 years to reach national and international average productivity levels. When prices decline, land with poor soil ceases to generate revenues that are greater than costs. When prices rise, less productive areas can be incorporated into production.

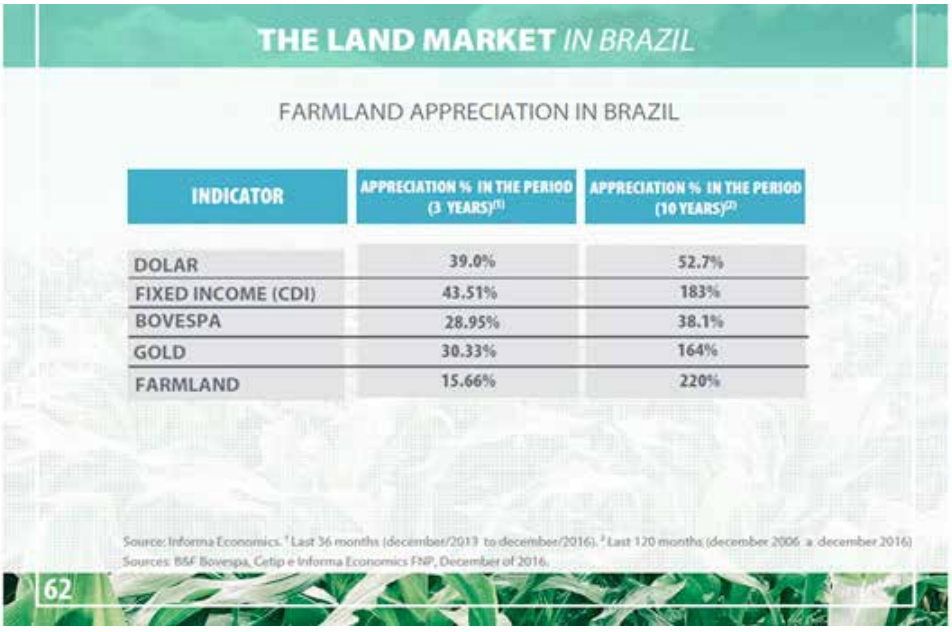
In fieldwork carried out in April 2017 in southern Maranhão and Piauí, we observed that in the context of the current economic crisis, some land in the municipalities of Monte Alegre and Santa Filomena, for example, are borderline profitable. The rural areas of these municipalities where SLC Agrícola (and Land Co.) and Radar S/A have land have been integrated into the soybean and land markets in recent years. Because of the increase in production costs and decrease in rainfall brought on by deforestation in the *Cerrado,* this land has become unproductive in relation to the price of soybean on the futures market. However, these pieces of land are traded as financial assets by corporations that use them to inflate their portfolios until they sell them to capitalize on their income.

In an interview with the manager of *Fazenda Parnaíba* (a farm owned by SLC Agrícola and SLC Land Co) in Tasso Fragoso, Maranhão in April 2017, he said that areas in southern Piauí have caused losses and that this land was used for "speculation" (in his own words). According to his calculations, the cost of establishing a farm in the region is R$5,000 per hectare over a five-year period, which entails clearing the vegetation of the *Cerrado,* correcting the soil and installing basic infrastructure. The land is later sold for at least R$15,000 per hectare.

In the 2015-2016 harvest year, the decrease in production and productivity in MATOPIBA was greater than in other soybean producing regions in Brazil and the national average. In the MATOPIBA region, in 2014-2015, 10,559,000 tons of soybean were produced, which fell to 6,793,000 tons in the 2015-2016 harvest year – a drop of 35.6%, much higher than the 0.8% decrease at the national level[19].

The interview quoted above confirms that the incorporation of new areas into soybean production serves to ballast loans based on the expectation that speculation will raise the price of this commodity. The areas also serve as a land bank to bulk up corporations' portfolios and inflate their share prices on the stock market, and provide a financial asset whose value is relatively independent from the price of the products that can be produced on that land.

Table 2: Inflation of the price of land used as a financial asset in Brazil (2013-2016 and 2006-2016)



THE LAND MARKET *IN BRAZIL*

FARMLAND APPRECIATION IN BRAZIL

INDICATOR	APPRECIATION % IN THE PERIOD (3 YEARS)[1]	APPRECIATION % IN THE PERIOD (10 YEARS)[2]
DOLAR	39.0%	52.7%
FIXED INCOME (CDI)	43.51%	183%
BOVESPA	28.95%	38.1%
GOLD	30.33%	164%
FARMLAND	15.66%	220%

Source: Informa Economics. [1] Last 36 months (december/2013 to december/2016). [2] Last 120 months (december 2006 a december 2016)
Sources: B&F Bovespa, Cetip e Informa Economics FNP, December of 2016.

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Source: SLC, 2017b, pg. 62

When we examine graphs 1 and 2 and their relationship with table 2 above (appreciation of farmland prices in Brazil), we find that even after the drop in commodities prices, land prices continued to rise. This suggests a certain "detachment" between the production of goods and the earnings generated from the exploitation of the land as a financial asset (DELGADO, 2012 and NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015). In regards to the early 2000s, Delgado (2012) notes:

> "The increase in exports over the last decade, especially of primary products as shown in the previous section, is fueling an intense

19 To access these statistics, consult data on the CONAB site at: <https://www.conab.gov.br>. Consulted in June 2017.

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

> process that is raising the value of farmland and will bring about a clear reversal in the cycle of devaluation seen in the 1990s [...]" (DELGADO, 2012, p. 97).
>
> "The process of resuming growth in land prices, given that this same surge had been seen in the 1967-1986 period, is the result of the global commodity boom in the [2000s]" (DELGADO, 2012, p. 98, *apud* PITTA, 2016, p. 256, note 142).

Delgado (2015) equates the fall in commodities prices – especially after the 2008-2009 year and with even greater intensity from 2014 on (graphs 1 and 2) – with the increase in land prices:

> Another way of surreptitiously generating financial gain in an economic crisis to favor, in this case, another strategic land title is to combine regulatory measures with non-regulatory ones to prevent the fall in commodities prices from pushing down the prices of rural land, which has been affected for over a decade by the boom in commodities. (...)
>
> Owners of financial assets and natural resources – land, water resources, mines and oil fields, would normally be concerned about the reversal in commodity prices abroad. The crisis did affect some, as in the case of large corporations in the sector – Petrobras, Vale do Rio Doce, Albras, Alunorte, etc. - whose business abroad shrank. But there is a secret way of appropriating public funds – public debt and the land market – which are being kept artificially high in order to protect landowners' revenues and financial revenues in an economy that has zero or negative growth (DELGADO, 2015).

During this period (2008-2009[20]), we noted that transnational commodity producers such as Cosan, SLC Agrícola, BrasilAgro, Sollus Capital, and TibaAgro (via *Fundo Vision Brazil Gestão de Investimentos e Participações Ltda.*) began to operate on the Brazilian land market. In some cases, such as Cosan and SLC Agrícola, corporations established as holdings that offer shares on the stock market created rural real estate firms to carry out land deals: Cosan set up *Radar Propriedades Agrícolas* and SLC Agrícola created *SLC LandCo.*, in joint ventures with international pension or investment funds (NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015).

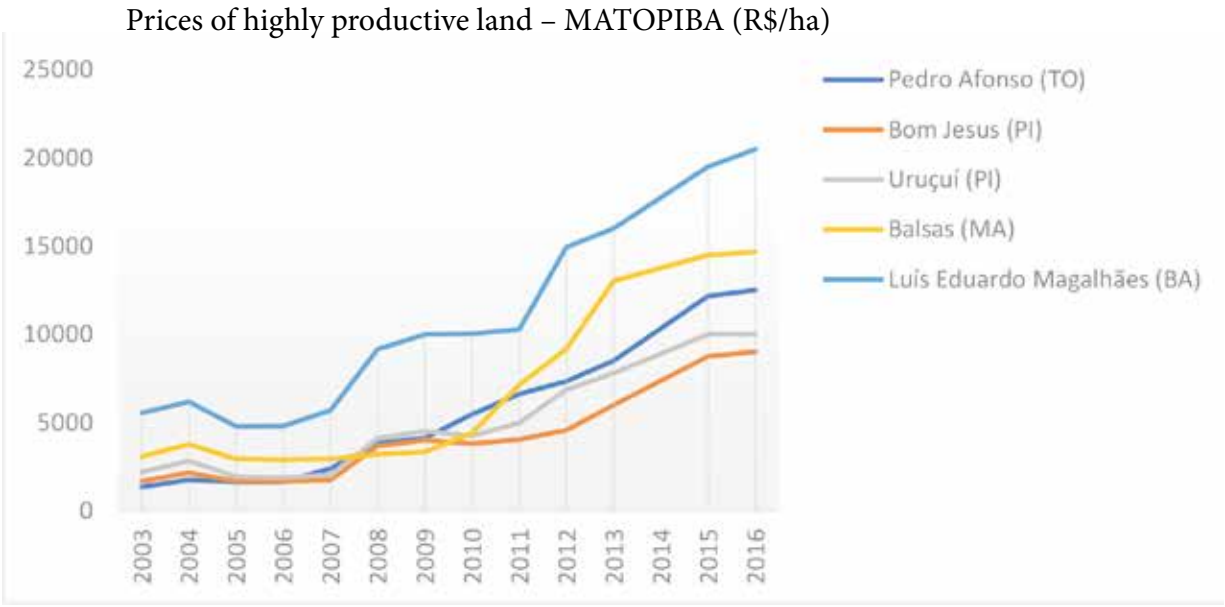
High commodities prices on the futures markets drove the occupation of new areas. This is how soybean production expanded

[20] See the following articles: "Megaprodutores consolidam a última fronteira" (Valor Econômico, April 1, 2013) and "10 grupos têm um terço da nova fronteira da soja" (Valor Econômico, April 1, 2013).

to MATOPIBA and came to occupy public lands of common use on the plateaus, which peasants and small-scale farmers had been using for centuries. Covered in the native *Cerrado* vegetation, these areas were used collectively by local populations before they became the target of land market speculation. They were appropriated at a low cost and later sold for a higher price. The demand for land as a financial asset fueled speculation, which increased prices.

This type of business became important to the soybean agro-industry, which incorporated it into their portfolio. Increases in a company's share value can ballast new debts, which function as a new investment and a promise of future production. This drives the expansion of monocropping that takes over new areas of land, which again fuels increases in prices and company shares. The creation of transnational real estate firms led to even greater increases in the price of land used as financial asset. These increases occurred independently from fluctuations in commodity prices, thus revealing the speculative nature of this type of business (NETWORK FOR SOCIAL JUSTICE AND HUMAN RIGHTS, 2015).

Graph 3: Land prices in MATOPIBA (2003-2013)



Org.: Débora Lima. Prices adjusted based on the General Market Price Index (IGP-M) of April 2015.

Graph 3 above illustrates the growth in land prices since the commodities boom in places where soybean is grown in MATOPIBA. Even after the fall in international commodity prices in recent years, the price of land continues to rise. This has spurred grilagem, the expropriation of peasants and the deforestation of the Cerrado.

