SOY STORY

Deutsche Umwelthilfe

MIGHTY EARTH

The Sad Truth Behind the Making of the German Schnitzel

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Imprint

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Aerial view of the Cerrado near Balsas, Maranhão. Source: Sven Bergau/DUH.

Executive summary

Industrial animal production in Germany is highly dependent on soy imports. Brazil is one of the largest exporters of soy. About 46% of the soybean meal imported into Germany in 2022 originated from there.[1] In Brazil, soy cultivation poses one of the greatest threats to forests and other habitats - such as the Cerrado, the tropical savanna in eastern Brazil, which is the second-largest biome in Brazil. In addition to cases of deforestation and other types of environmental destruction, complaints about human rights violations along the soy supply chain are also regularly documented.[2][3]

This report, prepared by **Environmental Action Germany (Deutsche Umwelthilfe, or DUH)** and **Mighty Earth** in collaboration with the **Institute for Society, Population, and Nature (Instituto Sociedade, População e Natureza - ISPN),** and the **Association of Lawyers for Rural Workers in the State of Bahia (Associação de Advogados/as de Trabalhadores/as Rurais no Estado da Bahia - AATR),** uncovers the risks of human rights violations and environmental destruction in the soy supply chains of the German pork production industry and provides clear indications of links to actors in the German pork production industry. The report highlights specific cases of human rights violations and environmental destruction in the Matopiba region of the Brazilian Cerrado and follows the links of such cases to actors in the German pork production industry.

The agribusiness Bunge accounts for about a quarter of all imports of Brazilian soy from the Cerrado to Germany.[4] Meanwhile, various studies highlight the significant human rights and environmental risks linked to Bunge's soy supply chains. The report indicates that Bunge soy transshipped in the ports of Amsterdam likely reaches pig producers in the Oldenburger-Münsterland and Weser-Ems regions, which in turn supply the slaughterhouses of the major German meat producers Tönnies and Westfleisch.

The efforts of the German meat industry to minimize risks of human rights and environmental destruction in their soy supply chains primarily rely on obtaining sustainability certificates. The new soy standard of the food safety testing system **(QS)** merely requires the purchase of certificates. However, both the **German Supply Chain Due Diligence Act (LkSG)** and the new **EU Regulation on Deforestation-Free Products (EUDR)** require the independent fulfillment of due diligence obligations by the companies concerned. For example, according to the LkSG, industry agreements such as QS and the corresponding certifications do not automatically exempt companies from fulfilling their due diligence obligations. In addition, the currently approved certification schemes continue to allow supply chain models that do not require segregation. This means that no physical separation is required between goods that meet the standards and those that do not. Thus, soy linked to human rights violations can easily enter the supply chain.

In summary, our research provides strong evidence that the supply chains of Tönnies and Westfleisch contain soy from Bunge, which may be linked to possible human rights violations in the Brazilian Cerrado. By focusing solely on certifications, meat companies are not adequately addressing the risks of human rights violations in their physical supply chains. There are, therefore, serious doubts as to whether they meet the requirements of the German LkSG.

I. Introduction

Large parts of Brazil are illegally burning. This includes vast areas of the Amazon rainforest as well as the Cerrado savanna in the east of the country. The number of wildfires in the country has more than doubled compared to last year. In August alone, an area the size of Costa Rica was engulfed by flames.

The cultivation of soy further fuels the wildfires due to the widespread destruction of the native vegetation. As forest areas decrease, rainfall significantly declines. Moreover, the demand for artificial irrigation is steadily increasing, further drying out the land.[5] [6] This development not only jeopardizes the survival of industrial agriculture in this region but also particularly affects Indigenous and traditional communities, who are already under increasing pressure due to continuous land grabs by agribusiness.

This report highlights the risks of environmental destruction and human rights violations in the supply chains of the pork production industry in Germany, which is heavily dependent on soy feed imports from Brazil. It identifies weaknesses in how actors in the German pork production industry fulfill their due diligence obligations and thus points to possible violations of legal requirements such as the **German Supply Chain Due Diligence Act (LkSG).**

Pork and its production are a central part of German agriculture and hold significant economic importance for the agribusiness sector. Germany is among the world's leading producers of pork and is the second-largest producer within the European Union, with 47.1 million pigs slaughtered in 2023.[7] Pork remains very popular in Germany and is by far the most consumed type of meat. According to the German Ministry of Food and Agriculture, the production value of German pig farming amounted to around 8.9 billion euros in 2023.[8] However, the industry is under significant pressure due to rising costs, declining demand, and low profits. More and more small farms are being forced to shut down, and the trend clearly indicates an increasing market concentration.

