Land Grabbing and Ecocide: How Bunge, TIAA, and Harvard Fuel the Destruction of the Brazilian Cerrado

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Executive Summary

ec.o.cide:

destruction of the natural environment by deliberate or negligent human action

"People are afraid because they can be killed at any moment."

Anonymous resident, Santa Filomena, Piauí

U.S. agribusiness trader Bunge Limited, Harvard University, and the retirement fund manager TIAA are fueling land grabbing and ecocide in the state of Piauí in the Brazilian Cerrado through their operations and business relationships with the Brazilian soy industry. Despite these companies' rhetorical sustainability commitments and attempts to portray themselves as climate conscious, their business operations and investments are contributing to widespread deforestation, violent land grabbing, environmental pollution, violations of communities' rights, and destruction of the Cerrado's unique and irreplaceable ecosystems.

The Brazilian Cerrado is a globally significant biome and the world's most biodiverse savannah. It is home to Indigenous, quilombola (Afro-descendant), and other traditional peasant communities that have lived on the land for generations, as well as home to 5% of the world's plant and animal species.¹ Within the Cerrado, the MATOPIBA region (acronym for the states of Maranhão, Tocantins, Piauí, and Bahia) is the current frontier for Brazil's soy expansion, where, through the use of land grabbing, fire, and deforestation, large swaths of native vegetation are destroyed and subsequently blanketed by industrial monoculture soy plantations.

As this report will show, financial speculation in land is central to the deforestation and violence unfolding in the Cerrado, where land is often violently taken from communities and then deforested in preparation for industrial soy production. The price of land used for soy production in Brazil has risen 127% on average over the past three years,² fueling land speculation in areas like Santa Filomena in the state of Piauí. Such speculation by international financial institutions threatens the lives and livelihoods of Indigenous, quilombola, and rural communities who have lived on these lands for generations, have legitimate land rights, and are actively demanding collective titles to their territories under existing laws.

Financial speculation in land by international pension and endowment funds is one part of the equation responsible for unfolding environmental and human rights violations in the Cerrado. Agribusiness companies are also complicit, including U.S. agribusiness giant **Bunge Limited**, which holds a near-monopoly over the sale of inputs and financing to soy producers in Piauí. Bunge's business model implicitly incentivizes the violence associated with industrial soy expansion in the region, as the company plays a critical role offering interest-bearing capital to the entire production chain. In southern Piauí, where Bunge owns a crushing plant in Uruçuí and several grain silos in Santa Filomena, land grabbing, deforestation, and violence against communities persist at alarming levels.

According to the National Institute for Space Research (INPE in its Portuguese acronym), more than 10,688 square kilometers of native vegetation was destroyed in the Cerrado in 2022 – an increase of more than 25% over the previous year. In 2023, deforestation in the Cerrado reached record levels, with over 3,500 square kilometers destroyed between January and May.³ In Bunge's backyard, destruction of native vegetation is intensifying at even more shocking rates: Deforestation in the municipality of Santa Filomena increased by 293% from 2021 to 2022, while deforestation in the state of Piauí increased by 103% during the same period.

In Santa Filomena, large tracts of land are currently controlled by companies like Radar Propriedades Agrícolas S.A. and its subsidiaries, such as Tellus (a result of the merger between the Cosan Group and the U.S.-based retirement fund TIAA); Insolo Agroindustrial (which grew and expanded as a property of Harvard University and has been recently sold); SLC Agrícola (the largest soy producer in Brazil since it bought Terra Santa⁴ and its real estate division, SLC LandCo, in partnership with Valiance Asset Management); Sierentz (owned by former directors of Louis Dreyfus Commodities, previously called Agrinvest), and Damha Agronegócios. These companies are the leading soy producers in the region, and their operations are often associated with land grabbing, fraud, and environmental destruction.

Notably, TIAA's joint ventures in Brazil are significantly exposed to land grabbing, corruption, and deforestation, while several of TIAA's land acquisitions were purchased from known or accused land grabbers. Meanwhile, research indicates that Harvard has funded tens of thousands of hectares of deforestation in Brazil through its investments in Brazilian agribusiness companies. Harvard's business dealings and land speculation are tied to illegal land grabbing and have resulted in environmental destruction and gross violations of communities' rights.

In September 2021, over 2,000 hectares of land in Serra da Fortaleza, in Santa Filomena, began to be deforested. The deforestation occurred on the Kajubar farm, which was registered to the estate of Euclides De Carli, a well-known land grabber in the region who had been accused by Brazilian prosecutors of "perhaps the largest [land grabbing] case in the state."⁵ Recent monitoring found that an additional area of more than 1,300 hectares of the Kajubar farm had been deforested in February and March 2023⁶ in an act that was flagrantly illegal. The extensive destruction on the Kajubar farm is far from an isolated case. Rather, land grabbers and agribusiness corporations, often in connection with international funds,⁷ create complex financial structures that serve to incentivize deforestation, land grabbing, and violence against Indigenous, quilombola, and rural communities.

The relentless expansion of soy plantations and industrial agricultural operations poses severe threats to the Cerrado. In the face of intensifying environmental and human rights violations, a complete halt to the expansion of soy plantations in the Cerrado is needed to protect this globally important biome and the communities that have been protecting the region for generations. Similar to the successful Amazon Soy Moratorium,⁸ a cessation of soy expansion in the Cerrado is required to eliminate deforestation and the destruction of native vegetation stemming from soy production.

The Brazilian and U.S. governments have a responsibility to hold companies accountable for deforestation (and increased greenhouse gas emissions), land grabbing, and violations of Indigenous peoples and other traditional communities' rights. Companies responsible for destruction of native vegetation should be monitored and fined. Companies and investors active in the Cerrado should ensure their operations and investments respect the land rights and selfdetermination of communities on the ground and comply with the internationally recognized right to Free, Prior, Informed Consent. Importantly, as Indigenous peoples are often the best protectors of land, forests, and biodiversity, collective titling processes should be prioritized and streamlined in order to protect and ensure the rights of Indigenous, guilombola, and other traditional communities.

Key findings by the numbers

10,688: square kilometers of native vegetation destroyed in the Cerrado in 2022 – a 25% increase since 2021.

1,189: square kilometers of native vegetation destroyed in Piauí state in 2022 – a 103% increase since 2021.

186: square kilometers of native vegetation destroyed in Santa Filomena in 2022 – a 293% increase since 2021.

15,000: hectares of new illegal deforestation in Santa Filomena, Piauí, state in 2022 on areas owned by the De Carli Group.

2,000: hectares of new deforestation and fireinduced destruction inside the Kajubar farm, Santa Filomena, since 2022.

1,300: hectares deforested in February and March 2023 inside the Kajubar farm.

300,000: hectares that the Harvard Endowment Fund purchased in the MATOPIBA region through local business ventures between 2008 and 2016, making Harvard University one of the large foreign entities owning land in Brazil. **53,000**: hectares deforested in the past decade by Harvard-affiliated Insolo AgroIndustrial.

450: square miles that Harvard owns in the MATOPIBA region.

926,000: hectares in Piauí state estimated to be under soy production.

43,530,000: hectares in Brazil estimated to be under soy production.

127: percentage of rise in price of land used for soy production in Brazil since 2020.

500,000: acres of public land in the Cerrado that Harvard and TIAA illegally acquired, according to an October 2020 Brazilian court ruling.

\$1.8 billion: the value of shares in Bunge purchased by asset managers signed on to the Glasgow Financial Alliance for Net Zero (GFANZ) since its founding in 2021.

\$7.8 billion: value of active loans and underwriting issued to Bunge by eight commercial banks that are members of the Glasgow Financial Alliance for Net Zero (GFANZ).

Map 1: Location of the Cerrado biome in Brazil, the MATOPIBA region, and Santa Filomena, Piauí



Source: AidEnvironment. Sources: Imagery ©2022 Planet Labs Inc.; Land ownership SIGEF/SNCI/CAR; Deforestation data PRODES and DETER; Silos data Sicarm.