6. Transnational land corporations in Brazil

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

Rural real estate corporations are companies whose main source of revenue is their operations on the land market. Our research focuses on some corporations that have enormous land portfolios and use different business strategies[21], mainly in the MATOPIBA region.

The emergence of this type of company is a recent phenomenon and is related to the territorial expansion of agribusiness, the increase in commodity prices on the world markets, and the rise in the prices of farmland, which is used as a financial asset by international investors. Several of these companies offer their shares on stock markets (BM&FBOVESPA). Some originated from Brazilian agribusiness corporations, such as SLC Land Co., which was founded in 2012 as a subsidiary of SLC Agrícola S/A (whose shares have been on the market since 2007), and Radar Propriedades Agrícolas S/A. The latter was set up in 2008 as a subsidiary of Cosan S/A (with shares on the market since 2005).

As for BrasilAgro S/A (*Companhia Brasileira de Terras Agrícolas*), as soon as the company was founded in 2005, it offered its shares on the stock exchange (IPO: Initial Public Offering) precisely to boost its business and acquire farmland. Even though it has partners from the urban real estate (Cyrela S/A) and agribusiness (the Argentine firm Cresud S/A) industries, BrasilAgro is a company whose main activity is trading land as a financial asset on the stock market. SLC LandCo. and Radar S/A, on the other

21 For more details on this type of company, see Oliveira, 2016 and Frederico, 2016 and 2017.

hand, are subsidiaries of larger holding firms. Other transnational farm real estate corporations with property in MATOPIBA are Sollus Capital, TibaAgro (linked to the Brazilian *Vision Brazil Investments* fund) and InSolo Agroindustrial (which does not have a subsidiary dedicated exclusively to trading land as an asset). While not all of these corporations have gone public with their shares, they all have partnerships with international financial capital.

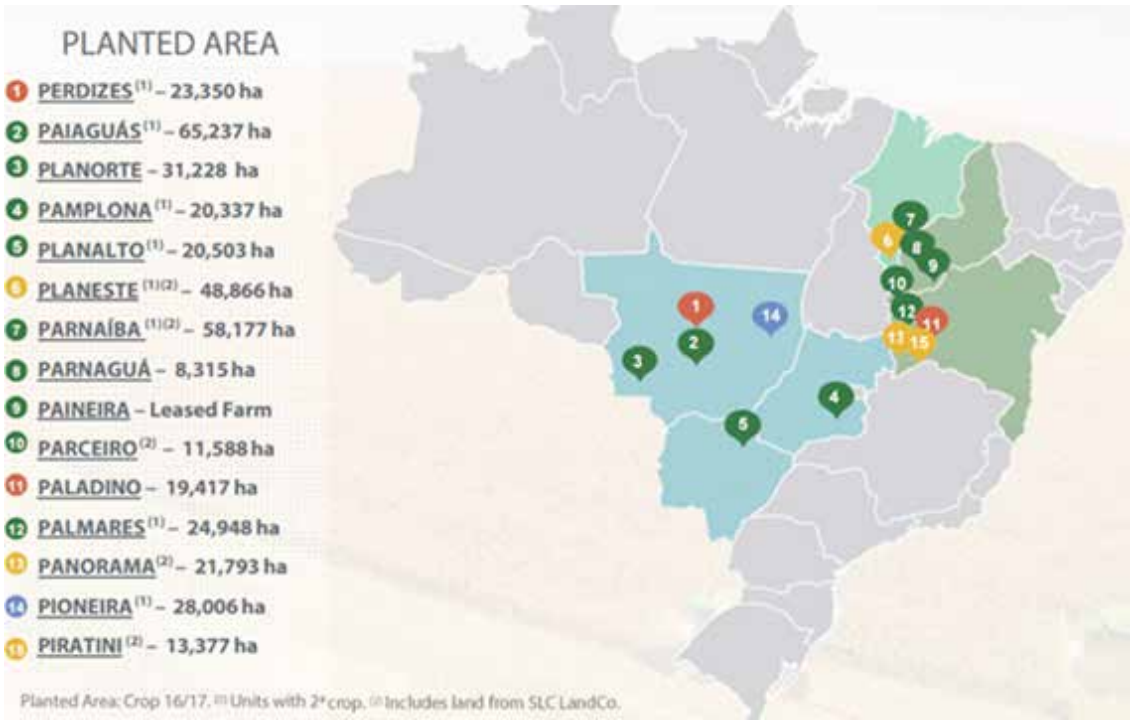
SLC (Schneider Logemann Company) Agrícola S/A was originally founded in 1977 to build tractors. It later began to produce soybean, corn and cotton and offered its shares on the BM&FBOVESPA stock exchange in 2007 (OLIVEIRA, 2016). In 2012, it opened a farm real estate subsidiary, SLC LandCo, in a joint venture with the British investment fund Valiance Ltda.

> In addition to its own farms, in 2012, SLC Agrícola S/A [...] created a subsidiary specialized in the acquisition, establishment, and sale of farms: SLC LandCo. 49% of its equity stake was sold to the British investment fund Valiance Asset Management Limited; SLC Agrícola S/A retained 50.6% of shares (OLIVEIRA, 2016, p. 396).

SLC LandCo.'s business consists of acquiring, establishing, and selling farms. SLC Agrícola has several farms in its portfolio (OLIVEIRA, 2016, p. 396), plus some that belong to SLC LandCo. In the case of the latter, SLC Agrícola leases SLC LandCo.'s land to produce soy, corn and cotton.

SLC Agrícola shareholder reports (SLC 2017a and 2017b) show that SLC LandCo.'s land bank has not yet been sold. Therefore, SLC LandCo.'s land is incorporated into SLC Agrícola's asset portfolio to boost its borrowing capacity and raise its share price on the stock exchange. This constitutes a kind of financial "simulation" of profits through asset price inflation.

Figure 2: SLC Agrícola and SLC LandCo.'s farms (SLC, 2017a)

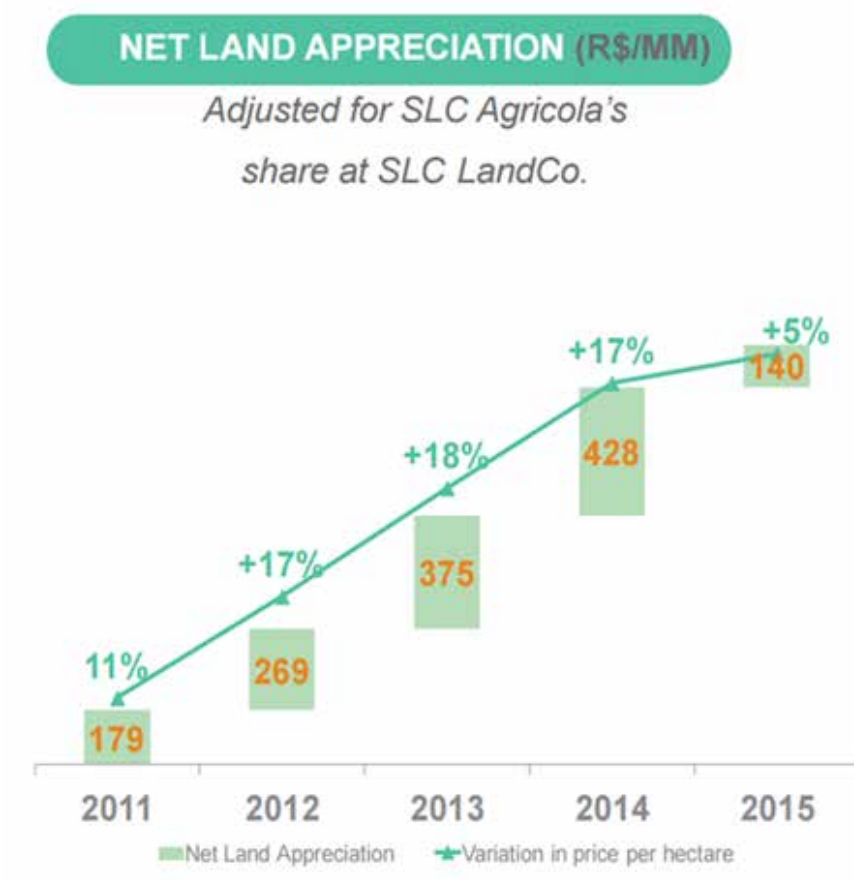


Source: SLC Agrícola (2017a)
Org.: Barbara Kuepper (Profundo)

In addition to the land it owns directly (approximately 236,000 hectares) and the areas owned by SLC LandCo. (approximately 86,000 hectares) (SLC, 2017b), SLC Agrícola leases plots of land from other owners. It also forms partnerships with other corporations, such as its joint venture with Mitsui (SLC-MIT), which controls close to 500,000 hectares of land.

While SLC Agrícola's main financial asset is soybean (traded on commodity futures markets), land does play a central role in its portfolio (SAWELJEW, 2016). We have already highlighted the speculative nature of SLC Agrícola's operations, how it uses soy as a financial asset on commodity futures markets, plays with exchange rate fluctuations, and depends on state subsidies and credit so it can simulate accumulation by taking on greater debt.

Graph 4: Appreciation of land (R$/ha) in SLC's portfolio (SLC Agrícola and LandCo) from 2011-2015

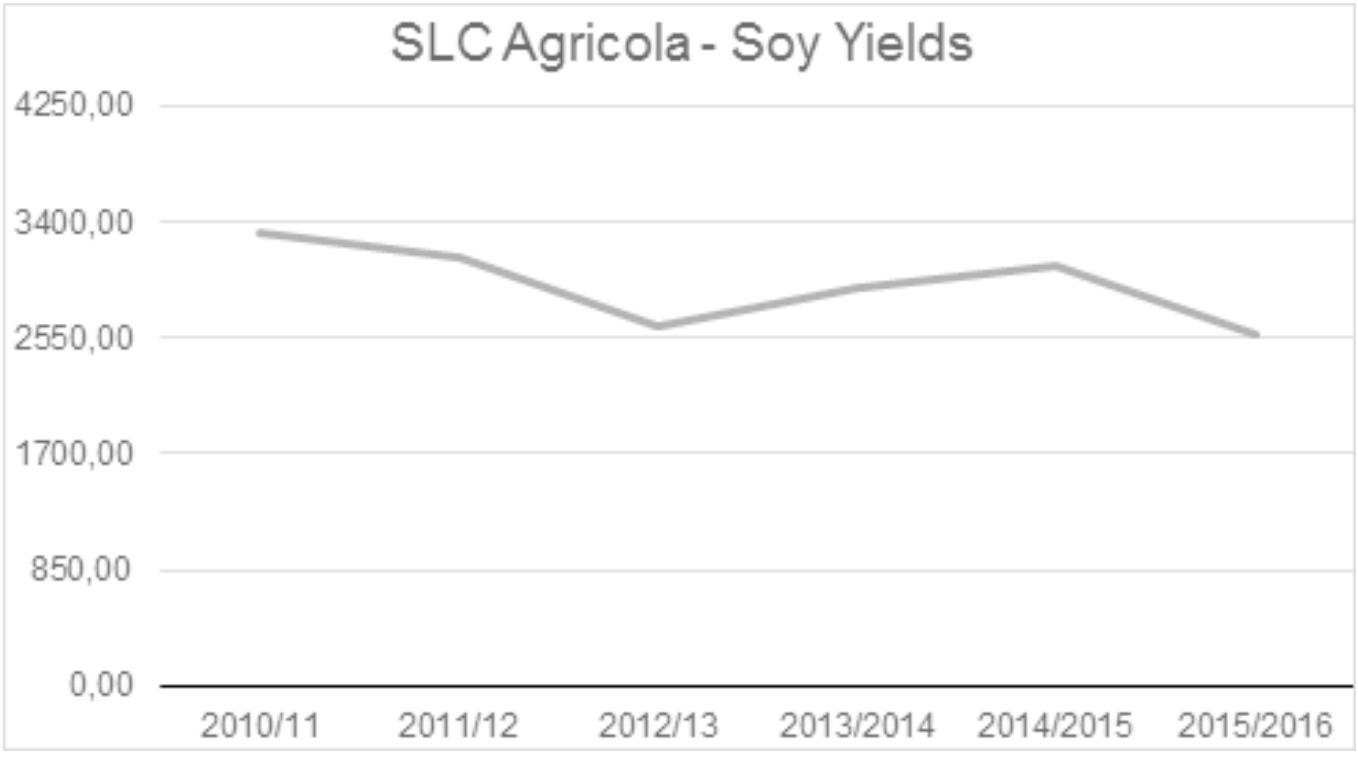


Source: SLC, 2017a
Org: Barbara Kuepper (Profundo)