The two largest pig slaughter companies that dominate the German market are Tönnies and Westfleisch. Tönnies, the biggest slaughter company in Germany and one of the biggest players in Europe, processes 14.8 million pigs annually.[9] Westfleisch, a cooperative, slaughtered 6.5 million animals in 2023.[10] Combined, these companies account for over 46% of all pig slaughterings in Germany.[11]

The 47 million pigs slaughtered annually in Germany require substantial amounts of feed. In addition to homegrown feed like silage maize and grains, so-called compound feed is also used, which contains protein-rich components such as soybean meal and rapeseed meal. On average, soybean meal makes up around 9% of the compound feed used for pigs.[12] In 2023, 8.21 million tons of compound feed were fed to pigs in Germany, which corresponds to approximately 740,000 tons of soy.

European soy production is far from meeting the demand of animal production, which is why a significant portion of soy is being imported. Brazil is the most important soy trading partner, accounting for 46% of all soy imports to Germany in 2022.[13] According to the Trase database, nearly 50% of all Brazilian soy imports to Germany come from the savanna region of the Cerrado, half of which has already been destroyed. However, due to poor data availability, nearly 30% of Brazilian soy imported to Germany cannot be attributed to any specific biome.[14]

One of the main grain traders for the import of soy from Brazil to Germany is the U.S. company Bunge. According to Trase, soy from Bunge comes almost exclusively from the Cerrado.[15] Several studies point to the high risk of human rights violations and environmental destruction associated with Bunge's supply chains.[16] [17] [18] As per Trase, Bunge is the company with the highest deforestation risk among all agribusiness traders operating in the Cerrado.[19] A 2023 report by **Mighty Earth** and **Environmental Action Germany (Deutsche Umwelthilfe, or DUH)** in collaboration with **Repórter Brasil** and the **Instituto Centro de Vida (ICV)** directly links Bunge to the deforestation of

approximately 15,900 football fields in the threatened Cerrado savanna in Brazil.[20] According to a study by Oxfam, Bunge also ranks the worst among all agribusiness traders in regards to the protection of land rights, sustainable land use, and avoiding inequality in land access. Additionally, Bunge ranked last in terms of support for small-scale producers, transparency, and accountability.[21]

Legal requirements for German companies

The LkSG has been in effect in Germany since 2023. The law requires companies to develop a system for carrying out human rights and some environmental due diligence for their supply chains. Expected to enter into force at the end of 2025, the **EU Deforestation Regulation (EUDR)** prohibits products linked to deforestation or violations of relevant laws in the countries of origin from entering the EU market. From July 2026, the more comprehensive standards of the EU supply chain law, which also includes civil liability, will apply.[22] This means that companies will be subject to a range of obligations aimed at eliminating or at least minimizing risks relating to human rights, nature, and illegality (see VI. Overview of German and European supply chain laws).

To comply with these obligations, German companies in the feed and pork production industries must first and foremost ensure transparency and traceability in their supply chains. For instance, they need to know where the soy in their feed comes from, which companies are involved, and whether there is a risk of deforestation or human rights violations. Unfortunately, the pork value chains remain highly opaque, and often companies in the feed and pork production industries are not yet able to trace the soy in their feed in a segregated manner, as the **DUH Feed Radar (Futtermittelradar)** 2023 previously highlighted.[23] A majority of companies still rely almost entirely on certification schemes. While certification schemes play an important role in the development of standards, transparency, and information gathering, they cannot replace independent due diligence or interaction with suppliers. Many certification schemes also have serious shortcomings, particularly with regard to segregated traceability, supply chain models, and the assurance and enforcement of standards. In some cases, certifiers allow compliant soy to be mixed with soy that does not meet the standards. This means that violations of land rights, for example, cannot be reliably ruled out in the supply chains.

This report aims to provide insights into specific risks in the value chain of soy that is used as animal feed in German pork production, as well as to offer proposals aimed at improving the situation in the soy-growing regions.

To begin with, we want to take a closer look at the situation in the Brazilian Cerrado. This is the biome where most of the destruction linked to soy feed in Germany takes place and where many Indigenous and traditional communities are suffering from the expansion of soy cultivation areas.

„Our concern is that our water source will dry up, […] without this water, we cannot survive.“[24]

Affected resident of a community near Barreiras, Bahia

Source: Sven Bergau/DUH.

II. The destruction of the Cerrado for soybean cultivation in Brazil

Deforestation and native vegetation degradation are among the main causes of climate change. In Brazil, the biggest source of greenhouse gas emissions is land use change, i.e. deforestation for the expansion of agricultural land. In 2022 alone, the destruction of Brazilian biomes, such as the Amazon and the **Cerrado**, emitted 1.2 billion gross tons of greenhouse gasses, which is equivalent to the emissions of Canada and the United Kingdom combined.[25]

The Cerrado is the second largest biome in South America, covering 2 million km², second only to the Amazon (Figure 1). It is the most biodiverse savanna in the world, being home to 5% of the world's plant and animal species, including the endangered maned wolf and giant anteater. Moreover it is essential for the regulation of the climate and water balance.[26] The Cerrado stores 9 **gigatons of carbon (GtC)** in its primary vegetation[27] and supplies eight of the twelve river basins in Brazil. Depending on the soil and topography, its ecosystems can vary from grasslands to forests. The social diversity of the Cerrado is unique: in addition to the 80 ethnic groups of Indigenous peoples, there are a multitude of traditional communities. However, despite its importance, the Cerrado has already lost almost half of its original vegetation, giving way to pastures and agriculture.[28] [29]