Acronyms used in report

AATR Association of Lawyers in Defense of Rural Workers

FPIC Free, Prior, Informed Consent

GFANZ Glasgow Financial Alliance for Net Zero

HMC Harvard Management Corporation

INCRA National Institute of Agrarian Reform

INPE Brazilian National Institute for Space Research **INTERPI** Land Institute of Piauí

MATOPIBA States of Maranhão, Tocantins, Piauí, and Bahia that border the Cerrado biome

NZAM Net Zero Asset Managers Initiative

SEMAR Secretary of Environment and Water Resources of Piauí State

TIAA Teachers Insurance and Annuity Association of America

Setting the scene: The case of the Kajubar farm in southern Piauí

There has been a rapid rise in commodity prices on global futures markets since mid-2021, when various countries began reopening their economies after lifting COVID-19 pandemic restrictions imposed in 2020.⁹ This increase in commodity prices is propelling the expansion of soy monocropping in Brazil and around the world. Over the last 20 years, soy expansion in Brazil has been mainly concentrated in the MATOPIBA region (the states of Maranhão, Tocantins, Piauí, and Bahia, which form the northern half of the Cerrado biome). Speculation on the price of farmland in the region drives this process, in which land begins to be used as a financial asset by real estate companies and a mechanism for rolling over the debt of agribusiness corporations.

Studies by Rede Social de Justiça e Direitos Humanos (The Network for Social Justice and Human Rights)¹⁰ reveal how speculation on agricultural land by rural real estate corporations with ties to international financial funds works. In southern Piauí, which is the area of focus of this report, research illustrates how agribusiness corporations such as Radar Propriedades Agrícolas S.A./Tellus, Insolo Agroindustrial, SLC Agrícola, and SLC LandCo; U.S. agribusiness giant Bunge Limited; and transnational financial corporations, including U.S. retirement fund manager TIAA and Harvard University, incentivize land grabbing, deforestation, violence against rural communities, and environmental pollution.

Bunge incentivizes the expansion of soy monocropping – and related environmental and human rights violations – by acting as an intermediary that offers interest-bearing capital to the entire production chain. For example, farmers take out loans to purchase chemical inputs produced by Bunge and then hand over their production to the company to pay off the loans. Bunge finances itself through debt and sets the purchase and sale prices of soy and its byproducts based on futures prices on the international derivatives market. This drives the territorial expansion of soy monocropping, which is often carried out through the destructive use of fire, deforestation, and land grabbing. The land-grabbing process generally begins with the registration of a small parcel of land at a notary office to obtain a falsified land title. Then, land grabbers gather together several of these titles to "prove" their ownership of larger areas, illegally appropriating dozens or even hundreds of thousands of hectares. In a typical process, the appropriated areas are then deforested, and an attempt is made to transfer their title to agribusiness corporations.

Before the deforestation is undertaken, the potential buyer is often asked to provide some form of advance deposit to guarantee payment. This is how deforested areas are linked to the financialized deals of agribusiness corporations, rural real estate companies, and trading companies. This is true for Bunge and financial corporations such as TIAA, Harvard, and Valiance Asset Management, which promote the expansion of soy monocropping in the region.

Real estate and agribusiness corporations – such as Radar S.A., Insolo, and SLC LandCo – engage in speculation on the land market and treat land as a financial asset, as though it were a company's shares on the stock market. The rule is, buy low, wait for the price to go up, and sell high. The apparent objective is to control and profit from land through the conversion of native vegetation to expansive industrial soy monocultures and other industrial agricultural commodities.

The case of the Kajubar farm in southern Piauí is illustrative of these dynamics. In September 2021, over 2,000 hectares of land in Serra da Fortaleza, in the municipality of Santa Filomena, began to be deforested. The deforestation was carried out by tractors hauling huge chains in an area called "Fazenda Kajubar," or the Kajubar farm, a property registered to the estate of Euclides De Carli, a known land grabber who died in 2019, following years of accusations that he had illegally appropriated large swaths of land in the region. Brazilian prosecutors in Piauí have claimed that "De Carli had taken control of more than 124.000 hectares, much of it through fraud, in what they described as 'perhaps the largest [land grabbing] case in the state.""11

Map 2: Deforestation on the Kajubar farm, 2021-2023



Source: AidEnvironment. Sources: Imagery ©2022 Planet Labs Inc.; Land ownership SIGEF/SNCI/CAR; Deforestation data PRODES and DETER; Silos data Sicarm.

Land records for several properties acquired by the De Carli Group, including the Kajubar farm, appear to lack any historical ownership data or are known to have resulted from fraud and irregularities committed by notary offices. Furthermore, land on the Kajubar farm was deforested without authorization by the state environmental agency (SEMAR). In fact, such authorization would have been impossible due to legal proceedings resulting from an annulment action filed by the State Public Prosecutor's Office, which is currently being examined by the Agrarian Court of Bom Jesus¹² - making the property's deforestation patently illegal.¹³

Despite this legal context, monitoring found that more than 1,300 hectares of the Kajubar farm had been deforested in February and March 2023,¹⁴ in preparation for conversion to industrial soy production.



The link between industrial soy and industrial livestock production

Industrial animal agriculture, including large-scale soy production for animal feed, is the single largest driver of land conversion in Latin America.¹⁵ The portion of global soybean production used as a protein source in animal feed is estimated at 90%, with production concentrated in only a few countries: the U.S., Brazil, and Argentina.¹⁶ In recent years, Brazil has surpassed the US as the world's largest producer.¹⁷ Soy production in Brazil has quadrupled over the past 20 years,¹⁸ and the Brazilian Ministry of Agriculture estimates it will increase by a third in the next decade.¹⁹ All of this has had a devastating impact on the Cerrado, which houses 12% of global soybean production and 10% of global beef exports,²⁰ and where the majority of soy production expansion is set to take place in the coming decades.²¹ Increasing foreign and domestic demand for industrial meat and dairy is already fueling soy and beef expansion into the MATOPIBA region of the Northeast Cerrado, a rare final frontier of undisturbed native vegetation.²²



Annulment action and accusations of land grabbing

In addition to the Kajubar farm case, other farms in Santa Filomena are also the subject of the annulment action,²³ when court proceedings blocked the land records of approximately 124,000 hectares of land, most of which are connected to the De Carli Group.

Filed in 2016 by the Piauí State Prosecutor's Office, the annulment action is currently being processed by the Agrarian Court of Bom Jesus, Piauí, and reveals how land grabbing is used as a common strategy for establishing farms in the region. The action shows that the land records for several properties acquired by the De Carli Group, including the Kajubar farm, do not contain any historical records or were the result of fraud and irregularities committed by notary offices. Heliomar Rios, the judge of the Agrarian Court of Bom Jesus in 2016, ordered the land records of these areas to be blocked due to evidence of illegal occupation and irregularities that violate the guiding principles of public records, which are continuity, specialty, availability, and legality.

The De Carli Group has been accused of involvement in various land-grabbing schemes in the states of Piauí and Maranhão. In the case of the Kajubar farm and other farms included in the annulment action, documents indicate that Euclides De Carli worked with João Emídio de Sousa Margues, his business partner in the company Solo Sagrado Colonização e Negócios Ltda. Euclides De Carli, João Emídio, and the Solo Sagrado company are defendants in an ongoing trial, where they have been inappropriately represented by a highly controversial politician. As an Agência Pública news report indicates, "[Governor] Ibaneis Rocha was the lawyer for one of the biggest land grabbers in the country while governor of the Federal District." Even though Rocha assumed office as governor in January 2019, which would preclude him from practicing law during his mandate, Rocha continued to serve as legal counsel for the defendants in this land-grabbing scheme, withdrawing from the case only in June 2021.24 Rocha was reelected as governor in 2022.25

In 2021, a legal maneuver challenged the 2016 annulment action of the 124,000 hectares under investigation, which empowered land grabbers to

deforest the areas illegally in order to sell them later. According to an Agência Pública report, "Deforestation and violence surround land grabbing case linked to Ibaneis Rocha's former clients."²⁶ In 2021, Judge José James Gomes Pereira annulled the measures imposed by the Agrarian Court and released all farm records that had been blocked under suspicion of fraud, even though the request for release referred only to the property of one of the defendants in the case, João Augusto Phillipsen. The report also explained that this request for partial release was filed by lawyer Lincon Guerra, who had previously been arrested in a Federal Police investigation called "Operação Sesmaria" for being the alleged mastermind behind another landgrabbing scheme in southern Piauí.