Over the last five years, variations in the price of land in SLC's portfolio (SAWELJEW, 2016) were more important in economic terms than the earnings from the CDI (Certificado de Depósito Interbancário, or Interbank Deposit Rate, which accompanies the Selic rate established by the government), the BM&FBOVESPA index (IBOVESPA), and the Brazilian inflation rate (IGP-M). The 2015 and 2016 reports (SLC, 2017a) showed that SLC's earnings from agricultural production declined with the fall in commodity prices (DELGADO, 2015 and PITTA, 2016). Its debt grew (see graph 9 below), but the price of land as a financial asset did not experience the same downward trend as these variables did. The increases in SLC Agrícola's portfolio value brought on by the rising land prices allowed the company to include the gains in its shareholder reports and use them and promises of future expansion to acquire new debt, thereby feeding back into the process of asset price inflation.

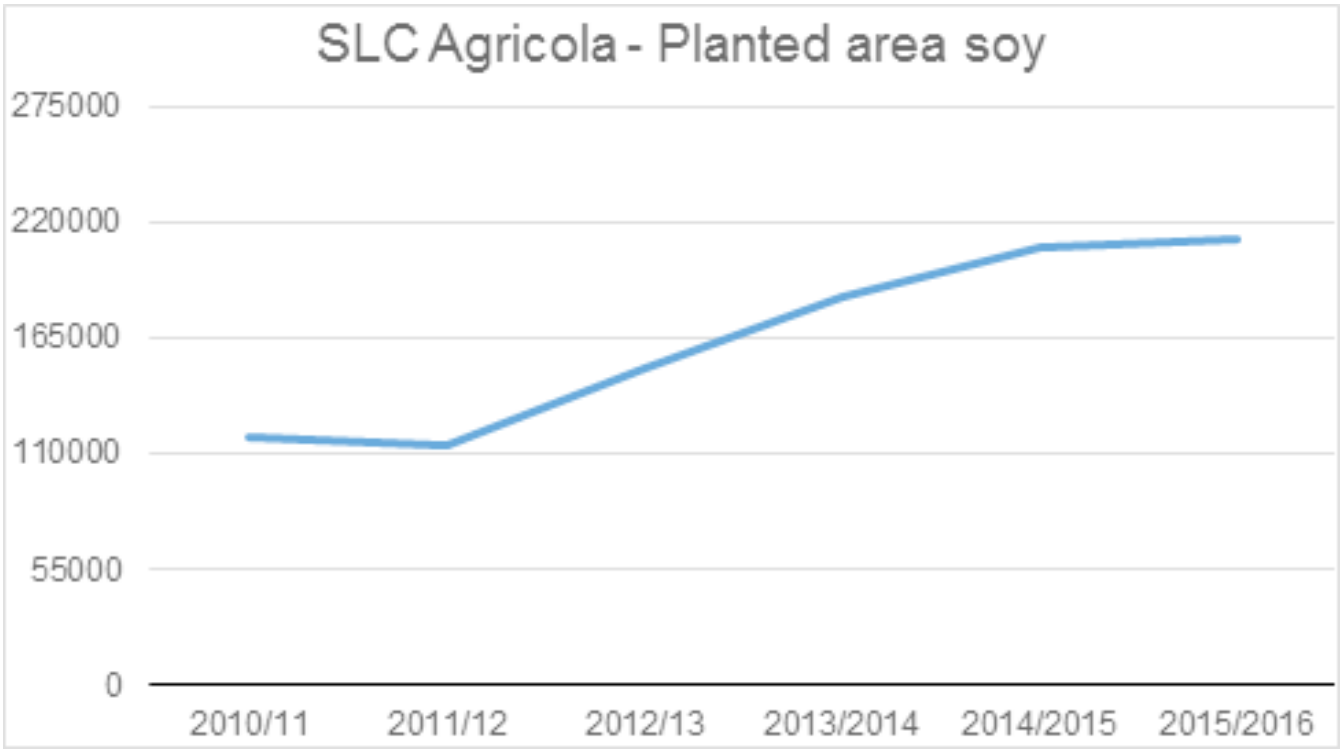
The case of SLC Agrícola/SLC LandCo is similar to the market trends we observed for Brazilian soy since prices began to fall on the international market. Average yields declined (from 3.3 kg/ha in the 2010-2011 harvest year to 2.6 kg/ha in 2015-2016), as the devaluation of the Brazilian real against the dollar pushed production costs up. There was, however, an increase in production and in the area used to grow soybean (from approximately 118,000 hectares in the 2010-2011 harvest year to 212,000 hectares in the 2015-2016 year). This expansion was an attempt to compensate for a decline in international prices. It did not succeed, though, in preventing a decrease in revenues from soybean production (graph 7).

Graph 5: Soy yields – SLC Agrícola (2010-2016) - kg/ha



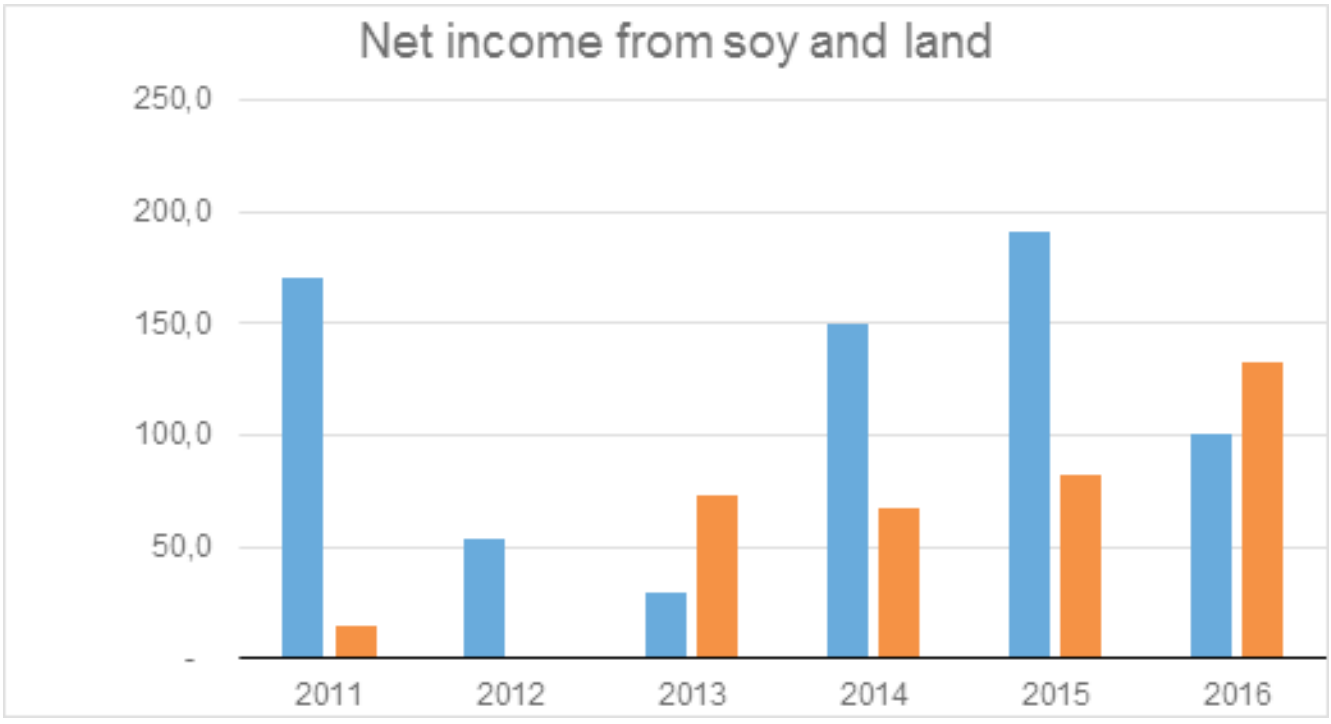
Source: SLC, 2017a
Org.: Tim Steinweg (AidEnvironment)

Graph 6: Area planted in soy (ha) – SLC Agrícola (2010-2016)



Source: SLC, 2017a
Org.: Tim Steinweg (Aidenvironment)

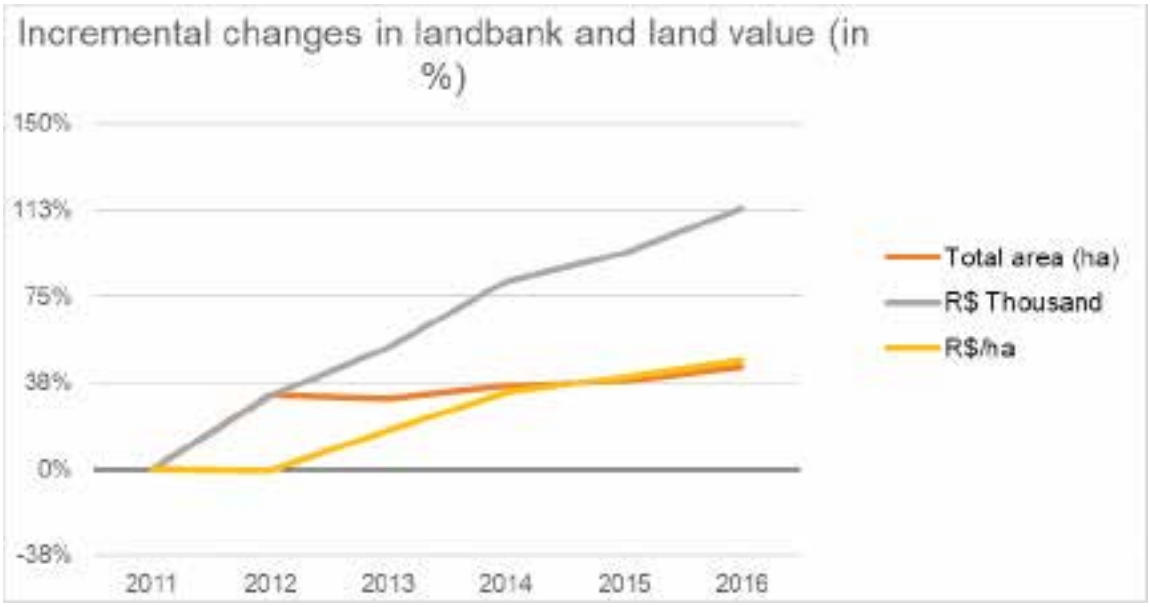
Graph 7: SLC Agrícola/LandCo income in millions of R$ (2011-2016), Soy (blue) x Land (orange)