In 2023, the Cerrado's deforestation annual rate reached 11,012 km,² surpassing the deforestation of the Brazilian Amazon, which had 9,001 km² destroyed in the same period. The Cerrado region known as **Matopiba**, which covers the states of Maranhão, Tocantins, Piauí, and Bahia, accounted for 72% of this deforestation.[30]

Matopiba is at the frontier of the rapidly expanding agribusiness in Brazil. As such it illustrates alarming rates of deforestation, while simultaneously maintaining large portions of conserved areas of the Cerrado. According to data from MapBiomas, between 2000 and 2020, 76% of the expansion of agriculture in this region took place in areas covered by native vegetation.[31]

In addition to deforestation, the Matopiba region also suffers from land conflicts, land grabbing, and the violation of the territorial rights of traditional peoples and communities. Studies such as *Na Fronteira da (I)legalidade: desmatamento e grilagem no Matopiba* (On the border of (il)legality: deforestation and land grabbing in Matopiba) by the Association of Rural Workers' Lawyers (AATR, in Portuguese) have demonstrated the detrimental impact of the expansion of agribusiness on the biome and the associated threat to traditional livelihoods.[32]

Furthermore, Brazilian forest protection laws are repeatedly violated in the process of soybean production. Rajão et al. 2020 estimate that almost 20% of soy exports from the Amazon and the Cerrado could be tainted by illegal deforestation.[33] Yet only a relatively small proportion of the Cerrado is protected by law.

There are only a few barriers to deforestation in the Cerrado. Only 8.6% of the Cerrado is legally protected by nature reserves and 4.8% by Indigenous lands.[34] In addition, Brazilian legislation, known as the Forest Code, establishes that native vegetation must be maintained in 20% or 35% of the rural properties in the Cerrado, depending on the biome, namely whether the property is in the Legal Amazon.[35] This is a significantly lesser requirement than that imposed on landowners in the Amazon, where they are obliged to maintain

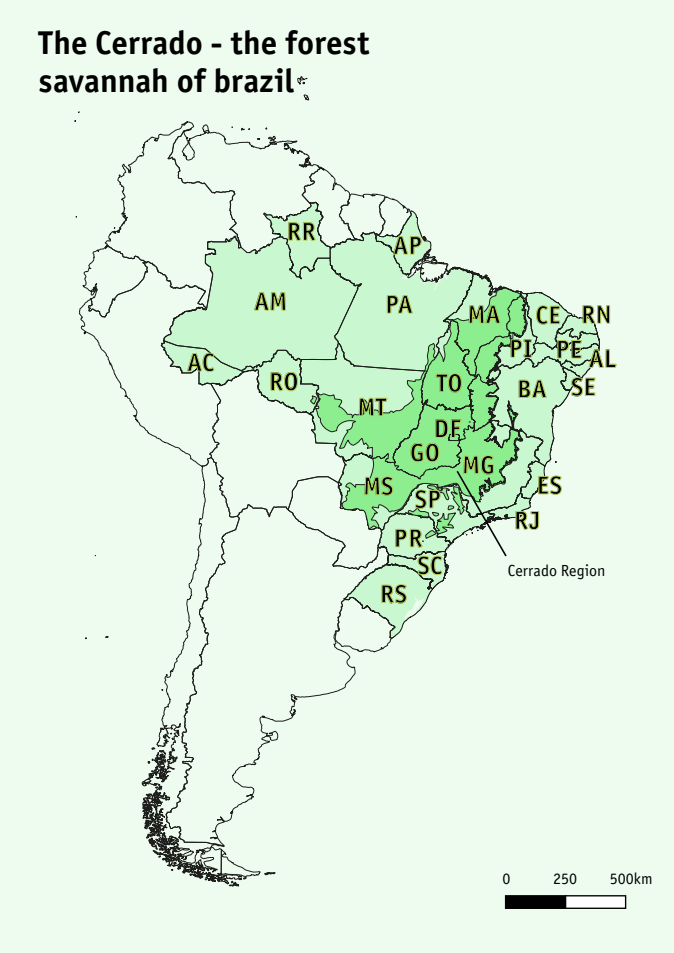


Figure 1 | Map with outlines of the Cerrado biome and the Brazilian states. Source: Own illustration based on data from the IBGE (2019).