Judge Gomes Pereira's preliminary ruling was later upheld by the Court of Justice of Piauí, effectively releasing the areas under investigation for land grabbing and subsequent deforestation. Several areas in Santo Filomena included in the annulment action were subsequently unblocked,²⁷ followed by reports of increased intimidation and violence, including the presence of rural militias.^{28,29} In June 2023, the Agrarian Court of Piauí once again blocked the Kajubar farm, following several complaints of illegal deforestation in Santa Filomena.³⁰

In 2022, 13,000 hectares of native vegetation were deforested without authorization on property registered in the name of Maria Cecília Prata De Carli, representative of the Euclides De Carli estate, as demonstrated by the embargoes imposed in Santa Filomena by SEMAR.³¹ Besides the Kajubar farm, the Santa Alice and Tupã farms began to be deforested after the Court of Piauí cancelled the suspension of their land records, despite evidence of fraud. Other properties of the De Carli Group in Santa Filomena that were deforested in 2022 were the Tagí, Baixão Fechado, Passárgada, Reata, São Manoel, Serra do Ovo, São Paulo, Novas, and Fortaleza I, II, and III farms, as shown by SEMAR's inspection reports and AidEnvironment's deforestation monitoring reports.³²

Map 3: Deforestation on the farm of the De Carli Group in Santa Filomena, Piauí 2022-2023



Source: AidEnvironment. Sources: Imagery ©2022 Planet Labs Inc.; Land ownership SIGEF/SNCI/CAR; Deforestation data PRODES and DETER; Silos data Sicarm.

These cases of deforestation reveal strategies to "heat up" or "launder" an illegally constituted farm so that it can be sold at a later date. Several properties appropriated by financial and agribusiness corporations went through this kind of process in the past, suggesting that land grabbing has been going on for years, with either the disregard or connivance of state institutions.

As discussed later in this report, this process raises complex questions about the effectiveness of agribusiness companies' traceability and monitoring systems. If land grabbing and subsequent deforestation occur in order to establish a farm for soy production, are agribusiness companies accounting for this destruction when monitoring their supply chains? Furthermore, as traceability processes generally identify suppliers in order to address deforestation risk, the land grabbing and violence against communities that precede deforestation are likely not captured. This is particularly concerning, as many agribusiness companies fail to account for the obligation to respect communities' land rights and the internationally recognized right to Free, Prior, Informed Consent in their policies and practices.

Land speculation and industrial soy expansion

Recent data on soy production in Brazil and Piauí illustrates speculative trends on international markets. Since 2021, soy prices have risen significantly on international financial markets, reaching record levels even higher than they were prior to the global economic crisis of 2008.³³ In Brazil, soy monocropping continues to expand through the financialization of land and the leveraging of corporate debt on these prices. Even when soy prices on international markets drop and production and productivity tend to decline, the total area used to grow soy continues to expand, as shown by the data below. This is because financial and agribusiness corporations continue to appropriate land as a strategy to manage their high debt levels.34

The territorial expansion of agribusiness and its relation to speculation on the land market generates an upward trend in land prices in Brazil, especially in the MATOPIBA region. A January 2023 Valor Econômico news report³⁵ indicates that in the last three years, the price of land used for soy production in Brazil has risen 127% on average.

This trend in land prices fuels speculation on land in areas like the municipality of Santa Filomena, in southern Piauí, in turn driving land grabbing and deforestation. Deforested areas in Santa Filomena have been leased to soy companies such as Insolo Agroindustrial, SLC Agrícola, Damha Agronegócios, and Sierentz Agro Brasil Ltda. (the new corporate name for Agrinvest Brasil S.A.).³⁶ There are also cases where these areas are sold to companies such as Radar S.A. and SLC LandCo.³⁷













Graph 6: Soy production in Brazil 1992-2003 150000 50000 0 1992 2000 2010 2020 2023 (Year/harvest)

Source: Conab. Org.: Teresa Paris

Land grabbing, deforestation and violence against rural communities

The most coveted areas for agribusiness in the Cerrado are the plateaus, due to their flat land at higher altitudes, which are ideal for mechanized soy monocropping. The expansion of agribusiness into these areas is leading to a growing number of violations of the territorial rights of Indigenous, quilombola, riverine, and peasant communities who have lived on and preserved the Cerrado for many generations. These communities continue to denounce the increase in fires, deforestation, violence, death threats, and the contamination of their food production by agribusiness corporations' toxic chemicals.

In 2017, after a public hearing and fact-finding visit in the municipalities of Santa Filomena and Gilbués in southern Piauí, the Federal Prosecutor's Office filed a Civil Inquiry to investigate land grabbing in both municipalities and to advocate for the land rights of communities who had raised serious human rights concerns.³⁸

Communities continue to suffer from rights violations and environmental destruction due to the slow pace of the process to regularize collective land titling and due to the lack of monitoring by environmental regulatory agencies. With land grabbers and loggers invading their lands, local communities are calling on the Land Institute of Piauí (INTERPI) to urgently finalize the titling process as a key step toward preventing the ongoing destruction of the Cerrado.

Local communities are calling on the Land Institute of Piauí to urgently finalize the titling process as a key step toward preventing the ongoing destruction of the Cerrado. Threats to rural communities have also intensified in recent years, due to rural militias working with land grabbers. The State Prosecutor's Office of Piauí launched an investigation into the role of organized militias in the state and found evidence of the involvement of military police officers.³⁹ In 2023, residents denounced such violence:

Now, we're in danger. The lives of people from the communities and territories are at risk. Today, every time you take a step, you run into the militia. They want to humiliate people. But what we want is peace, and there is no peace for us. They're there, on the road, scaring and terrorizing people. People are afraid because they can be killed at any moment. In the case of the Kajubar farm, machines were left after the deforestation was reported and the environmental agency embargoed the area, but the people there are armed. They just removed the machines, but the gang is still there. The competent authorities need to see this situation, which is very dangerous for us.

A recent report by the Associação de Advogados/ as de Trabalhadores/as Rurais (AATR, Association of Lawyers in Defense of Rural Workers) denounces the increase in deforestation and states that it is "connected to the emergence of the soy commodity agribusiness economy," which has destroyed close to 13 million hectares of the biome in the last 20 years.⁴⁰ As previously noted, deforestation of these areas is part of land grabbers' strategy to cover up the land-grabbing process and sell land to agribusiness corporations.⁴¹

Map 4: Deforestation in Santa Filomena, Piauí, 2020-2023



Source: AidEnvironment. Sources: Imagery ©2022 Planet Labs Inc.; Land ownership SIGEF/SNCI/CAR; Deforestation data PRODES and DETER; Silos data Sicarm.



Source: TerraBrasilis/INPE Org.: Teresa Paris

The Instituto Nacional de Pesquisas Espaciais (INPE, National Institute for Space Research) reported that, in 2022, 10,688.73 square kilometers of native Cerrado vegetation was destroyed – a 25% increase over the previous year. In Piauí in 2022, there was a 103% increase in the destruction

of native vegetation in comparison to 2021, from 583.77 square kilometers in 2021 to 1,188.78 square kilometers in 2022. In the municipality of Santa Filomena, the destruction of native vegetation rose from 47.2 square kilometers in 2021 to 185.78 square kilometers in 2022 – an increase of 293%.⁴²

2023 has seen record levels of deforestation and environmental degradation in the Cerrado. In the first five months of 2023, more than 3,500 square kilometers were destroyed, an increase of 35% compared to the same period last year. In May 2023 alone, deforestation alerts rose by 83%, affecting over 1,300 square kilometers.⁴³

In September 2022, a resident of a riverside⁴⁴ community in Santa Filomena described the impacts of agribusiness on the plateaus around the Chupé, Barra da Lagoa, and Brejo das Meninas communities:

Before, we used to have a quiet life. Then, outsiders started coming here to pressure us, saying that they owned the land. In 1998, INTERPI had already given us a temporary title, and in 2010, they sent an outsourcing company to survey our areas. They said that they would send us our definitive titles, but they still haven't sent them yet. There's always someone pressuring, trying to claim our land. In 2016, a land grabber from Paraná came and deforested the area and set fire between Chupé and Barra da Lagoa. This fire spread into the marsh, burned our marsh, from the middle to the edge. The fire burned everything we had: It burned down my house and my brother's house, burned our orange, cashew, and buriti trees. Many animals died: agoutis, armadillos, pacas, margays - they were all burned. Then, he tried to make it hard for me to get my title, which was already being processed, and said he was the owner of 22,000 hectares of land.

The expansion of agribusiness onto the plateaus cuts off communities' access to these areas, which they previously used to collectively raise livestock and gather fruit, impacting communities' livelihoods and food security. Not only do agribusiness companies occupy and destroy the plateaus, they also try to drive communities out of the lowlands, where communities' homes and crops are located, so that they can register them as their legal reserves to avoid environmental fines.⁴⁵ One community leader described the situation:

A lot of things changed for us, because before, the cattle and other animals were free to roam on the plateaus. The cattle did really well when fed on native grasses. When we were forced to stay in a more limited area, we had to start our own pasture from scratch, and everything became more difficult. We used to pick fruit on the plateaus, but now, we only have the fruit from the lowlands. Up there, on the plateau, everything was cut down, but before, there used to be pequi, mangaba, and other traditional fruits, such as puçá. In addition to the impact on foraging and animal husbandry, the communities have reported the loss of native bees which act as pollinators and produce honey used for food and medicine:

Another thing that practically disappeared are the native bees, such as the uruçu and tataíra bees. We used to collect honey for food and medicine. Another bee that was very important for us was called "cupira." But there aren't any anymore because outsiders came and cut down the trees of the Cerrado.