Source: SLC, 2017a
Org.: Tim Steinweg (Aidenvironment)

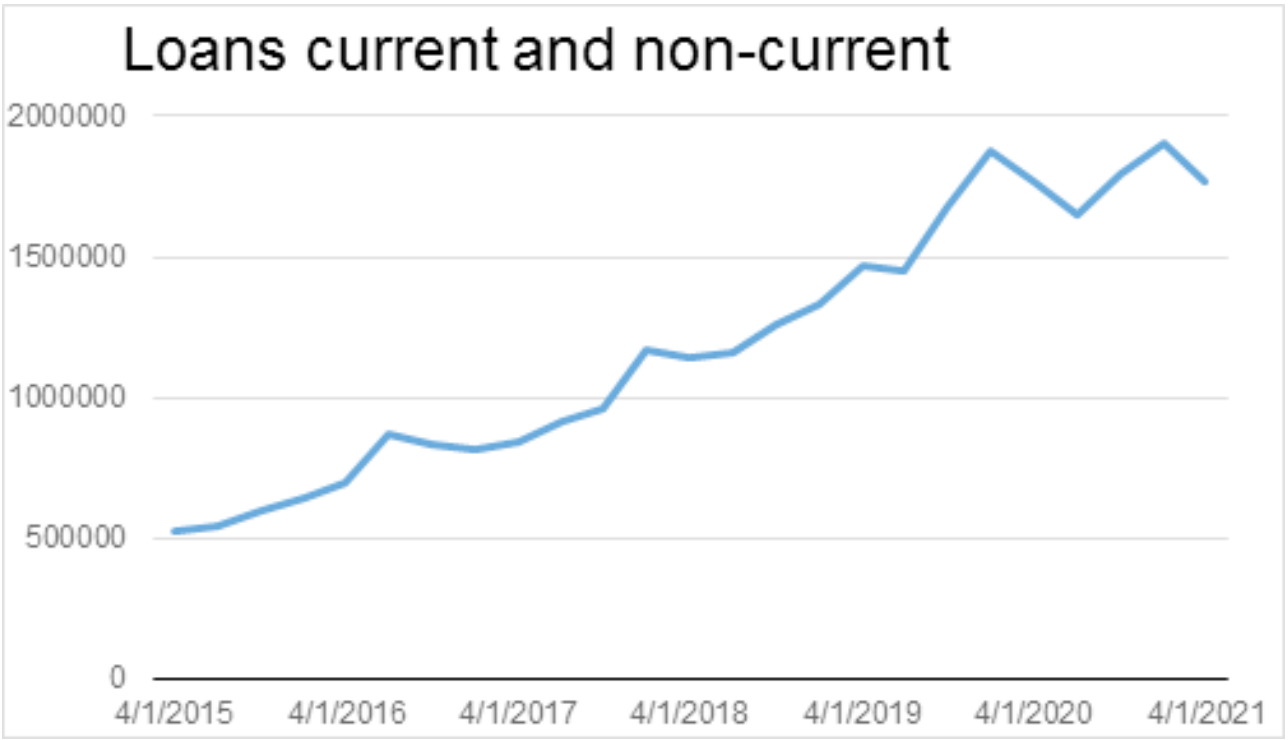
The decline in income from soybean production was partially compensated by the increase in land prices, as graph 7 above illustrates. There is a relation between the expansion of the area used to grow soybean and rising land prices, as can be seen in graph 8 below.

Graph 8: Increase in area, land value and price per hectare in the SLC Agrícola/LandCo. portfolio (2011-2016)



Source: SLC, 2017a
Org.: Tim Steinweg (Aidenvironment)

Graph 9: SLC Agrícola/LandCo.'s debt in thousands of R$ (2011-2016)



Source: SLC, 2017b
Org.: Tim Steinweg (Aidenvironment)

The financialization of a company's accumulation strengthens its capacity to expand[22], which can generate a speculative bubble. Graph 9 shows the growth in SLC Agrícola/LandCo.'s debt, which reached R$2 billion at the end of 2016. The fall in soybean and commodity prices, followed by the reduction in government subsidies, contributed to SLC Agrícola's financial crisis. The same thing happened to other soybean producing and processing companies as well (SOJABRASIL, April 23, 2017).

SLC LandCo was created as a subsidiary of SLC Agrícola to exploit land as a financial asset in connection with the expansion of soybean monocropping into "new" areas. In this process, the companies acquired and established farms at a low cost, as in the case of MATOPIBA. The demand for land linked to the speculative cycle of rising commodity prices was what stimulated this expansion.

The same trend can be found when Radar S/A, Cosan S/A's real estate subsidiary, incorporates land into its asset portfolio, which inflates its share price:

> Radar will appear as a subsidiary on Cosan's next balance sheet for the first time. According to analysts, this should enhance the performance of the company's shares, whose value had already risen 63.7% in the 12 months prior to October [2012], whereas the Ibovespa index rose 6.7%. "Radar is one of Cosan's hidden assets. Once its value is correctly incorporated into the company's market value, it should drive up the share value", said Alexandre Sabanai from Perfin Investimentos (IG NOTÍCIAS, November 28, 2012).

Radar S/A pioneered the creation of transnational farm real estate corporations in Brazil (NETWORK OF SOCIAL JUSTICE AND HUMAN RIGHTS, 2015). Our research on this issue began with an analysis of the expansion of the sugarcane agro-industry in central and southern Brazil (XAVIER, PITTA, and MENDONÇA, 2012; XAVIER, PITTA, NAVARRO, and MENDONÇA, 2014; and PITTA, 2011 and 2016). After the 2008 crisis erupted and commodity prices fell in mid-2011, several sugarcane corporations went bankrupt.

It was in this context that Cosan S/A went public on the stock market (2005) and, as a holding company, set up several subsidiaries. It also entered into a joint venture with the Anglo-Dutch oil corporation Royal Dutch Shell to create Raízen as its sugarcane, ethanol, and electricity division. It also engaged in a merger or joint venture with the US pension fund TIAA-CREF (Teachers Insurance and Annuity Association – College Retirement Equities Fund) to create Radar Imobiliária Agrícola S/A.[23]

Radar S/A acquired land to be used for the expansion of sugarcane monocropping in the central-south region of the country (IG NOTÍCIAS, November 28, 2012). It also promoted the expansion of other commodities such as soybean, corn, and cotton to the plateaus of MATOPIBA, which Cosan does not produce. Radar's objective was to obtain capitalized income from the land – that is, establish farms and then sell them in speculative transactions.

Radar acknowledges that it bought land from the owner of CODECA (Colonizadora De Carli company; see footnote 9 above) in the south of Maranhão and Piauí. Part of this land was deforested and leased out for soybean production. In our reports (NETWORK OF

[22] According to several reports, when credit is available on the market at low interest rates, as in the case of export agribusiness firms in early 2000s, what matters is the collateral on the loans; the companies' finances are of secondary importance. Bank managers earn bonuses based on the amount of loans they grant. As long as asset prices continue to rise, the collateral is used as new financing, which feeds back into the process until the bubble bursts. For more on this process during the US subprime mortgage crisis in 2008, see Lewis, 2011. Robert Brenner (2003) explains this process in relation to the US tech bubble on the NASDAQ exchange, which burst in 2001.

[23] For more details on Radar's land deals, see NETWORK OF SOCIAL JUSTICE AND HUMAN RIGHTS, 2015. See Spadotto, 2017, as well.

SOCIAL JUSTICE AND HUMAN RIGHTS, 2015), we show that Radar's actions caused Cosan and TIAA-CREF's share prices to inflate due to the upsurge in land prices.

In September 2016, Cosan announced the sale of the majority of its stake (the equivalent of hundreds of thousands of hectares of land) in Radar to Mansilla Participações, TIAA-CREF's subsidiary in Brazil and Radar's business partner. Cosan is said to have sold the land for R$1.06 billion and retained only 3% of Radar's shares. The remaining 97% went to TIAA-CREF via Mansilla Participações (VALOR ECONÔMICO, September 30, 2016 and O ESTADO DE SÃO PAULO, October 3, 2016). This deal appears to confirm, as the results of our research suggest, the potentially speculative nature of these companies' business. Cosan acquired land as financial assets through Radar, waited for the price to increase, and then sold the land (VALOR ECONÔMICO, September 30, 2016 and O ESTADO DE SÃO PAULO, October 3, 2016).

At the time when it sold this land, Radar owned more than 550 farms in the states of São Paulo, Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Tocantins, Piauí, and Bahia. Its land portfolio is assessed at over R$2.7 billion (EXAME, October 19, 2016).

TIAA-CREF's acquisition of the majority stake in Radar took place in spite of the limits that Brazilian laws impose on foreign land ownership (a maximum of 25% of a given municipality can be owned by different foreigners, and 10% by the same person). Since Cosan continues to manage Radar while TIAA appears only as an investor, the companies claim that the land is not owned by foreigners. The same procedure has been used by SLC Agrícola, SLC LandCo, and the UK-based Valiance Management fund.

TIAA-CREF Asset Management owns close to US$1 trillion in assets (NETWORK OF SOCIAL JUSTICE AND HUMAN RIGHTS, 2015). It has set up two financial vehicles to channel investments into farming activities and farmland, with assets held in Australia, Brazil, Chile, and the US: TIAA-CREF Global Agriculture I and II (TIAA GLOBAL ASSET MANAGEMENT, 2016a and b). Both receive funds from other public and private pension funds, such as Sweden's AP2; the Caisse de Dépôts et Placement du Québec and the British Columbia Investment Management Corporation (bcIMC) from Canada; Stichting Pensioenfonds ABP from the Netherlands; the German Ärzteversorung Westfalen-Lippe; the Cummins UK Pension Plan Trustee Ltd., the Environment Agency Pension Fund and Greater Manchester Pension Fund from the UK; and the New Mexico State Investment Council from the US.

Not only does financialization (and its inherently speculative nature) function as a way of circumventing the law on the transnationalization of land, it may also exempt the corporations linked directly or indirectly to questionable land acquisitions from their responsibility in the matter.

Fieldwork was carried out for this study in April 2017 on land located on the plateaus of the Santa Filomena (PI), Alto Parnaíba (MA), Balsas (MA), and Tasso Fragoso (MA) municipalities. Our research established a close relation between the farms of Radar and those of SLC Agrícola/LandCo. SLC Agrícola leases part of Radar's land for soybean production and it is possible that Radar acquired the Catuaí Norte farm from SLC Agrícola. When these corporations trade land among themselves, it keeps the market buoyant.