80% of the native vegetation in their area. Thus, according to Brazilian laws, around 30 million hectares of native vegetation in the Cerrado could still be legally deforested.[36]

Around 50% of the soybean area cultivated in Brazil and 12% of global production are produced in the Cerrado.[37] In 2021/2022, the area of soy cultivated in Matopiba was 5 million hectares, corresponding to 24% of the total soy area in the Cerrado biome.[38] According to projections by the Brazilian Ministry of Agriculture, grain production in the country is expected to increase by 27% by 2030/2031, with soy being one of the crops driving this growth.[39] For the Central-Northeastern areas of Brazil, which comprise the Matopiba region, the forecast is that the area planted with grains will reach between 9 and 11 million hectares during this period.[40]

Nevertheless, the advance of deforestation in the biome can also be detrimental to agribusiness itself. A research paper by WWF compiled studies that show how deforestation harms productivity in the field.[41] One of the studies cited evaluated the effects of the rise in temperature caused by historical deforestation on soy production in the Amazon and Cerrado. It estimated that between 1985 and 2012, deforestation and the rise in temperature related to it caused a 12% reduction in soy productivity in the Amazon and a 6% reduction in the Cerrado, with a drop of more than 20% in some regions such as Matopiba.

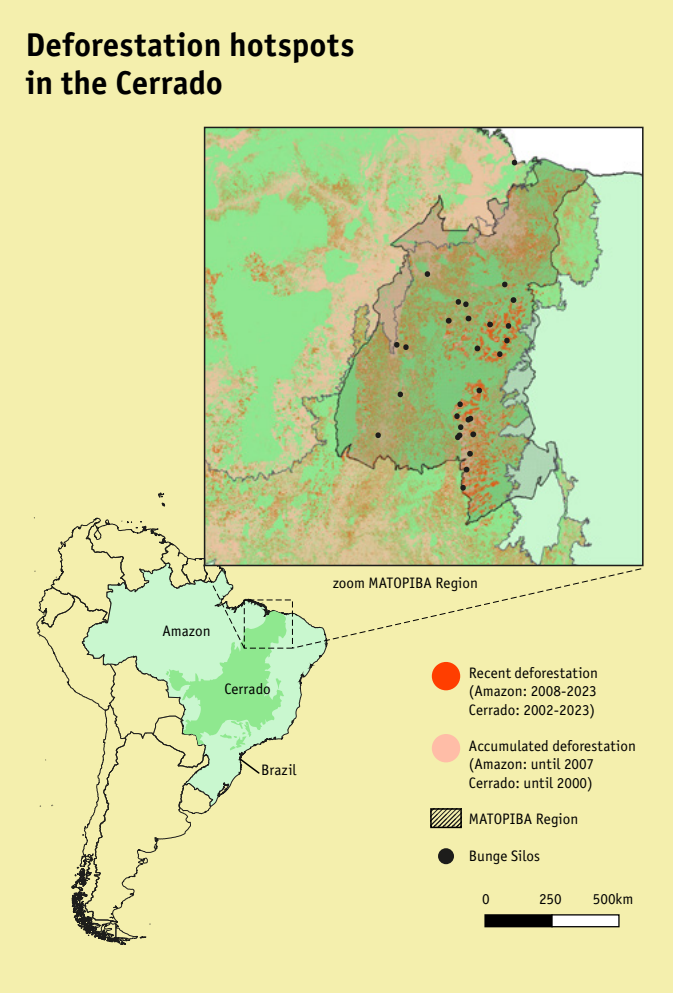


Figure 2 | Location of the Cerrado and deforestation that occurred 2020-2023 around the locations of the Bunge silos in the Matopiba region. Source: Own illustration according to IBGE (2019).

Bunge: One of Brazil's leading soy traders with risks of land-right conflicts and environmental destruction

The agricultural trader Bunge is one of the so-called **"ABCDs" (ADM, Bunge, Cargill, and Louis Dreyfus Company),** the largest agricultural commodity traders in the world that have dominated the global grain trade for decades, controlling at least 70% of the market. Over 70% of Bunge's commercial activities relate to soy production: vegetable oils and protein meal for animal feed.[42]

Bunge is one of the largest soybean processors in Brazil, with more than 6,500 employees and 100 facilities, including silos, ports, mills, and distribution centers.[43] In 2023 the company made a revenue of €53.85 billion.[44]

Bunge is also the most important grain trader for imports of soy from Brazil to Germany. According to the Trase database, around 22% of soy exports from Brazil to Germany were exported via Bunge in 2020. However, our research shows that, in addition, significant quantities of Bunge soy reach Germany via the Netherlands (see Chapter 4). According to Trase, the Bunge soy that reaches Germany comes almost exclusively from the Cerrado. However, soy exports from Brazil remain highly opaque. For example, 28% of exports to Germany cannot be attributed to any one trader.[45]

Studies show that traders like Bunge operate in areas with a high risk of deforestation and environmental destruction in the Cerrado. As per the Trase database, in 2020 the deforestation risk associated with soybeans acquired by Bunge in the Cerrado was 23,055 hectares, one of the highest among exporting companies.[46] [47] Chain Reaction Research confirms this, finding that in 2020 Bunge's risk of deforestation was higher than that of any other trader operating in the Cerrado.[48] [49] [50] [51]