The expansion of agribusiness generates violence against rural women's ways of life in particular, as it affects, for example, the babaçu groves from which babaçu coconut breakers make a living.⁴⁶ The violation of land rights and the destruction of biodiversity leave the communities in a vulnerable situation, which forces them to migrate to the city, as one community member shared:

With the arrival of these companies, the communities are becoming poorer because they are losing their land. A lot of people were forced out, but others have stayed, despite all the pressure. People who went to the city are going hungry because they have no other way to make a living. Some people who went to work on the farms, when they return, the money isn't enough and they end up in debt.



A traditional house in the Melancias Territory

Agrochemical pollution and access to water

Besides investigating cases of land grabbing, the Federal Prosecutor's Office's Civil Inquiry also ordered an investigation into the use of agrochemicals on soy plantations in the municipalities of Santa Filomena and Gilbués, which is a constant complaint of local communities.

Workers consistently denounce degrading working conditions on agribusiness farms, with those applying chemicals facing the most severe risks. Workers stated that companies do not supply adequate protective equipment and that "we have to risk our lives, because we have to spray the poison or work in the plantations with the chemicals."

"We have to risk our lives, because we have to spray the poison or work in the plantations with the chemicals." In addition to the risks of contamination to workers who apply chemicals, aerial spraying of chemical inputs affects communities' food production and pollutes water sources, soil, and wildlife habitats. Communities report experiencing health problems during spraying time. Another problem cited was the inadequate disposal of agrochemical containers, which are left in an "open-pit garbage dump" on the slopes of the plateaus, thus contaminating the wetlands and the animals. Residents report that:

These big farms, such as SLC and Insolo, spray chemicals from planes. Besides breathing the poison in, our crops are attacked by pests. There's a different pest every day because of the chemicals they use. There is a lot of poison in the water that comes from the plateau. You don't see partridges or other birds from the Cerrado there anymore. There used to be lots of them. The soil is poisoned, the water is poisoned, and the birds disappear.



The contamination of water sources of the Cerrado has a much wider impact, since the region is home to natural springs that supply water to hydrographic basins in various parts of the country. In addition to pollution from agrochemicals, agribusiness farms prevent communities from accessing water sources that were previously used communally. The deforestation of areas around the headwaters of rivers and streams is also causing drought in the region. Companies appropriate water by building irrigation structures for monoculture plantations, causing more springs and wetlands to dry up, polluting rivers, and leading to a scarcity of fish and fauna.

One member of a community in southern Piauí denounced the deforestation of over 10,000 hectares on the Insolo farm, which dried up the community's marsh: "There used to be a marsh there when I was a child, and it was the most beautiful thing in the world. The farm called Insolo deforested 10,000 hectares, and the marshes dried up. During the summer, you go by there, and it's very sad to see it like that."⁴⁷

"You don't see partridges or other birds from the Cerrado there anymore. The soil is poisoned, the water is poisoned, and the birds disappear."

Cerrado resident

Bunge's backyard: Increasing deforestation, land grabbing, and the destruction of the Cerrado

"Global commodities trader Bunge bought soybeans from farms responsible for deforesting an area twice as large as Manhattan in Brazil's Cerrado savanna in 2020, the most among the world's major trading firms."

Reuters⁴⁸

Bunge Limited, headquartered in the United States, is the world's largest soybean processor⁴⁹ and holds a near-monopoly over the sale of inputs and financing to soy producers in Piauí, although Bunge contests this characterization (see Annex 1). The company controls almost all soy trading in the region, where it owns and leases out many silos in Santa Filomena to store the grain that supplies its crushing plants in Uruçuí, in southern Piauí. Bunge reports that more than 90% of the volumes sourced in Piauí go to its crushing plant in Uruçuí for sale in the domestic market (see Annex 1); while some is exported as soybean meal and oil from the Itaqui Port in the state of Maranhão. In 2015, Bunge inaugurated a silo in Santa Filomena near deforested areas, including the Kajubar farm and other farms controlled by the De Carli Group that were subject to blocked land titles on suspicion of land grabbing. Data collected in 2020 via the Trase platform demonstrates that Bunge exported approximately 60% of the 129,227 tons of soy produced in Santa Filomena that year. Another U.S.-based corporation, ADM, exported around 26% of the soy produced in that municipality.⁵⁰ Analysis by Trase found that Bunge had the largest total exposure to soy deforestation and conversion in Brazil, with 60,300 hectares of risk exposure.⁵¹

Bunge contests these findings, stating that "Trase is an imprecise tool that does not necessarily reflect actual commercial relationships" (see Annex 1).⁵²

In Santa Filomena – Bunge's own backyard – land grabbing, deforestation, and violence against communities persists, with destruction of native vegetation intensifying at shocking rates. While destruction of the Cerrado increased by 25% in 2022 from the previous year, deforestation and destruction of native vegetation in Santa Filomena increased by a staggering 293% (from 47.2 square kilometers to 185.78 square kilometers), and deforestation and destruction of native vegetation in Piauí increased by 103% (from 583.77 square kilometers to 1,188.78 square kilometers) during the same period.

According to an Agência Pública report,⁵³ in 2020, Bunge adopted restrictions on its sourcing of soy in southern Piauí. Bunge clarified that the restrictions were limited to a property subject to a deforestation embargo, leading to the farm being blocked under Bunge's sourcing guidelines (see Annex 1). Bunge announced that it would verify the origins of part of the soy it buys to demonstrate that it has had no connection to deforested areas in the Cerrado since July 2008, when it created a program to monitor its indirect sourcing in the Cerrado. However, this program tracks only 30% of the soy that Bunge trades.⁵⁴

In response to Agência Pública's questions on the origins of the soy purchased in Santa Filomena and, more specifically, the purchase of grains from the Pedrinhas (Kajubar) farm, Bunge responded that it "does not comment on business relations with specific producers."55 In response to Friends of the Earth U.S. (see Annex 1), the company reported that Santa Filomena is a priority area for its non-deforestation commitment and that it has traceability to the farms in the region. Yet Bunge's role in controlling the trade and storage of soy in the region demonstrates its connection to land grabbing and deforestation, while the rising rates of deforestation in Bunge's own backyard indicate the company's role in enabling the ongoing destruction of the Cerrado.

Bunge has committed to achieving deforestationfree soy supply chains by 2025.⁵⁶ Notably, this is five years later than the 2020 cutoff date set by the Accountability Framework Initiative⁵⁷ and the Cerrado Manifesto,⁵⁸ which represent industry best practice and are supported by investors representing \$7.8 trillion in assets.⁵⁹ Bunge's continued refusal to adhere to a 2020 cutoff date, along with the alarming rates of deforestation in Santa Filomena and Piauí, raises serious questions about whether Bunge's 2025 target date will tacitly fuel intensifying destruction of the Cerrado up to January 2026.

In February 2023, Bunge announced it had achieved traceability to source for over 80% of its soy supply in the Cerrado,⁶⁰ leaving some 20% of its indirectly sourced soy currently untraced. While traceability means the ability to identify the suppliers of soy that ends up in Bunge's supply chain, it remains unclear whether Bunge's monitoring and traceability efforts account for land grabbing and subsequent deforestation that occurs in order to establish a farm for soy production prior to the soy's entering Bunge's supply chain. Furthermore, as traceability identifies only current suppliers, and Bunge's commitment is to achieve a deforestationfree supply chain by 2025, the land grabbing and violence against communities that is inherent to land conversion in the Cerrado is likely ignored by

Bunge, while remaining integral to the company's business model.

This is particularly concerning, as neither Bunge's 2022 Non-Deforestation Report⁶¹ or 2022 Global Sustainability Report⁶² make any reference to the internationally recognized right to Free, Prior, Informed Consent, communities' land rights, or the rights of Indigenous Peoples or traditional communities, including Afro-descendant communities. Oxfam's 2022 Agribusiness Scorecard, a benchmarking tool that measures global agribusinesses' policies and implementation plans, gave Bunge the lowest score in the sector on the thematic issue of land rights, land use, and land inequality.63 In a region where significant areas of land are known to have been acquired through violence, coercion, and fraud, including farms tied to the De Carli Group that may already appear in Bunge's supply chain, the inability to address land grabbing and violence against communities as part of the process to establish soy farms is a significant failure of due diligence.