It was not possible to prove that the Ludmila farm owned by Radar on the Santa Filomena plateau (which is adjacent to the Parnaguá farm belonging to SLC Agrícola), was established on "*terras griladas*" – that is, land appropriated through *grilagem*. Even so, it is important to note that the State of Piauí Agrarian Court in the Bom Jesus district initiated proceedings that could result in the cancellation of the deeds for the majority

of the area surrounding these farms due to suspicion of *grilagem* (GP1, August 3, 2016). During the court proceedings on the cancellation of the deeds to over 124,000 hectares of land in the area around these two farms, Judge Heliomar Rios Ferreira summoned the owner of CODECA who has been accused of *grilagem* (Case no. 0000759-98.2016.8.18.0042 of July 5, 2016, PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF PIAUÍ).

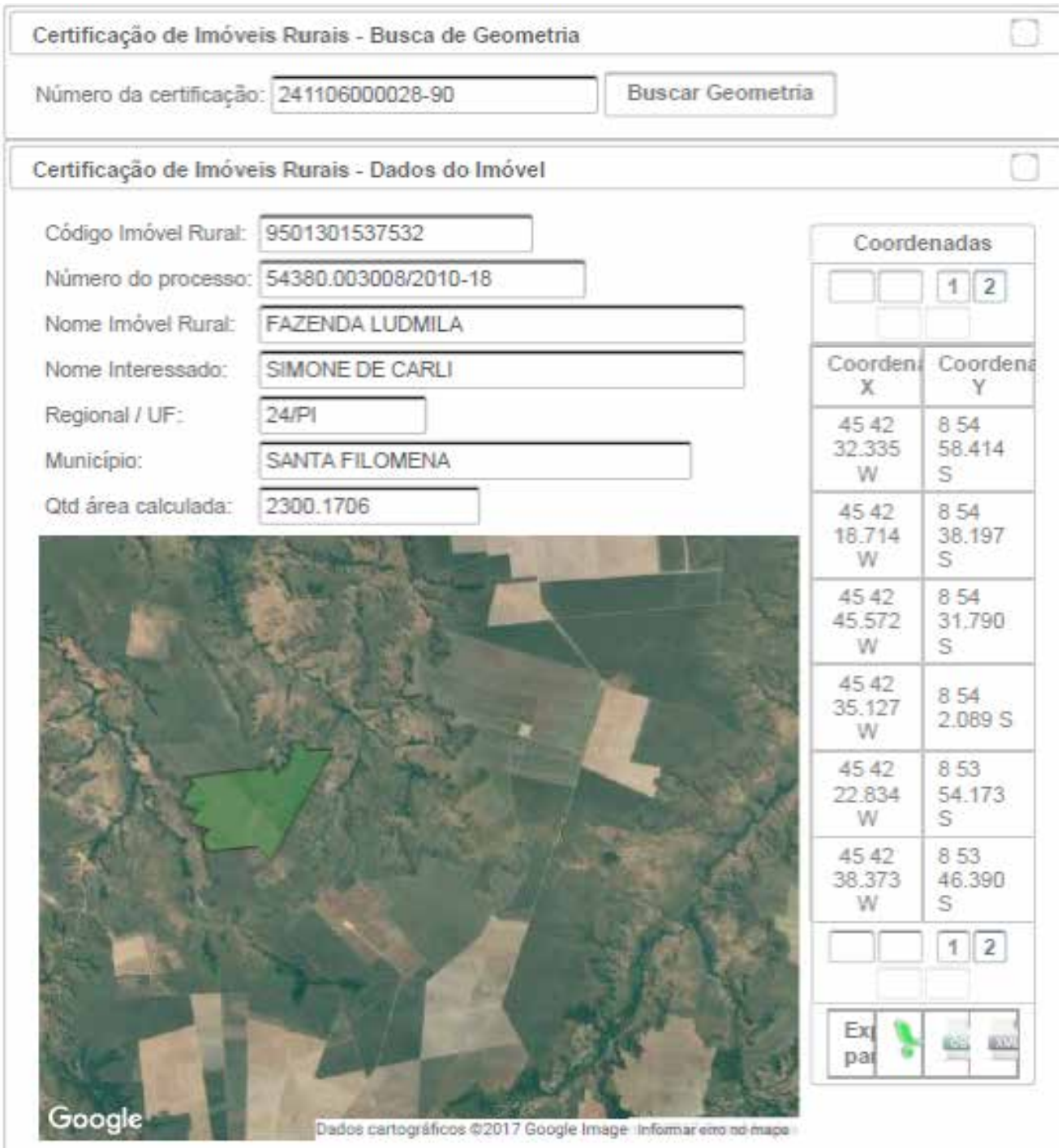
The Parnaguá and Ludmila farms, owned by SLC Agrícola/LandCo and Radar respectively, hire the NSSP (Norte Sul Segurança Privada) company to provide them with private security services[24]. NSSP also works on the plateaus that rural communities used for subsistence farming for centuries.

Photo 1: Parnaguá farm (Monte Alegre, PI), SLC Agrícola/LandCo

Photo: Samuel Frederico / Yuri Saweljew, April 2017.

[24] During the fieldwork carried out on the Parnaguá farm, owned by SLC Agrícola, and the Ludmila farm, belonging to Radar S/A, in April 2017, in the south of Piauí, the farms' security guards themselves claimed to be employees of the owner of CODECA. The company affirmed, however, that it does not have ties with NSSP, the company that appears in photo 1 taken on the Parnaguá farm.

Screen print 1: Location of the Ludmila farm, Radar S/A, Santa Filomena, PI (Chapada Até Que Enfim, or the "At last!" plateau)



Source: INCRA (Instituto Nacional de Colonização e Reforma Agrária, or National Institute for Colonization and Agrarian Reform). Available at: http://acervofundiario.incra.gov.br:8080/Conversao01/faces/index.xhtml. Website consulted in April 2017.
Note: Please note the name of the person applying for the deed to the property.

Photo 2: Ludmila farm – Radar S/A, Santa Filomena, PI (Chapada Até Que Enfim): area of the native Cerrado biome cleared by tractors using a large chain

Photo: Samuel Frederico / Yuri Saweljew, Abril 2017.

Radar declared that it had acquired land from the owner of CODECA, as mentioned earlier. In the fieldwork conducted on the Parnaíba farm, owned by SLC Agrícola/LandCo in Tasso Fragoso (MA), researchers found a map of this farm on which the said businessman's name appears as the previous owner of this parcel of land. The Parnaíba and Planeste farms, owned by SLC Agrícola/LandCo, and the Sagitário and Catuaí Norte farms, belonging to Radar, in Balsas and Tasso Fragoso (MA) are located on the Gerais de Balsas plateau close to the land that had apparently been acquired by CODECA in the 1990s (MIRANDA, 2011 and ALVES, 2006).

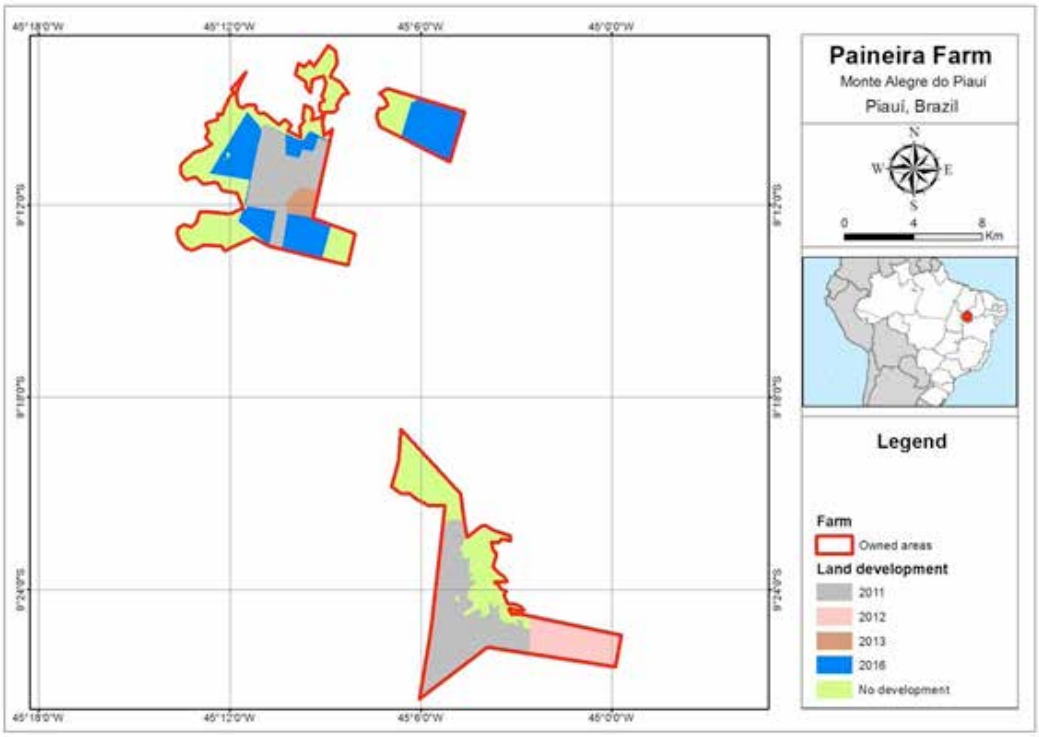
The speculative demand for land stimulates *grilagem* and the expropriation of rural communities. Financialization functions as a way of "outsourcing" *grilagem*, as the companies that benefit from the illegal operations are not made to bear the consequences of this kind of deal. The same happens with the overexploitation of migrant sugarcane cutters, where outsourcing companies are the ones that hire and swindle workers directly.

In an interview with SLC Agrícola's farm manager at the Parnaíba farm in Tasso Fragoso, MA (held in April 2017), he explicitly stated that these areas were used for speculation, since revenues were lower than production costs due to the drop in commodity prices. These areas could be expanded and later sold to generate capitalized revenues from land, even at times when the prices of the goods produced were low.

Some of the recently developed areas owned by SLC Agrícola/LandCo. are located in the south of Piauí and the northeast of Bahia. Farms in Mato Grosso, Mato Grosso do Sul and Goiás have not been expanded at least since 2011.