In the 2023 report by Mighty Earth and DUH, Bunge is potentially linked to almost 26,000 hectares of recently cleared land in the endangered Cerrado savanna.[52] The report elucidates that since 2021 over 11,000 hectares have been cleared by farms in the Cerrado, from which Bunge sourced soy from 2022 to 2023. The report also points to human rights violations such as land grabbing in connection with soy farms supplying Bunge. A report by **Friends of the Earth (FOE) US** and **Rede Social de Justiça e Direitos Humanos** describes problems such as land grabbing, fraud, and environmental degradation in the south of Piauí, where Bunge owns a soy mill in the municipality of Uruçuí and several grain silos in the municipality of Santa Filomena.[53] In addition, since 2021, AidEnvironment has identified over 196,000 hectares of deforestation on land potentially linked to Bunge's supply chain.[54] In a study by Oxfam, Bunge also received the worst score of all agricultural traders in terms of respect for land rights, sustainable land use, and inequality in access to land. Bunge also ranked last in terms of support for small producers, transparency and accountability.[55]

Bunge's sustainability targets are anything but ambitious. The company is aiming to become deforestation-free only by 2025.[56] However, it has not yet committed to a 2020 deforestation cut-off date. The company told Mighty Earth: "Bunge does not have a 2020 cut-off date for deforestation or native vegetation conversion specified in our voluntary commitments..."[57] Rather, to date, Bunge appears to be merely attempting to eliminate deforestation that is illegal under Brazilian law. If deforestation is legal, the company will continue to buy soy from deforested areas until 2025.[58] It therefore seems that Bunge will continue to accept soy from areas that have been converted until that time. In addition, a study conducted by Harvest and the Rainforest Foundation Norway in collaboration with DUH in 2022 shows that Bunge was unable to meet its voluntary commitments and could not establish sufficient transparency, particularly with regard to its indirect supplier risks.[59]

"[...] They steal these lands to sell them to the big farms. [...] I have already received death threats because I stand up for the protection of the environment."[60]

Affected community member
near Gilbués, Piauí.

Source: Sven Bergau/DUH.

III. Case Studies: Human and environmental rights violations related to soy production in Brazil

A review of existing investigations and reports published by organizations and media was conducted with the objective of identifying representative cases of environmental risk and human rights violations in the Cerrado biome. Moreover, the volumes of soy produced in the Cerrado municipalities destined for Germany were determined using the Trase and Panjiva shipping records databases.

In this section, we present five cases documented by civil society organizations and journalists that illustrate those risks in Bunge's soy supply chain related to soy produced in the Cerrado of the Matopiba region. The cases presented here illustrate a wider pattern of negative impacts the expansion of agribusiness has on the Cerrado and its local communities.

The methodology used to trace the soy supply chains in the various cases involved several investigative techniques. Trucks transporting soy from farms to Bunge silos were physically followed, verifying the connection through direct observation. Additionally, invoices were obtained, further confirming soy deliveries to Bunge facilities. In some cases, the farms involved had an agricultural

Gunshot wound of a member of the Fecho de Pasto community in the Cerrado. Armed men wanted to drive the community off their land.
Source: Fellipe Abreu/ISPN.

pledge agreement with Bunge, suggesting that the farm repaid their loan with their soy harvest, reinforcing the link between the farms and Bunge. In one case, a radius of 50 kilometers around these facilities was defined to determine the risk of deforestation and human rights violation in Bunge sourcing areas.[61]

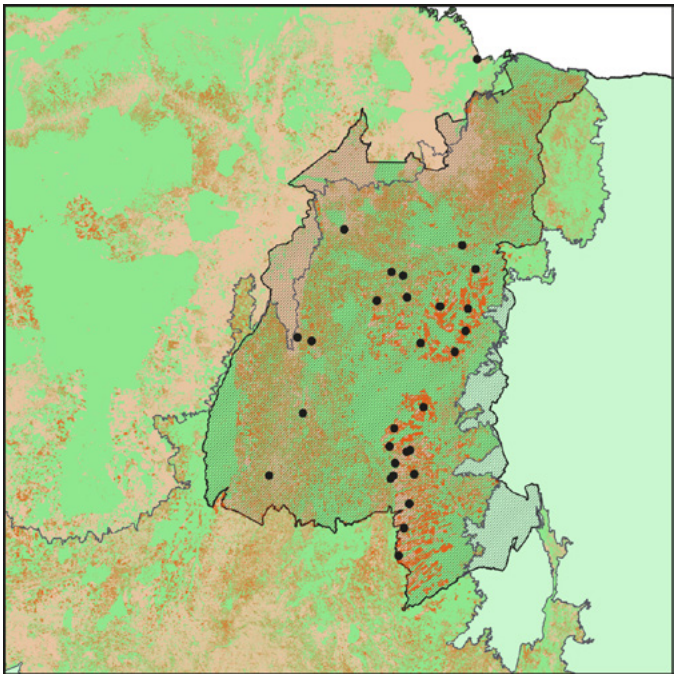


Figure 3 | Locations of the Bunge silos in the Matopiba region and deforestation between 2020-2023. Source: Own illustration based on IBGE (2019).