In its 2022 Non-Deforestation Report, Bunge stated that it has blocked 386 farms from its supply chain.⁶⁴ However, best practice requires Bunge to stop purchasing soy from farms that have been deforested after 2020, including current and future production from the Kajubar farm and other

Graph 9: Main companies exporting soy produced in Santa Filomena, Piauí, in 2020



Brazillian Soy (2020) - Volume (t) by exporting company

Source: Trase,116 February 15, 2023

illegally deforested properties. Bunge reports that it currently does not have a commercial relationship with the Kajubar farm (see Annex 1). While Bunge claims that its commitments are the best in the industry, the reality is that Bunge's operations represent a significant portion of the industry at large, as the company is the largest soy trader in Piauí⁶⁵ and largest soybean processor in the world.⁶⁶ If Bunge were to adhere to a 2020 deforestation cutoff date as called for by the Cerrado Manifesto,⁶⁷ then the industry as a whole would be forced to move forward. Bunge's refusal to align its operations with the Cerrado Manifesto, heed civil society calls for a cessation of all soy expansion in the Cerrado, and implement meaningful FPIC policies and practices, is in turn driving further deforestation, land grabbing, human rights violations, and increased carbon emissions, which are intensifying the climate crisis and its impacts.

Bunge's response to these concerns can be found in Annex 1.



Bunge's bankrollers: A failure of oversignt by banks and investors

The largest investors in Bunge are U.S. asset managers Capital Group, Vanguard, BlackRock, Fidelity, and State Street, along with Swiss asset manager UBS. As of May 2023, Capital Group owned \$2.1 billion of shares in Bunge (17%), Vanguard owned \$1.5 billion of shares (12%), and BlackRock owned \$1.4 billion of shares (11%).

Value (USD in millions) **GFANZ member?** Investor Capital Group (United States) 2,166.2 Yes Vanguard (United States) 1,518.7 No BlackRock (United States) 1,369.2 Yes FIdelity Investments (United States) 529.36 No **UBS** (United States) 456.2 Yes State Street (United States) 406.5 Yes Fidelity International (Bermuda) 285.9 Yes Dimensional Fund Advisors (United States) 239.8 No Bank of New York Mellon (United States) 239.8 Yes Northern Trust (United States) 195.5 Yes Other 5,593.2





Seven of the top ten shareholders in Bunge are members of the Glasgow Financial Alliance for Net Zero (GFANZ), a voluntary global initiative by financial institutions to transition the global economy to net-zero greenhouse gas emissions. As of May 2023, there were 94 GFANZ investor members that were invested in Bunge. All seven of the top ten shareholders in Bunge that are members of GFANZ and the Net Zero Asset Managers (NZAM) initiative increased their shareholdings in Bunge since GFANZ was launched at U.N. COP26 in Glasgow in 2021. In total, 55 shareholders in Bunge that are members of GFANZ increased their investments in the agribusiness company by 16,671,858 additional shares since the end of 2021 - an increase of approximately \$1.8 billion.⁶⁸ This finding is consistent with prior research from Global Witness that revealed that certain GFANZ members, such as BlackRock and State Street have increased their investments in deforestation-linked business overall,69 raising concerns that GFANZ, NZAM, and similar voluntary initiates are providing greenwashing cover for financiers that continue to bankroll deforestation, land grabbing, and human rights violations.

> Since joining the Glasgow Financial Alliance for Net Zero in 2021, GFANZ investor members have increased their shareholdings in Bunge by \$1.8 billion.

The concern that GFANZ is providing greenwashing cover for Bunge's financiers extends to major international banks which are members of the GFANZ Net-Zero Banking Alliance. Bunge's largest commercial creditors include some of the largest commercial banks in the U.S., Netherlands, France, and Japan, all of which bear responsibility for enabling the company's environmental and human rights harms.

According to publicly available data, eight large commercial banks that are members of GFANZ have issued Bunge loans and underwriting valued at \$7.8. billion. Citigroup, one of Bunge's three largest creditors and a member of GFANZ, announced new social and environmental policies in March 2023,70 however, these policies do not appear to be strong enough to restrict lending to companies driving deforestation, land grabbing and human rights violations such as Bunge. Citigroup's new policy merely states that existing clients will be encouraged to pursue membership in the Roundtable on Responsible Soy (RTRS). Notably, Bunge is already a member of the RTRS, yet this membership has not resulted in elimination of environmental and human rights violations in the company's soy operations and value chains.

These grim realities indicate the need for greater regulation over the companies, industries, and financiers driving deforestation and associated land conversion via industrial agricultural production. Furthermore, financial institutions should adopt binding policies on forests and human rights, ensuring zero-deforestation, compliance with the internationally recognized right to Free, Prior, Informed Consent, respect for Indigenous Peoples and other communities' land rights, and zero tolerance for murder, violence, and criminalization of environmental human rights defenders.

Bunge's largest creditors (August 2023)

Investor	Value (USD in millions)	GFANZ member?
Farm Credit Services Commercial Finance Group (United States)	1,980	No
SMBC Group (Japan)	1,953.6	Yes
Citigroup (United States)	1,201.9	Yes
ING Group (Netherlands)	1,073.3	Yes
JPMorgan Chase (United States)	1,019.8	Yes
BNP Paribas (France)	831.6	Yes
US Bancorp (United States)	785.8	No
Rabobank (Netherlands)	639.1	Yes
Mizuho Financial (Japan)	601.8	Yes
Crédit Agricole (France)	527.1	Yes
Other	8360.9	

Source: Profundo



TIAA-funded deforestation: Radar/Tellus on the Ludmila and Laranjeiras farms

"TIAA and its affiliates may not be directly involved in land-grabbing and ecocide ... because others do the 'dirty work' for them."

Federal Public Ministry of Brazil⁷¹

One of the farms embargoed by SEMAR in Santa Filomena in 2022 was the Ludmila farm,⁷² which was once registered in the name of Simone De Carli and is currently registered in the name of Tellus Brasil Participações S.A., which is part of the Radar S.A. Group. Leasing land boosts demand and thus influences prices on the land market, indicating that Radar – as well as its part-owner TIAA – play a key role in incentivizing land grabbing by promoting the expansion of soy monocropping in the region. TIAA's role in land speculation and acquisition merits special attention due to significant exposure to land grabbing, corruption, and deforestation.

While Radar/Tellus does not produce soy itself, it leases land for soy production and engages in speculation on land prices. Radar Propriedades Agrícolas S.A. was created in 2008 as a joint venture between Cosan S.A. and Mansilla Participações S.A. to conduct business on the land market. Mansilla is a Brazilian company created by the U.S.-based retirement fund manager TIAA.⁷³ The financial architecture of the economic group formed by Cosan S.A. and TIAA, by way of Mansilla, appears to be structured in a way that conceals the ownership of the land.

Tellus Brasil Participações S.A. was created in 2010 by the same Cosan and TIAA group, with Cosan S.A. owning 51% of its shares and the other 49% owned by Terra Viva Brasil Participações Ltda., a subsidiary of TIAA. Notably, TIAA-CREF Global Agriculture HoldCo also owns other companies in Brazil, such as Nova Gaia Brasil Participações Ltda.⁷⁴ In 2019, in response to an investigation by the Federal Prosecutor's Office, INCRA, the national agency for agrarian reform responsible for the supervision and control of acquisitions by foreigners, issued an opinion in which it concluded that while Tellus Brasil Participações S.A. was legally founded as a Brazilian company, it should be treated as a foreign company, as it belongs to an economic group that involves foreign corporations. As a foreign entity, then, since the company acquired properties while laws were in place to regulate land acquisitions by foreign entities,⁷⁵ those land deals were in violation of Brazilian law. INCRA thus "declared that the acquisitions of dozens of rural properties by the joint venture between the US pension fund TIAA and Cosan S.A., which resulted in the creation of various companies of the Radar Group, were null and void." INCRA also stated that an additional reason to annul the land acquisitions was evidence indicating that the origins of the properties had been forged on the land records for land-grabbing purposes (Public Registry Law 6.015/1973), as "there was no mention of the transfer of land from the State to private owners."76

In its July 2023 response to Friends of the Earth U.S. (see Annex 2), TIAA shared that, "In the second quarter of 2022, INCRA concluded that the farmland ownership structure is compliant with rules on foreign ownership in Brazil requiring that a land-owning company be domestically controlled." This decision has not been publicly announced. The alleged reversal of INCRA's decision illustrates the complex policy environment related to farmland ownership in Brazil and raises questions about whether INCRA's decision to reverse its judgment was due to external pressure on the agency.