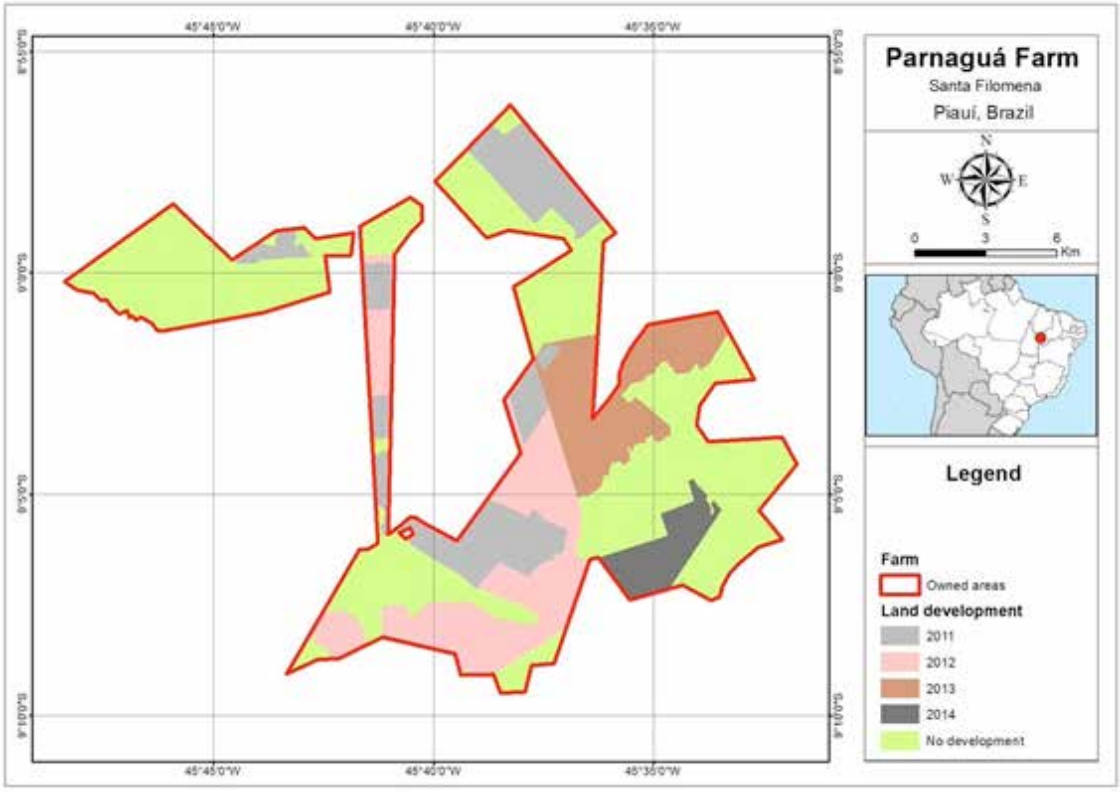
25 In response to our consultation of the companies, CODECA affirmed that it had never owned the Parnaíba farm.

Map 2: Paineira farm, SLC Agrícola/LandCo – Expansion in 2011-2016



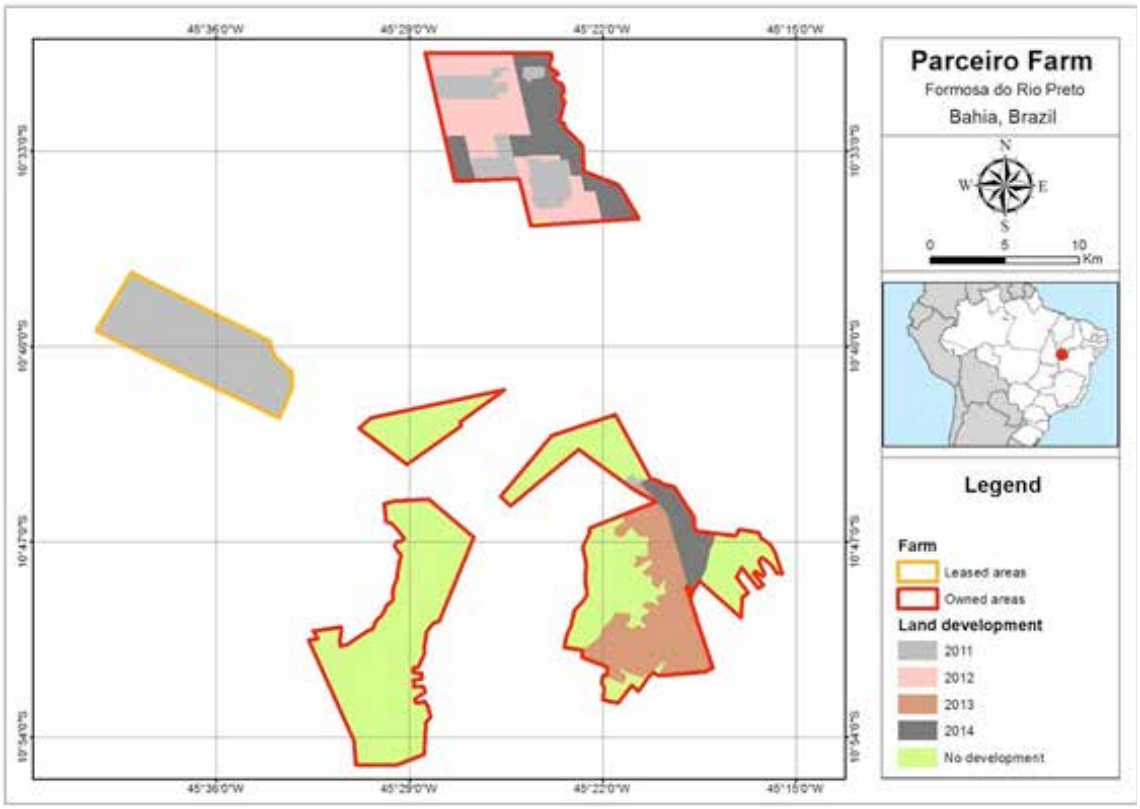
Source: Serge Rafanoharana (Aidenvironment Asia)

Map 3: Parnaguá farm, SLC Agrícola/LandCo – Expansion in 2011-2016



Source: Serge Rafanoharana (Aidenvironment Asia)

Map 4: Parceiro farm, SLC Agrícola/LandCo – Expansion in 2011-2016



Source: Serge Rafanoharana (Aidenvironment Asia)

In the case of the Paineira farm in Monte Alegre in the south of Piauí, the area was incorporated as a financial asset during a time when soybean prices fluctuated between high and low prices. Efforts to expand the farm into new areas were reduced during the period due to the "lawsuits" against the company, as SLC Agrícola's manager explained in the interview on the Parnaíba farm in Tasso Fragoso, MA. In relation to the first farm (Parnaguá, map 3 above), the lawsuits launched were in regards to the permits authorizing the clearing of the Cerrado vegetation, the possible cancellation of the land titles, and the obscure legal situation of the farm. The second farm (Paineira, map 2 above) was rented to a soybean farming company, Agropecuária Celeiro. According to accounts from communities in the lowlands, the Paineira farm is involved in a land conflict, as the company is attempting to claim the communities' land as its own to use it as part of its legal reserve. According to the reports gathered during our field research, the company is harassing and deceiving community members in its attempts to gain control over the land.

Five communities in the lowlands in the region surrounding the aforementioned farm are being affected by the operations of the soybean companies. In the area, there are reports of rivers being polluted and drying up, of soils and water being contaminated by agrochemicals, and of land conflicts. Agropecuária Celeiro rents the land from SLC Agrícola/LandCo, which earns profits from the deal. There are also reports of new areas being incorporated into the Fazenda Paineira (Monte Alegre, PI). This raises several questions, such as: at the end of the lease, when Agropecuária Celeiro returns the land to SLC Agrícola/LandCo, to whom will the incorporated areas belong? When the farm is sold, as per SLC Agrícola/LandCo's strategy, who will benefit from the incorporation of new areas into the farm?

Photo: Vicente Alves, Junuary 2017.

In the state of Maranhão, the farms of Radar S/A and SLC Agrícola/LandCo are located on the plateaus where, although there is no possibility of incorporating new areas, they can expand their control by leasing the surrounding farms (as in the case of SLC Agrícola, which rents land from Radar S/A). However, in terms of accumulating land as a financial asset, the main areas of expansion are in the south of Piauí, in Tocantins, and more recently occupied areas in Maranhão.

Even when commodity prices are low, the expansion of production and rural real estate companies functions as a mechanism of accumulation. This mechanism uses financial capital as an intermediary and further promises of future expansion to compensate for the fall in prices or to appropriate land as a financial asset. Other companies are also engaged in this process in MATOPIBA.

BrasilAgro, for instance, was created in 2005 as a joint venture between Elie Horn from the Cyrella Group and the Argentine corporation, Cresud (GRAS and NASCIMENTO, 2017). It was set up to operate exclusively as a rural real estate firm. It raises funds for land acquisition by offering shares on the stock exchange. According to its business plan, BrasilAgro:

> ...acquires, develops, exploits, buys and sells land in rural areas that is adequate for farming and livestock raising [...]. In 2006, we acquired a total of 10 farms and in June 2008, we completed the sale of one farm. Our business plan focuses on the appreciation of our rural property as our main source of financial gain (OLIVEIRA, 2016, p. 411).

SLC Agrícola uses both soybean and land as financial assets in its business deals. Radar is active on the land market, but not in production. Cosan and BrasilAgro operate on the stock exchange and use land as their main asset to inflate the value of their portfolios. BrasilAgro has established soybean farms and traded land in MATOPIBA in recent years. After it establishes a farm, it leases it out and waits for the price to increase before selling it. BrasilAgro owns farms in Paraguay and Brazil, in the states of Mato Grosso do Sul, Mato Grosso, Minas Gerais, Goiás, the west of Bahia, the south of Piauí, and the south of Maranhão. It has sold land in Mato Grosso do Sul, Goiás, Piauí, and Maranhão.

In February 2017, BrasilAgro was the first transnational rural land corporation to resume operations on the land market. It bought an area of approximately 17,000 hectares for R$100 million in the municipality of São Raimundo das Mangabeiras, Maranhão. The area is close to Balsas and Tasso Fragoso, to the northeast of these municipalities. Soybean production has recently expanded to this area (VALOR ECONÔMICO, February 8, 2017).

The inflation of the price of land is fundamental for BrasilAgro, as it increases its share value and serves as a guarantee for loans and new land acquisitions. Gras and Nascimento (2017) show that in several of BrasilAgro's shareholder reports, one can find references to lawsuits involving land conflicts and problems with environmental laws. This type of business depends on the appropriation of public lands of common use, historically occupied by indigenous and peasant peoples who generally do not have the deeds to their land, but who do have rights to the land.

Another company involved in the land market in MATOPIBA is the Vision Brazil Investments fund (founded by Amauri Júnior and Fábio Greco, former Bank of America employees). Part of this company's capital comes from TibaAgro, a company controlled by members of the Golim family that supposedly used the *Fazendas Reunidas Boi Gordo* company to create a "financial pyramid" and then went bankrupt in 2004 (IG NOTÍCIAS, November 4, 2011). The Vision Brazil Investments/TibaAgro group allegedly owns more than 10 farms in Piauí and receives funds from the Dutch pension fund APG/ABP via financial channels such as Morang LLC and New Holland Absolute Return (VALOR ECONÔMICO, April 1, 2013a and b). One of its farms, São João do Pirajá, is located in Bom Jesus do Piauí near the Paineira farm, owned by SLC Agrícola, in Monte Alegre, PI (see ALVES, 2006, 182).

The InSolo Agroindustrial Group (founded in 2008) is involved in the soybean industry in Maranhão, Piauí, and Tocantins (OLIVEIRA, 2016). It owns land in the Chapada Até Que Enfim region and has farms close to those of Radar and SLC Agrícola/LandCo. Numerous farms in the surrounding area are involved in proceedings initiated by State of Piauí Agrarian Court to cancel land titles that are suspected of having been obtained illegally (Case no. 0000759-98.2016.8.18.0042; July 5, 2016, PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF PIAUÍ). Resources from Harvard University are channeled into InSolo Agroindustrial through a financial vehicle created in Brazil called *IPA Investimentos e Participações Agrícolas Ltda.* (PEREIRA and PAULI, 2016, p. 9). Pereira and Pauli (2016) explain that 95% of InSolo Agroindustrial's capital belongs to the Harvard Endowment Fund. In September 2016, Brazilian businessperson Colin Butterfield was hired as the fund's executive director on natural resources and is responsible for investments in agricultural holdings. Prior to this, he was the CEO of Radar S/A (OUTRAS PALAVRAS, September 22, 2016).