III.1. Short description of the cases in the Cerrado

Case 1 - Santa Isabel, Luis Eduardo Magalhães and Barreiras, state of Bahia

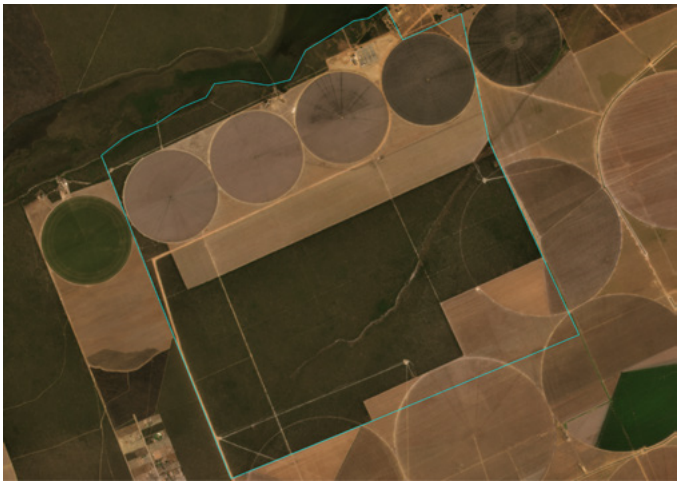
Farm name: Santa Isabel
Deforestation: 2,753 hectares deforested between June and August 2021 and 516 hectares deforested in February 2023 (partially illegal).
Potential human rights violations:
The community that lived inside the farm, in the Buriti village, was forced to leave.
Link from the farm to Bunge silos: Observation of a truck delivery

An investigation by Mighty Earth[62] found that between April 2022 and March 2023, Bunge purchased soybeans from farms in the Cerrado that had been illegally deforested. One of the suppliers was the Santa Isabel farm complex, situated in the municipalities of Luis Eduardo Magalhães and Barreiras in the state of Bahia.

The Santa Isabel Farm complex, owned by Franciosi Agro group, deforested 2,753 hectares between June and August 2021, according to the report. Part of the deforestation was characterized as illegal. ICV's analysis shows that the deforestation was illegal either because it was not authorized or because the authorizations issued did not cover the entire area deforested. Deforestation was also detected in **Legal Reserves (LR)** and **Permanent Protection Areas (APP)**, which in theory must be protected under the Brazilian Forest Code. Some 1,047 hectares were deforested in three areas where no deforestation permits were found. Part of these areas overlap with LR'S and APP. A further 1,392 hectares in six plots had a permit, but additional deforestation took place outside the limits of the permit. Most of the deforested vegetation was identified as savanna (83%) and a smaller portion as grassland.

A **Legal Reserve (LR)** is a percentage of an area within a rural property in Brazil that must be covered by native vegetation. The LR is a legal requirement, established in the Forest Code, and aims to safeguard soil fertility, rainfall, and biodiversity, maintaining a balanced environment, water security and long-term production. In the Cerrado, the size of the LR can vary from 20 to 35 percent of the size of the property. In addition to the LR, the Brazilian Forest Code also determines the protection regime for **Permanent Protection Areas (APP).** These are areas with the function of preserving water resources, the landscape, geological stability, biodiversity, soil protection, and ensuring the well-being of human populations.

In a report published in May 2023, Repórter Brasil identified that a portion of the soybeans produced in the Santa Isabel farm during that year's harvest



Before – August 2022

After – August 2022

Figure 4 | Before and after images of deforestation at the Fazenda Santa Isabel complex. Source: Rapid Response n.2 [SOY]. Mighty Earth (2024).

were destined for the Bunge plant in Luís Eduardo Magalhães, thereby establishing the farm as a direct supplier to the multinational corporation. Upon inquiry by journalists, neither the farm nor Bunge offered any commentary regarding the nature of their commercial relationship.[63]

In February 2024, Mighty Earth undertook a field mission to western Bahia to further investigate the case of the Santa Isabel farm.[64] They found that the farm was producing soy in rotation with cotton, with soy being the main crop. The year following the 2021 deforestation, soy was planted in the area. Furthermore, the investigation revealed the occurrence of new deforestation in the boundary of the Santa Isabel farm. In February 2023, an additional 516 hectares were deforested (Figure 4), with a portion of this area overlapping with Legal Reserves (188 hectares), as indicated in the MapBiomas alert report.[65] As determined by Mighty Earth's analysis based on Forest Observatory EC Europa GFC 2020, 60% of the deforested area at Santa Isabel farm was classified as forest according to the EU Forest Map.[66]

In addition to the deforestation, in September 2021, a local media outlet reported that families from the village of Buriti, a community within the current Santa Isabel farm, were being relocated.[67] The village was established in the 1990s by agricultural workers who had been employed on the farm, which at the time was owned by the Agronol Group. In 2009, the families in the village won the right of possession, as noted by the report. However, after the process of selling the land to the Franciosi group began, the families were forced to leave their residences. During its field trip in February 2024, Mighty Earth observed that only six families remained in the community. The school, church, and other infrastructure had been demolished (Figure 5).[68]