In 2016, Cosan sold most of its stake in Radar to TIAA.⁷⁷ However, as land prices continued to rise, spurred on by speculation, in 2021, Cosan bought back half of Radar from TIAA. By all appearances, the companies seem to have used land speculation to inflate the value of their assets.

A 2023 investigation into TIAA and Cosan's joint venture revealed significant exposure to land grabbing, corruption, and deforestation, in addition to the companies' failure to conduct proper due diligence to ensure that lands acquired were not purchased from land grabbers. The report, which was partially based on an internal leak within Cosan, as well as legal records, found that "TIAA and COSAN used a complex network of companies to make their Brazilian land purchases." ⁷⁸ Specifically, TIAA and Cosan established several jointly owned companies that purchased more than 30,000 hectares of farmland from known and accused land grabbers. This included land acquisition from a land baron "charged with corruption and money laundering as part of Operation Far West, a probe into an alleged bribery scheme in which Brazilian judges were allegedly paid for favorable decisions in land disputes."⁷⁹ The investigation also documented how Radar signed four major land deals with known land grabber Euclides De Carli between 2010 and 2015.⁸⁰



TIAA manages over \$1.2 trillion in assets,⁸¹ providing financial and retirement services for millions of teachers, academics, educators, arts workers, and individuals. TIAA's investments in farmland, fossil fuels, and deforestation-linked commodities drive environmental destruction, human rights abuses, and climate crisis.

- Largest owner of farmland and timberland in the world, with 3 million acres under management.⁸²
- Over \$78 billion invested in fossil fuel companies.83
- One of the world's largest holders of bonds across the coal value chain ranking 4th globally.⁸⁴
- In 2022, nearly 800 prominent clients filed a complaint with the U.N.-backed Principles of Responsible Investment (PRI), alleging TIAA's substantial investments in fossil fuels and deforestation violate the company's climate pledges and principles for responsible investment.⁸⁵
- Over 20 academic institutions have passed faculty resolutions demanding retirement savings do not finance climate destruction.⁸⁶

Rally during speech by TIAA's CEO Thasunda Brown-Duckett at Bloomberg headquarters in New York City on June 7, 2023

Another case of financial speculation on farmland is the relationship between Radar/Tellus and SLC Agrícola and its subsidiary, SLC LandCo. Radar acquired several of its farms from SLC, after SLC had bought them from the De Carli Group in the state of Maranhão. Radar/Tellus then leased the land to SLC for soy production. These companies also developed similar partnerships in Bahia, which involve other local land grabbers.⁸⁷ In Piauí, the properties of Radar, SLC, and Insolo are located in the same region, and these companies conduct business with one another at various levels.

In a response to Friends of the Earth U.S. (see Annex 2), TIAA stated that "leasing land does not boost demand." However, the company's track record of buying land and in many cases leasing it back to the seller in order to generate capital for further expansion implies otherwise. Notably, SLC Agricola, one of the worst deforesters in the region,⁸⁸ is TIAA's largest tenant⁸⁹ and has expanded its operations by leasing properties from TIAA, generating profits for both entities.

Many farms acquired by the Radar/Tellus Group in Maranhão and Piauí were purchased from the De Carli Group, including the Laranjeiras and Ludmila farms (the latter was divided up into the Frutal, Piqui, and Limoeira farms). Located in the Serra da Fortaleza region in Santa Filomena, they were acquired by Tellus Brasil in 2012⁹⁰ from the "Imobiliária Terra do Sol"⁹¹ real estate firm, which had bought them from middlemen working for Simone De Carli,⁹² Euclides De Carli's daughter.⁹³ In addition to contravening legislation on land acquisitions by foreigners, these farms were most likely illegally appropriated, since their records do not contain proper reference to the transfer of state property to private owners.⁹⁴

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Once more, these business dealings reveal the connection between deforestation and land grabbing, as demonstrated by the AATR report "Na Fronteira da (i)legalidade" (On the border of (il)legality). To meet the legal requirements of the Brazilian Forestry Code, the group of farms made up by the Frutal, Limoeira, Piqui, and Laranjeiras farm have set aside part of their own land as their legal reserves. However, most of the group's legal reserve is actually on the Alegre I and Alegre II farms.⁹⁵ Located in the lowlands, over 45 km from the group, these farms were purchased to compensate for deforestation of the plateaus. Together, this group of six farms has an area of approximately 3,200 hectares in total. Monitoring by AidEnvironment shows that the Ludmila and Laranjeiras farms were deforested between 2013 and 2017. During this period, the native vegetation was replaced by soy on nearly all of the farms' land. Notably, this deforestation occurred in the years immediately prior to TIAA/Nuveen's 2018 adoption of its No Deforestation policy, which prohibits acquisitions of land that has been cleared of native vegetation in five distinct biomes of the country.



Source: AidEnvironment. Composed using SIGEF, Google, and Sentinel satellite imagery.

According to previous data, these farms used to be leased to Agrinvest/Sierentz Agro Brasil Ltda. In September 2022, a field study found that part of these farms is now leased to Insolo Agroindustrial, which owns the Fortaleza farm, located on the Chapada da Fortaleza plateau, in Santa Filomena, near the Ludmila and Laranjeiras farms.

In response to Friends of the Earth U.S.'s inquiries (see Annex 2), TIAA stated that the Ludmila and Laranjeiras farms had been sold in June 2023, suggesting that TIAA, having overseen the conversion of these properties from native vegetation to soy plantations in the years prior to adopting its No Deforestation policy, may have unloaded the properties due to increased scrutiny. TIAA shared that its due diligence process involves screening sellers for involvement in litigation and conducting reputational background checks "in regions that have historically been more affected by environmental and social issues." Given that the Cosan leak revealed that TIAA purchased more than 30,000 hectares of farmland from known and accused land grabbers, and TIAA's links with several farms associated with the De Carli Group, there should be further investigation into the efficacy of TIAA's existing due diligence processes.

TIAA has also pointed to Nuveen's 2018 Zero deforestation policy, which prohibits "acquiring land that has been cleared of native vegetation in five distinct biomes of the country after certain dates." While the policy shows that TIAA is attentive to the concerns of deforestation, its scope does not extend to farmland already held in its portfolio. Previous independent research has shown that TIAA's farms in the Cerrado have been cleared of 72,000 hectares of forest since 2000 and that TIAA's Brazilian subsidiary Radar SA deforested at least one of its Brazilian properties soon after purchase.⁹⁶



Harvard's land grab in southern Piauí: The case of Insolo Agroindustrial

"Harvard has funded the deforestation of 53,000 hectares of Brazilian land."

The Harvard Crimson, 2023

Founded in 2008, Insolo Agroindustrial⁹⁷ operates in the rural land market and produces grain and cotton in the states of Maranhão, Tocantins, and Piauí in the Cerrado. Insolo Agroindustrial was created in connection with Harvard University's endowment fund and became actively involved in the land market in Brazil during the 2008 global economic crisis – a time when the financialization of agricultural land intensified.⁹⁸ Since then, several transnational financial corporations have increased their holdings in the MATOPIBA region.⁹⁹

Managed by the Harvard Management Corporation (HMC), Harvard's endowment fund buys and sells land in Brazil through three local companies: Insolo Agroindustrial, GBE, and Granflor. These three companies bought close to 300,000 hectares of land in the MATOPIBA region between 2008 and 2016, making Harvard University one of the biggest foreign groups controlling farmland in Brazil. A 2023 report on Harvard's land holdings in Brazil stated that "Harvard has funded the deforestation of 53,000 hectares of Brazilian land."¹⁰⁰

In 2008, Insolo was turned into a vehicle for channelizing resources from Harvard's endowment fund to land deals in Piauí. At that time, Harvard controlled 95.8% of Insolo's shares by way of its fund management company, Phemus Corp., and other subsidiaries administered by the Insolo group. Between June 2008 and June 2016, Harvard University injected at least \$138.7 million into Insolo, which bought six farms with a total area of 115,000 hectares in Piauí. As a result, Harvard become one of the largest institutions to own farmland in Piauí.¹⁰¹ However, an October 2020 court ruling found that HMC (and TIAA) illegally acquired more than 500,000 acres of public land in the Cerrado.¹⁰²

Harvard's land speculation has led to gross rights violations and environmental destruction which has significantly affected rural communities. This includes the case of the Ipê Farm, located in the municipalities of Ribeiro Gonçalves and Baixa Grande do Ribeiro (near Santa Filomena) in Piauí. Approximately 58,400 hectares of this farm are used for soy monocropping. In its May 16, 2018 ruling, the Agrarian Court of Bom Jesus, Piauí, affirmed that one of Insolo's subsidiaries, Sorotivo Agroindustrial Ltda, had illegally appropriated almost 27,000 hectares of public land incorporated into the Ipê farm.¹⁰³