Other transnational corporations operating in the MATOPIBA region[26] include Sollus Capital (see the box below), which has ties to Ceagro (with capital from Mitsubishi from Japan and *Los Grobo* from Argentina), XingúAgri (which has joint ventures with

26 See Oliveira, 2016; Frederico, 2016 and 2017; Pereira and Pauli, 2016. For more details on these companies in Tocantins, see Lima (2017).

US-based Multigrain and Mitsui from Japan, and SLC Agrícola from Brazil); Adecoagro (which receives capital from George Soros); Agrinvest (with capital from the Ridgefield and Touradji hedge funds from the US and Brazil, respectively); CalyxAgro (linked to the Luis Dreyfus Commodities Group from France and the PineBridge Investment fund); the Colorado Group (with capital from the Global Opportunity and Black Rock funds); as well as trading companies such as Bunge and Cargill.

The case of Sollus Capital in Campos Lindos, Tocantins

Campos Lindos, Tocantins, June 2017.

By: Eva Hershaw, a Fulbright researcher in 2016 at the University of Brasília who is currently a land monitoring specialist at the International Land Coalition.

On October 14, 2016, police officers went around the city of Campos Lindos - a rural municipality in the northeast corner of Tocantins known as the "filet mignon" of the Cerrado biome – to hand out eviction notices to 41 families living in the lowlands in the area called the Serra do Centro, putting an end to a legal battle that lasted almost 20 years. Even though some families had been living there even before the region became globally known for its potential to produce soybean and corn for export, a local court decided that they had "invaded" the legal reserves of grain producers represented by *Associação de Plantadores do Alto do Tocantins* (PLANALTO, or Alto do Tocantins Growers Association). The association is funded by local, international, and transnational capital.

"I am trying to understand what right they have to come here and remove – evict the people from here", said 55-year old José Nilton Luciano, who has lived in the region for the last 15 years. He is the first on the list of evictions. "Now they say I live on their reserve and that's just the way it is".

Although land conflicts are nothing new in Brazil, Campos Lindos is an emblematic case of state-driven expansion of commodity-producing agribusiness commodities at the expense of traditional peoples' livelihoods. This conflict began in 1997, soon after the state of Tocantins was created. The then-governor José Wilson Siqueira Campos created the municipality and named it after himself. A short time later, the state launched the Campos Lindos Agricultural Project and appropriated the Santa Catarina farm for itself, which covered an area of 105,600 hectares, claiming that it was "socially unproductive". According to the Federal Prosecutor's Office of Tocantins, 150 families were living on the land at the time.

Instead of giving land titles to the settlers already living on the land – in some cases, for nearly four decades – or using the land for agrarian reform, the state sold it at a low price to a small group of political and business elites. Among the 27 beneficiaries related to the transaction, one finds former Minister of Agriculture and current state senator for Tocantins Kátia Abreu and her brother. Emiliano Botelho, the state president of the Companhia de Promoção Agrícola (Campo), grabbed the biggest lot, which covered 1,700 hectares of land. The project advanced even though it did not have an adequate Environmental Impact Report (RIMA for its acronym in Portuguese) and as of 2017, had only met three of the 34 technical requirements issued by the Brazilian Institute of the Environment and Renewable Natural Resources (Ibama) and the state environmental agency, Naturatins.

"The disastrous actions taken by Brazilian authorities, with the judiciary's consent, ended up producing a situation of grave injustice, as they oppressed and forced small farmers off the land where they worked", stated Pedro Alexandre, public defender in Palmas (TO) who has worked on the case. "They criminalized the work and traditional way of life of small-scale workers".

Photo: Samuel Frederico / Yuri Saweljew, Abril 2017.

PLANALTO led the process against the families and the government ended up acting in the association's favor. The case became a symbol of the chronic insecurity that the landless people in the country face and of the social impacts of the alliances formed between foreign capital and national governments in the name of rural development. The municipal GDP is much higher than the national average (R$34,867.88) and in 2015, 92.5% of its budget came from foreign sources. In 2003, Campos Lindos was considered the poorest city in Brazil and in 2010, according to the IBGE, it was estimated than 21% of individuals over 15 years of age do not know how to read or write, which is much lower than the national average.

The inequality, expropriation and violence that come with the development of agribusiness in a country where ownership of most of the land has not been legalized have grown in recent years, especially along the new agricultural frontier in MATOPIBA, which covers the states of Maranhão, Tocantins, Piauí and Bahia. In 2016, 61 people died in rural conflicts in the region, according to the *Comissão Pastoral da Terra* (CPT, or Pastoral Land Commission). This tendency will only get worse if international and transnational corporations continue to show interest in land and if the state continues to give priority to private investment instead of its social responsibility.

One well-known actor in the region that local authorities identify as a member of PLANALTO is Sollus Capital, an investment company that seeks to capitalize on "the dynamics of attractive farmland in South America". The company minimizes its exposure to risk by diversifying its portfolio "in terms of location, culture, and size". By working with companies in the real estate, logistics, and services industries, Sollus offers to "maximize the value of cultivated land" for investors. This company - which owns land in Argentina, Uruguay, and Paraguay and is involved in business in Africa – is a joint venture between US-based Touradji Capital, the Brazilian investment firm Vinci Partners, and the Los Grobo Group, a transnational agribusiness company created in Argentina (see FREDERICO, 2017).

Founded by the former partners of Banco Pactual, Vinci is described as one of the main private equity managers in Brazil. Its portfolio includes PDG Reality and Equatorial Energia,

which operate in the country's energy sector. The company also invests in ethanol via CMAA. Los Grobo, a major agribusiness corporation with operations all over South America, is another of Sollus Capital's partners. It works on logistics, infrastructure, and the supply of products and services to agribusiness producers. The company claims to manage 246,000 hectares of land and produce a combined 3 million metric tons of soybean, wheat, corn, and sunflower in the Southern Cone. The New York-based hedge fund Touradji Capital Management specializes in investing in commodities and commodity-related securities. It currently manages over US$3.5 billion in assets and has investments in the energy, metal, and agribusiness sectors, mainly in Brazil.

In total, Sollus owns more than 6,000 hectares in Campos Lindos and 30,000 hectares in the entire MATOPIBA region. With these founding partners on board, the company describes itself as being "well-trained in identifying areas of the [agricultural] frontier that can be developed in the short-medium term". The Campos Lindos region of Tocantins is clearly one of these areas.

The presence of actors such as Sollus in Campos Lindos and the political capital of the Planalto association are an indication of the changing and complex nature of the challenges faced in rural Brazil. By establishing partnerships with local companies to invest in land, foreign pension and investment funds and insurance companies can diversify their portfolios geographically and guarantee the best return for their assets. In the midst of an unprecedented political and economic crisis, the Temer administration (2016 - ?) promised, among other things, to increase or even suspend the limits on foreign investment and land ownership in a given municipality. If this were to occur, existing pressure on rural areas in Brazil and the violence against traditional communities would increase, and cases such as the one in Campos Lindos would be reproduced elsewhere.

On the day of the eviction, the majority of the families fled. Some members of the community burned a bridge to stop authorities from entering, while numerous others went to the city and promised to return to their houses only after the authorities left the area. In the end, the state managed to evict 24 of the 41 original families.

"Our assessment of the situation is positive now because the conditions here for dealing with land issues are not the best", said Lorrany Lorenzo, a lawyer with the CPT who is representing the families in this case. The fact that some families managed to remain is viewed as a victory underscores the challenges involved in the local struggle, which, according to Lorenzo, is not over.

The CPT aims to bring the case before the Inter-American Court of Human Rights to demonstrate just "how idle the state was and how it was the main actor that caused these conflicts to happen in Campos Lindos".

7. Social impacts in MATOPIBA and in the south of Piauí

The expansion of soybean monocropping in the Cerrado began decades before the commodity boom, mainly on the plateaus. Plantations of not only soybeans, but also corn, eucalyptus, and cotton drove the expansion of the agricultural frontier. In the west of Bahia, the south of Maranhão and Piauí, and the southeast of Tocantins, the native Cerrado vegetation was destroyed by tractors using the "correntão", or the so-called "big chain" (see photo 3 below). Rural communities were expropriated and the *grilagem* of public lands of common use prevailed.

Photo 3: Large chain used to clear the Cerrado in Santa Filomena, Piauí

Photo: Samuel Frederico / Yuri Saweljew, Abril 2017.

Since the beginning of the boom in commodity prices in the early 2000s, pressure has been growing on rural communities who are finding themselves increasingly fenced in by the agroindustries, with less land to produce on, and "constricted and confined" (KLUCK, 2017, p. 18) to small areas. These impacts were documented in the fieldwork conducted[27] mainly in the region of Santa Filomena, in the Chapada Até Que Enfim area in the south of Piauí; and the Balsas region, in the Gerais de Balsas and the south of Maranhão. SLC Agrícola and Radar own land and soybean plantations in the region. In Santa Filomena, Insolo is also present.

[27] We did not provide details on the location and names of the communities visited to protect the identity of their members.

Satellite image 1: the border between the south of Maranhão and the south of Piauí, 2000.

Satellite image 2: the border between the south of Maranhão and the south of Piauí, 2008

Satellite image 3: the border between the south of Maranhão and the south of Piauí, 2016

Source for images 1, 2 and 3: Google Earth, May 2017.

The deforestation of the Cerrado on the plateaus can be seen in the sequence of satellite photos above. The destruction of the Cerrado altered the rainfall patterns in the region, which now suffers from drought. Many rivers dried up, as their sources were destroyed by soybean plantations that deplete the water and pollute the groundwater, thus affecting the water supply in the lowlands as well. Rural communities living in the lowlands depend on this water for human consumption, fishing, and food production. Without the rivers and the wetlands, it is impossible to survive in the lowlands.

The use of agrochemicals by agribusiness corporations also causes serious socio-environmental impacts. Aerial spraying is often used to apply agrochemicals, which pollutes rivers and the water table, kills fish and the rural communities' crops, contaminates food, and raises the incidence of diseases such as cancer. The use of chemical inputs on the farms of agribusiness companies creates an environmental imbalance and increases the number of pests affecting the crops of the communities living nearby and destroying their yields, making it impossible for them to produce food. The deforestation of the Cerrado's plateaus pushes the local fauna out of the area, eliminating the possibility of hunting to obtain food.

To irrigate the soybean plantations on the plateaus, dams are often built on the rivers from which water is extracted and distributed through central pivot irrigation systems. This exacerbates water supply problems in the region, which is beginning to experience drought caused by a decline in rainfall as a consequence of deforestation.