To understand the destination of the soy produced by the Santa Isabel farm in the Cerrado, a team of French journalists followed the soy trucks from the farm, documenting that the truck was en route to Bunge's grain silo and crushing plant in Luís Eduardo Magalhães, approximately 17 kilometers away.[69]

In 2020, 22,584 tonnes of soy were exported by Bunge from the municipality of Luís Eduardo Magalhães, as per the Trase database. Approximately 20.5% of this was imported from Germany.[70]

Case 2 - Fazenda Ipê, Baixa Grande do Ribeiro, state of Piauí

Farm name: Fazenda Ipê
Deforestation: 8,184 hectares deforested between March and June 2022, of which 6,850 hectares were deforested in LRs and APPs.
Link from the farm to Bunge silos: Deliveries documented by invoices.

A recent case of soy-driven deforestation in the Cerrado biome was documented by AidEnvironment[71] at Fazenda Ipê, an approximately 58,424 hectare property owned by the Insolo group, which is currently utilized for the cultivation of soybeans, corn, rice, and cotton.[72] The report indicated that between March and June 2022, 8,184 hectares were converted to agricultural land, of which 6,850 are in areas declared as LRs and APPs (Figure 5). According to sources consulted by Repórter Brasil,[73] grain was planted in the recently deforested areas. Mighty Earth noted that Ipê Agroindustrial LTDA is a direct supplier to Bunge, as evidenced by invoices indicating the sale of numerous trucks of soybeans to Bunge in Uruçuí (PI) between April 8 and May 6, 2022. Additionally, Mighty Earth indicated that there are three nearby warehouses owned by Bunge that engage in trade with the farm.[74]

In response to the Repórter Brasil investigation, the administrator of Fazenda Ipê stated that the areas of LR and APP used in the Mighty Earth report were outdated. However, AidEnvironment responded that this information was available in the public consultation system of the **Rural Environmental Registry (CAR)**[75] in 2022, at the time the report was drafted, indicating that the changes were implemented subsequent to the acquisition of this data. They also pointed out that it has become a common strategy to modify the CAR registration in order to expand the cultivation areas, and then compensate for these areas on other properties.

In addition, research indicates that the group is engaged in potential human rights violations

Figure 5 | Buriti village, within the Santa Isabel farm complex, whose infrastructure has mostly been destroyed.
Source: Mighty Earth and France 24 Brazil.

and land grabbing. A May 2018 decision by the Agrarian Court of Piauí ruled that part of the Fazenda Ipê was acquired through land grabbing practices on what was previously public land.[76]

Case 3 - Estrondo Farm, municipality of Formosa do Rio Preto, state of Bahia

Farm name: Cachoeira Estrondo Agribusiness Condominium
Potential human rights violation: Threats to traditional communities; green land grabbing; preventing community members from accessing their traditional territory.
Deforestation: The state government has issued their authorization to clear 24,732 hectares, despite several allegations of irregularities.
Link from the farm to Bunge silos: It is located in a municipality where Bunge is the main exporter group with four warehouses owned by Bunge located in a 50km radius.

In the far west of the state of Bahia, in the municipality of Formosa do Rio Preto, are the *geraizeiras* communities of the Rio Preto Valley, a segment of traditional peoples and communities in the Cerrado, recognized by the 2007 Decree 6.040.

These five communities (Aldeia, Gatos, Mutamba, Cacimbinha and Cachoeira) comprising more than 120 families, have suffered under the advance of agribusiness and land grabbing.

According to denunciations by the Tribunal Permanente dos Povos - **TPP (Permanent People's Tribunal)**[77] and Greenpeace,[78] for over ten years Cachoeira do Estrondo Agribusiness Condominium has been at the center of serious land conflicts and rights violations. The Condominium, which includes several farms, covers an area of 320,000 hectares.[79] The Condominium occupies more than a quarter of the municipality of Formosa do Rio Preto, the largest municipality in the state of Bahia, and is pointed out by the TPP as one of the largest farms that expanded through land grabbing in the state.[80] The area is used for soy, maize, and cotton crops.[81]

The history of land conflicts in the region can be traced back to the 1970s and 1980s, when public

Figure 6 | Boundary of the Fazenda Ipê property in blue, the areas of deforestation in red, and the overlaps with the declared Legal Reserves at the time in green. Source: Repórter Brasil (2023).

July 2021 **April 2022**

Figure 7 | Before and after images of deforestation in the Cachoeira do Estrondo Condominium in Bahia. The boundaries of the property are in blue, and the boundaries of the cleared area in red. Source: AidEnvironment (June 2022).

areas in the Cerrado were illegally appropriated. Part of these lands have been used by traditional communities for generations.