After the court ruling, the state resumed control of the land but subsequently resold the land to Insolo, proceeding to illegally regularize land grabbing. Through Insolo, Harvard University "heated up" an illegally appropriated parcel of land and promoted the expansion of soy production. This type of land grabbing continues to be deployed today for Insolo's aggressive expansion, which promotes the use of fire and deforestation. In June 2022, a report by Carta Capital¹⁰⁴ revealed new incidences of environmental destruction on the Ipê farm:

Images from the Projeto de Monitoramento do Desmatamento na Amazônia Legal por Satélite (PRODES, or Satellite Monitoring of Deforestation in the Legal Amazon Project), included in a Chain Reaction Research report, show that between 2000 and 2018, nearly 24,000 hectares were deforested on the Ipê farm. Satellites also detected outbreaks of hundreds of fires around the farm in 2019, when fires decimated forests and other ecosystems around the world. According to monitoring data, Insolo is believed to have been responsible for deforesting over 53,000 hectares in the last decade.¹⁰⁵

The sale of Insolo

Faced with cases of human rights violations and environmental destruction stemming from its investments, HMC has tried in recent years to sell off its landholdings in Brazil.¹⁰⁶ In 2021, Insolo was acquired by businessman Ricardo Faria, owner of the agricultural company Terrus, founded in 2020, which had invested "300 million reals in land acquisitions in Maranhão, Tocantins, and Piauí," according to a November 2021 report.¹⁰⁷ The report described Faria as the "largest emerging agribusinessman" and "the largest individual agricultural producer in Brazil."

According to a report published in December 2021 on the Exame website, Ricardo Faria bought Insolo Agroindustrial in November 2021 for 1.8 billion Brazilian reals, which he paid "practically all in cash."¹⁰⁸ This made him the fifth-largest grain producer in the country, after SLC Agrícola. The report stated that "Faria is probably the largest individual landowner in the country, since, out of all big producers, he is the only sole owner of his operation.

According to Exame,¹⁰⁹ Faria's company already controlled over R\$2 billion in assets as the owner of the Granja Faria chicken farm (in partnership with Perdigão, currently BRF, which produces 7 million eggs per day) and the grain harvests in the 2021/2022 crop year. As for the purchase of Insolo, Terrus bought 100% of IPA Investimentos e Participações Agrícolas and its subsidiaries, which includes Insolo Agroindustrial.¹¹⁰ IPA was the financial vehicle created in Brazil to channel Harvard University's funds to Insolo.¹¹¹

Insolo's farms in Santa Filomena and its expansion through land leasing

In a presentation made in November 2022 at COP27 in Egypt.¹¹² Ricardo Faria stated that Insolo operates on six farms and has 180,000 hectares planted in grains in the states of Maranhão, Tocantins, and Piauí. One of his farms, the Fortaleza farm, is located in the municipality of Santa Filomena, Piauí, on approximately 9,300 hectares of land.¹¹³ This is in the same region as the Ludmila and Laranjeiras farms, controlled by Radar, and the Parnaguá farm controlled by SLC.

Reseacher Jéssica Siviera demonstrated that the Fortaleza farm has a "history of land grabbing and environmental conflicts with the surrounding communities."¹¹⁴ Studies show that Insolo acquired this farm via the De Carli Group – a further indication of Harvard University's involvement in land grabbing.

In a December 2021 interview,¹¹⁵ Faria affirmed that he has prepared an additional 30,000 hectares to expand his operations in MATOPIBA in 2022 and that leasing land is one of the strategies he will pursue. Field research in the south of Piauí in 2022 found that Insolo was leasing the Ad Rubi farm from the Damha company and part of the Ludmila farm from Radar. The latter is one of the farms on which AidEnvironment identified illegal deforestation in 2022. Furthermore, in January 2023, around 5,000 hectares were deforested on the Planalto farm, which is controlled by Terrus S.A./Insolo in Sebastião Leal, Piauí. This confirms that Insolo continues to promote the expansion of soy monocropping and is responsible for driving associated negative human rights and environmental impacts.

Conclusion

The relentless expansion of industrial soy plantations poses severe threats to the Cerrado – the world's most biodiverse savannah and Brazil's birthplace of waters. In many areas of the Cerrado, including the state of Piauí, financial speculation in land and the expansion of agribusiness are driving increasing deforestation and destruction of native vegetation, alongside violent land grabbing and violations of communities' rights.

In 2022, over 10,688 square kilometers of native vegetation was destroyed in the Cerrado – an increase of more than 25% from the preceding year. In Piauí, the acceleration of deforestation is intensifying at more dramatic rates. In the same time period, deforestation and destruction of native vegetation in Piauí increased by 103% (from 583.77 square kilometers to 1,188.78 square kilometers), and in Santa Filomena, deforestation and destruction of native vegetation increased by a staggering 293% (from 47.2 square kilometers to 185.78 square kilometers).

Meanwhile, land grabbing, fraud, and violence against Indigenous, quilombola, and other traditional communities is regularly employed to illegally seize land and subsequently deforest it, in preparation for establishing soy farms. This ongoing crisis of environmental and human rights violations comes despite agribusiness companies' and financiers' climate and deforestation commitments and memberships in voluntary net-zero initiatives.

In the face of these disturbing realities, a complete **halt to the expansion of soy plantations in the Cerrado** is needed to protect this globally important biome and the communities that call it home. Similar to the successful Amazon Soy Moratorium, a cessation of soy expansion in the Cerrado is required to eliminate deforestation and the destruction of native vegetation stemming from soy production.

The Brazilian and U.S. governments have a responsibility to hold companies responsible for deforestation (and increased greenhouse gas emissions), land grabbing, and violations of Indigenous Peoples and other traditional communities' rights. Companies responsible for ongoing deforestation and the destruction of native vegetation, including through the use of fire, **should be monitored and fined for their destructive operations**. This oversight should include agribusiness giants such as **Bunge**, financial firms such as **TIAA**, and academic institutions that engage in predatory land speculation and acquisition such as **Harvard** – all of which are fueling the destruction of the Cerrado through their business relationships, supply chains, and investment practices.

Companies and investors active in the Cerrado should ensure their operations and investments respect the land rights and self-determination of communities on the ground, as well as comply with the internationally recognized right to Free, Prior, Informed Consent.

As Indigenous Peoples and other local communities are often the best protectors of land, forests, and biodiversity, collective titling processes should be prioritized and streamlined in order to recognize the rights of Indigenous, quilombola, and other traditional communities, in accordance with existing laws. This includes recognizing the land rights of communities to self-declared areas of ancestral lands. Communities that have suffered illegal land grabbing and environmental destruction should receive return of their lands and compensation for environmental destruction and loss of livelihoods.

Our struggles for dignity, human rights, and a livable planet are intertwined. International solidarity efforts should continue to support frontline communities as they seek to have their rights recognized, their lands restored, and their future secured.

Annex 1: Bunge's Response to Friends of the Earth U.S.

BUNGE

Wednesday, July 19, 2023

We acknowledge receipt of your letter on July 5, 2023. In response to your letter, we would like to provide the following comments and clarifications.

We are aligned with Friends of the Earth that deforestation and human rights abuses are critical concerns. As described in our most recent <u>Global Sustainability Report</u>, we devote considerable effort and resources to promote sustainable agriculture, disincentivize native vegetation conversion, and incentivize the uptake of certified products that provide assurances of no deforestation or native vegetation conversion. We are also strengthening our human rights policies and implementation programs after having published a newly enhanced Global Human Rights Policy earlier this year.

Therefore, before answering your questions we would like to correct some misconceptions we found in your letter:

- Bunge does not hold a "near-monopoly" of the soy trading in Piauí nor in Santa Filomena municipality. The fact that we have an elevator there does not mean other companies cannot source in this municipality and store the production in cities nearby.
- More than 90% of our volumes sourced in Piaui go to our crushing plant in Uruçuí and most of the products from this plant are destined for sale in the domestic market (Brazil).
- Your letter references data of risk exposure to soy deforestation from the TRASE platform. We note
 that the data acquired through TRASE should not imply a connection between farms and Bunge. It is
 an imprecise tool that does not necessarily reflect actual commercial relationships, but references
 generalized data. Multiple other companies may also be sourcing directly or indirectly in given regions
 that are not captured by TRASE findings.
- Regarding the mention of the Agência Publica's article which says that "in 2020, Bunge adopted restrictions on its sourcing of soy in southern Piauí", we clarify that the article contains incorrect information. Bunge has never applied a "Cerrado Moratorium". In this case, an embargo had been found for deforestation on the farmer's land, at which point Bunge's sourcing guidelines and our engagement process resulted in the farm being blocked.