The land of indigenous, quilombola and peasant communities continue to be the target

of *grilagem* and expropriation. As the areas of the plateaus were deforested, companies began to appropriate parcels of land in the lowlands (places where rural populations, who preserve the Cerrado, live and grow crops) in an attempt to use the preserved Cerrado in these areas to comply with legislation requiring landowners to set aside 35% of their property as a legal reserve:

> Farmers in the lowlands were the first to suffer from the impacts of the recent occupation, as the areas in the valley floor that separate the plateaus – the lowlands – were seized for private use along with the plateaus. For modern agriculture, these parcels of land are not – at least not at the moment - important for production, but they are used to comply with environmental laws, as it is necessary to reserve [a certain amount of land] as areas of permanent preservation. Since agribusinessmen wish to remove the most vegetation from the flat areas of the plateaus as possible for production, what is left for complying with certain environmental legal requirements are the areas in the lowlands.
>
> When businessmen or real estate speculators acquire land on plateaus where there are also areas available in the lowlands [nearby], they often oppose the possibility of the settlers remaining in the area. They frequently demand that the families leave, either using coercion or by trying to convince them to accept sums of money (normally for derisory amounts) to free the land from human occupation (ALVES, 2006, p. 181).

The flat areas in the lowlands have also been seized for intensive, industrial cattle production, as well as to grow soybeans using central pivot irrigation systems. During our fieldwork, we registered several recent cases, such as, for instance, in Santa Filomena in the Chapada Até Que Enfim region, where the land of the communities in the lowlands were fenced in and expropriated by gunmen hired by soybean farming companies.

The practice called the "*abraço*" or "embrace" continues to be used by local *grileiros*, agribusiness corporations, and rural real estate firms. Foreign companies do not usually get directly involved in *grilagem*, but their interest in land increases the price of land as an asset. It also fosters the view that prices will rise as these companies want more land. Both stimulate expropriation:

Photo: Vicente Alves, January 2017.

In the Cerrado in Piauí, there has recently been numerous cases of workers being evicted. In the past few years in Bom Jesus, the municipal rural workers' union has received several denunciations of the expropriation of settlers. They have also noted conflicts arising between the communities living in the lowlands, which are being fueled by land speculators interested in the peasants' land. The documents of that municipal union in which the testimonies of the residents of the lowlands have been registered indicate that some settlers and modern farmers have been involved in the accelerated expansion of land deals, bringing harm to others living in these areas.

In 2005, several complaints were registered in the union's records. The main one referred to a conflict in Serra do Pirajá, in the municipalities of Bom Jesus and Currais, an area made up of plateaus and lowlands. The government of Piauí distributed part of this land, mainly on the plateaus, to what was supposedly producer associations from other states, namely Rio de Janeiro (...). The other part of land, located in the lowlands and also the plateaus, was left in the possession of its long-time residents. Some settler families living on that land, however, complained about other families in the same situation, claiming that they sold their own and other peoples' land to modern agriculture businessmen. The complainants pointed to a large real estate speculator who was anonymously encouraging some settlers to sell their parcel of the claimed land or even to illegally increase their area to include the areas of others, which would bring them more money. Once the deal was finalized, the said speculator would not only pressure others to also sell their land, but also expanded the size of the property he acquired by preparing false land titles (ALVES, 2006, p. 182)

The *grilagem* scheme for land speculation began when the state distributed public land on the plateaus to agribusiness while ignoring the long-standing right to common use of these areas, thus expropriating local communities. Real estate speculators began to control these areas through the so-called "*abraço*" technique and illegally expanded their property by deceiving settlers, employing violence, and falsifying documents (OLIVEIRA, 2016, p. 392). The increase in the price of the land feeds back into this process, as new farms are established at practically no cost on public land of common use. The speculator or *grileiro* sells these areas to larger real estate companies, including some transnational ones.

Rural communities thus remain confined to small parcels of land, as both the plateaus and the lowlands are the target of real estate speculation. When they migrate[28], they encounter degrading working conditions on the farms. Many farms have mechanized production. The few jobs still available are generally spraying weeds, removing stones and stumps, and clearing the land manually before seeding soybeans (sometimes on the land that was taken from them). Many workers migrate to the outskirts of cities and favelas and subject themselves to informal labor. For women, the only work available is usually that of domestic workers or day laborers.

During the boom in commodity prices in Brazil, which coincided with the expansion of the automobile and real estate industries, many migrant workers went to work on construction projects such as the Belo Monte hydroelectric dam and the stadiums built for the 2014 World Cup. When the global economic crisis hit Brazil in 2013 (with greater intensity from 2014 and 2015 on), there was a sharp decline in this type of work. The official unemployment rate

[28] Research was conducted on working conditions in the south of Piauí during interviews held on June 23, 2017 with Joana Lúcia Feitosa, from the CPT- Piauí State Coordinating Committee on Migration and Slave Labour; and Adriana Cavalcanti, Advisor to the Department of Salaried Workers of the FETAG-PI (Federação dos Trabalhadores na Agricultura, or Federation of Agricultural Workers).

reached the 14 million mark, or more than 13% of the active population[29].

Despite all of these difficulties, some communities are attempting to reclaim their land. The documentary entitled *17 sonhos e uma cerca* (17 dreams and one fence, MILU, 2015) shows the struggle of the Rio Preto settlement in Bom Jesus, in the south of Piauí, which was able to go through INTERPI (Instituto de Terras do Piauí, or the Piauí Land Institute) to get its land demarcated. Unfortunately, the wrong land was demarcated and the area was smaller than the original size; it is not known if this was by mistake or on purpose. The conflict with *grileiros* ensues, even after the official demarcation of the area, as it continues to be the target of speculation. The recognition of these communities' land is fundamental to their attempts to reclaim them, even if they have been "*griladas*". The falsification of a land deed is a crime for which the time limit for filing charges never expires, as these documents continue to be used in subsequent land deals.

With the current laws on the legalization of land ownership, the risk of the land of indigenous, quilombolas, and peasant communities being illegally expropriated remains. One example of this is the state of Piauí's law nº 6709, from September 28, 2015, which seeks to legalize ownership for both the land of rural communities and the areas occupied by agribusiness (to produce soybean, corn, sugarcane, cotton, eucalyptus, or cattle). In fact, in many cases, the current state of territorial occupation serves as a sort of confinement of rural communities (KLUCK, 2017), which are surrounded by agribusiness and harassed by real estate speculators.

Photo: Samuel Frederico / Yuri Saweljew, Abril 2017.

[29] For statistics on unemployment, see the Brazilian Institute of Geography and Statistics (IBGE) website: http://www.ibge.gov.br/home/

8 - Conclusion

The 2008 economic crisis altered the profile of agribusiness in Brazil and attracted foreign corporations from different sectors – not just agricultural, but also financial – to the country. This fueled a process of mergers and acquisitions, which led to an even greater concentration of capital. The corporations opted for this strategy as a way to increase their capital and other assets, such as machinery, land and subsidiaries, among others. As a result, their share prices became a fundamental part of their market value and a mechanism for obtaining credit.

The farms of these companies were established on public land by fencing off an area for which no land title exists. In the majority of cases, this happens on public land where small farmers have lived and produced food for hundreds of years and therefore have "posse" or tenure of the land. The main way to establish a farm on public land is through the practice known as *grilagem*, which is the legal act of forging the deed to the land, fencing it off, and forcing local farmers to leave in order to later sell or lease the "new" property, as if its ownership had, in fact, been legalized.

The expansion of agribusiness and speculation on land as a financial asset is driving the expropriation of the lands of peasants, indigenous , and quilombola communities in the MATOPIBA region. This expropriation generates poverty and hunger and forces the displaced people to submit to degrading working conditions on the farms – conditions so degrading that they are often analogous to slavery. The rise in unemployment worsens living conditions in the cities, as a result of the expansion of financial and speculative capital in rural Brazil.

One of the main sources of this capital is TIAA-CREF. This US-based pension fund manages TIAA-CREF Global Agriculture, one of the largest players on the international land market. To operate in Brazil, TIAA-CREF Global Agriculture created subsidiary companies in Brazil, but with foreign capital, mainly through Radar S/A and in partnership with Cosan. Several rural land corporations emerged after this - such as SLC LandCo., which is owned by one of the largest grain producers in Brazil, SLC Agrícola – as joint ventures with international funds, as we demonstrated in this report.

The role of financial capital can be understood as a kind of "outsourcing" of land deals. It is similar to the way sugarcane plantations use outsourced labor to cut sugarcane to avoid being held responsible for the degrading working conditions and cases of slave labor. In the case of land deals, the "outsourcing" mechanism consists of creating several companies with the same managers as subsidiaries to make it appear as if they belong to different owners.

These are some of the main trends identified in this study. They illustrate the relationship between international financial capital and the land market, and its impacts on rural areas in Brazil.

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Note on the consultations of the companies:

Once we finalized the text of this report, we initiated a process of consulting the companies mentioned in it. We followed the legal advice of FIAN International and submitted to the companies by email and telephone the introductory paragraph cited below, together with excerpts of the report that could be of interest to the corporations so they may respond or state a different position on the results presented:

> "This report does not aim to be present an accusation or a legal complaint, or serve as a news report. Even though the study has taken a certain distance from the reality observed in order to analyze it, the report presents clear positions based on the analyses formulated. To elaborate this report, different sources of information were used, including theoretical debates; the revision of the bibliography on the issue; research on secondary sources such as news articles, theses, and articles, as well as the materials made available by the companies themselves. It also uses analyses of the results of field research, gathered through the use of observation of the local situation and interviews with individuals involved as the object of study in question."

We only received responses from CODECA and TIAA-CREF; the latter has its headquarters in the US and is the owner of Radar S/A in Brazil. We gave the companies over two weeks to send their response, which was the period of time suggested by our legal advisors. CODECA's responses have been included in the footnotes in the report. TIAA-CREF summarized its response in the email reproduced below:

> "Thank you for your email. The "Transnational corporations and land speculation in Brazil" report contains misinformation. Our company published details on our farms and subsidiaries in our 2016 report. Access it by clicking on the following link: < https://www.tiaa.org/public/pdf/06-2017_GBR-CFARMRPT_Farmland_Report.pdf>. In addition to the report on our farms, we discussed our investments in land with your organization on June 7, 2017."

We thus consider that the companies had the opportunity to state their position on the research results.

The results presented here are not, in any way, affirmations of the absolute truth by the Network of Social Justice and Human Rights. In many cases, information was obtained from official legal proceedings available to the public, other studies, or through reports gathered during our field research. When the results presented were obtained from other studies, we highlighted the sources of the information. Requests to remain anonymous received from the sources consulted during our fieldwork were respected to ensure their safety. In the case of the CODECA corporation, we took into consideration the response we received (and incorporated it into this research report) and we emphasized the need for the bodies responsible to investigate the possible divergences in the information obtained and possible illegal practices. Legal proceedings are currently underway to investigate certain accusations (PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF PIAUÍ, file no. 0000759-98.2016.8.18.0042 of July 5, 2016), which justifies raising the doubts on the legality of certain practices, as we did in this study. It is not the place of the Network for Social Justice and Human Rights to pass judgment, nor to hold the parties responsible. We presented the results obtained through rigorous research, as we are concerned about the possible serious impacts caused by the processes examined in this report on the human rights of the rural communities from the region in question (MATOPIBA).

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