Regarding our cut-off date, Bunge does not have a 2020 cut-off date for deforestation or native vegetation conversion specified in our voluntary commitments. We work through associations, initiatives and in direct partnership with our value chain peers to ensure industry-wide success on the establishment of a suitable cut-off date still to be defined, as this is something that requires collective agreement and appropriate consultation of local communities. We are pleased that our peers have accelerated their non-deforestation deadlines to align with our own 2025 commitment and will continue to urge further alignment on our collective goals through platforms such the Soft Commodities Forum, the Agri-Trader Soy Roadmap, and Abiove.

Regarding your questions:

- Bunge does not have a commercial relationship with Kajubar/Pedrinhas farm.
- Santa Filomena is a priority area for our non-deforestation commitment, and we have traceability of the farms in the region.
- The other properties you mentioned, with just the given names of the farms, we were unable to carry
 out a deep evaluation of the requests. However, from the data we obtained through the
 AidEnviroment Report we did not identify commercial relationships with these areas, except one,
 which has met all requirements related to our sustainability policies and procedures.
- Since we established our non-deforestation commitment in 2015, we have developed the industry's
 most expansive and transparent system of traceability and monitoring, giving us unprecedented
 insight into our supply chain and strengthening relationships with our suppliers. As a result of our
 efforts, over 97% of our soybean volumes from Brazil are deforestation and conversion-free. To
 implement our commitment in 2025, we are focused on accelerating progress across three major
 approaches:

1. Increasing our indirect traceability – The majority of our sourcing in Brazil is direct, to which we have already achieved 100% traceability and monitoring, audited every year by a third-party. Last year we announced that we overperformed our interim target for indirect traceability and have now reached 82% in the regions related to the cases you have identified. This is being accomplished through the Sustainable Partnership Program, a pioneering initiative to support grain resellers in the adoption of socio-environmental verification

2. Disincentivizing legal native vegetation conversion – Even before the implementation of our commitment in 2025, we are taking extensive measures to disincentivize deforestation and native vegetation conversion. This includes the use of technology, financial incentives, partnerships and other initiatives made available to our suppliers in order to encourage and promote sustainable agricultural expansion over previously cleared areas. Sustainable soybean production is achieved through multiple levers, such as certifications (Round Table on Responsible Soy [RTRS], Biomass Biofuel Sustainability Voluntary Scheme [2BSvs], ProTerra, and more); regenerative agriculture; financial incentives to resellers of the Sustainable Partnership Program; and our recently announced initiative Fincrop.

3. Driving sector-wide transformation – While we believe our non-deforestation approach is leading, a real transformation of the industry can only be achieved through collaboration and engagement with the value chain. This includes pre-competitive partnerships and initiatives that can enable scalability for sustainable agriculture. Our Sustainable Partnership Program is an example of this: by engaging resellers in the program – some of whom may also be selling to our competitors – we're helping to accelerate the uptake of practices to increase traceability beyond our own supply chain.

 Bunge also does not tolerate any supplier who employs or exploits children or uses forced labor, or who engages in other forms of exploitation including against indigenous or traditional communities. Our policies below contain language around how we enforce our human rights commitment:

> <u>Grains and Oilseeds Commitment</u> Land Use and Biodiversity Policy Human Rights Policy

- In our soybean purchase contracts in Brazil, Bunge has clauses that require our suppliers to respect
 and protect human rights, including the possibility of unilateral termination by the Company in the
 event of non-compliance with its clauses.
- Bunge reaffirms its commitments to its social and environmental policies and reiterates that it does
 not purchase soybeans from commercial farms overlapping indigenous lands, nor does it engage in
 illegal practices or those that violate human rights. Our commercial operations with suppliers are legal
 and comply with Brazilian legislation and company procedures.
- Bunge also has a world-wide and confidential reporting channel in nineteen (19) languages to receive and respond to concerns related to its socio-environmental policies. Annual figures of such queries are also disclosed in our public reports. In addition, we are always open to cooperating with inquiries, including by third-party entities.
- Credible allegations of human rights abuse or other forms of exploitation are not tolerated. Farms that
 have been identified by the authorities to have engaged in human rights abuse are promptly blocked
 from our supply chain. At a minimum, we conduct daily checks of the public list drawn up by the
 Ministry of Labor and Employment of businesses that have subjected workers to conditions analogous
 to slavery.

Bunge remains committed to promoting leading standards and to developing practical and sustainable approaches to agriculture in South America. We welcome participation from organizations and partners like you to urge such action among customers and governments in key destination markets.

Kind regards,

Bunge Sustainability Team Sustainability@bunge.com

Annex 2: TIAA's Response to Friends of the Earth U.S.

TIAA and Nuveen take sustainable investing seriously and we are long-term investors in farmland. We evaluate the impact of our investments on local communities and ensure that land we acquire and hold meets all government requirements for forest and natural habitat protection. Through our investments, we help local agricultural operators and farmers grow their operations, promote environmental sustainability, make improvements to land, conserve resources and acquire new technologies that help them be better stewards of the land.

In August 2018, Nuveen adopted a Zero Deforestation Policy for its farmland investments in Brazil with clear cut-off dates. The policy prohibits acquisitions of land that has been cleared of native vegetation in five distinct biomes of the country. Properties already in our portfolio or new acquisitions cannot be converted from native vegetation. Our Zero Deforestation Policy, which evolved through a dialogue with stakeholders, underscores our commitment to ensuring our investments discourage depletion of forested areas and native vegetation in Brazil's delicate biomes, and ensures that our investments do not promote illegal or legal land clearing.

Our investment structures comply with local rules and regulations, including those relating to taxation of our properties. Any suggestion that TIAA has engaged in improper business practices is without merit. Through local partnerships, all investment structures comply with the foreign ownership legislation in Brazil. In every country in which we operate, including Brazil, we follow the requirements of all laws and adhere to strong ethical guidelines in our investments. And we expect the government to investigate and prosecute instances of land-grabbing wherever it occurs.

We hold ourselves accountable to high standards of responsible investing because we care about the communities we invest in. It's also why we continuously strive to improve. We do this not just because we are investing for the long term and want to be good stewards of the land, but because those communities and our clients deserve that approach. More information follows below.

Due diligence process

Our due-diligence processes reflect the high standards of responsible investing principles to which we hold ourselves accountable. We are transparent, accountable, and responsible in our investments.

As any prudent steward of the land would do, we continuously strive to improve our diligence to reflect new information and expectations of us as a large owner of farmland. While our previous diligence process met industry standards for legal and commercial due diligence, following allegations in late 2015, and our own review, in early 2016 we refined our due diligence process, adding several steps to obtain additional information on each seller.

- We screen sellers based on their involvement in litigation (including jurisdictions far from the property being considered for purchase) and also based on a reputational background check.
- If we find any reason for concern we will engage a qualified third party to conduct additional background checks.
- Only in cases where we are satisfied with these checks on the seller will we move forward with a land purchase.
- This new process is implemented for transactions in regions that have historically been more affected by environmental and social issues.
- Please refer to our disclosure Q&A on investment in Brazil <u>Sustainability Q and A | Nuveen</u> (See page 5)

Independent audits of property operations

In 2016, we implemented a Code of Conduct for the properties we manage in Brazil and independent audits against this Code have been carried out since then, currently by Imaflora. The Code covers the following five principles: Promoting Environmental Sustainability; Respect for Human Rights and Labor Practices; Respect for Natural Resources and Land Ownership; High Standards of Business Ethics; and Report Activities and Progress in Implementing the Principles.

Adherence to foreign ownership laws

Regarding INCRA, your information is outdated. In the second quarter of 2022, INCRA concluded that the farmland ownership structure is compliant with rules on foreign ownership in Brazil requiring that a land-owning company be domestically controlled.

Zero deforestation policy

As stated above, in August 2018, Nuveen adopted a Zero Deforestation Policy for its farmland investments in Brazil with clear cut-off dates. The policy prohibits acquisitions of land that has been cleared of native vegetation in five distinct biomes of the country. Properties already in our portfolio or new acquisitions cannot be converted from native vegetation. Independent sustainability audits are carried out by Imaflora across all assets managed in Brazil.

Below is our sustainability approach including zero deforestation policy and Q&A which aligns with the roundtable for Responsible Soybean certification.

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