The intimidation against members of the local community began more than a decade ago. These actions were perpetrated by armed individuals who supposedly worked for the farms.[82] Guard posts, fences, and ditches have been installed to block access to the traditional territories. The families reported restrictions on their right to come and go, being prevented from moving freely between communities and from accessing the general fields and plateaus traditionally used for cattle raising. Such violations were further aggravated by the use of physical and psychological violence in several documented episodes.[83]

In 2017, following the filing of a repossession lawsuit by the traditional communities, an injunction was issued to guarantee possession of 43,000 hectares of land. As documented in the TPP report, this measure was not applied until 2019, when a portion of the guardhouses were decommissioned, as a consequence of extensive community mobilization. Nevertheless, discussions regarding an agreement that would guarantee the communities' territorial rights are still ongoing.

In 2015, the environmental agency of the state of Bahia granted a deforestation permit within Estrondo, for a total of 24,732 hectares. This area partially overlaps with traditional territories that are awaiting regularization. Despite this, in 2019, the Bahia government renewed this deforestation authorization, extending its validity to four years.[84] An analysis of this authorization, revealed several irregularities associated with its granting, such as incomplete studies about potential social and environmental impacts, which are needed to obtain such authorizations.[85]

Between July 2021 and April 2022, according to an analysis made by AidEnvironment, 24,130 hectares had been deforested (Figure 6).[86] Despite reports of irregularities by CSOs and the Public Prosecutor's Office, by the beginning of 2022, all 24,700 hectares had already been deforested, according to Earthsight.[87] This includes vast areas of the traditional territories to which the traditional communities lay claim. Moreover, the families fear that the loss of native vegetation will have an impact on the region's water resources.[88]

Within a 50km radius of the farm, there are four Bunge warehouses and two Cargill warehouses, which are the main exporters of soy from Formosa do Rio Preto.[89] In 2020, Trase data indicated that they accounted for 43.5% and 40.8% of the total volume exported respectively.[90] Further evidence for the connection between the farm and Bunge was provided by a Greenpeace investigation, which points out that Bunge operated a silo on the Estrondo farm and bought soy from the farm in 2019.[91]

Formosa do Rio Preto was one of the main origins of soybeans exported by Bunge in 2020, where Bunge exported more than 612,000 metric tons of soy from.[92] Most of this was destined for the European Union (88%), with about 39% of this volume going to Germany.

Case 4 - Fundo e fecho de pasto communities, municipality of Correntina, state of Bahia

Farm name: Agrícola Xingu
Potential human rights violations: Green land grabbing.
Link from the farm to Bunge silos: References to indirect deliveries.

As documented by AATR,[93] the western Bahia region experienced a process of large-scale land grabbing that began in the 1960s and 1970s and has led to the fragmentation of traditional lands in the Bahian Cerrado. The authors provide a detailed analysis of the process of rural property registrations illegally opening from the 1980s onwards in the Corrente river basin, in the municipality of Correntina. This process resulted in the establishment of four „ghost farms," which collectively encompass 98,383 hectares and currently overlap with the territories of the *Fecho de Pasto* traditional communities of Cupim, Vereda da Felicidade, Capão do Modesto, and Porcos-Guará-Pombas. Only one of the farms has been converted into effective possession, while others have maintained the status of land grabs on paper.

The illicit registration of the „ghost farms" occurred in the 1980s, 1994, and 2005. These registrations appear to have been undertaken with the objective of land speculation, facilitating access to bank loans and public funds, and encouraging the expansion of monocultures. In more recent times, these areas have once again become the subject of interest, with a particular focus on what has been termed as ‚green land grabbing'.[94] This refers to the illegal appropriation of land for the specific purpose of registering it as a LR for other properties, or even for leasing it or receiving carbon credits.

As found by the AATR, there were 1,262 registered properties in the region that overlapped with the territories of the fundos e fechos de pasto communities, a traditional community that have been using public land communally for centuries, mainly for extensive grazing of animals, gathering fruits, medical plants, and cultural and leisure practices. A total of 82,300 hectares registered as LRs overlapped with the traditional territories of the communities in the Corrente River Basin.[95]

This situation is exemplified by the reality facing the traditional fundo e fecho de pasto community of Capão do Modesto, which is home to approximately 60 families. There are 32 LRs declared over the fundo e fecho de pasto of Capão do Modesto. There, farmers, and agribusiness are claiming the right to the land in and around the territory. They claim that parts of the natural vegetation in the Capão do Modesto territory are the LR's of their properties, as compensation for the areas already deforested on their own properties that are cultivated with soy, cotton, and other crops. However, these areas have been used by traditional communities for over seven generations. Human rights violations have also been documented by Global Witness[96] and the Tribunal Permanente dos Povos.[97] Global Witness' report indicated that farmers have appropriated areas in the valleys of the Arrojado and Meio rivers, causing damage to collective fences that demarcate the traditional territory and prevent cattle from escaping, and have deforested the vegetation in the region.[98] Furthermore, the report noted that since 2017, seven farmers have initiated legal action against members of the territory, alleging trespassing and causing environmental damage to the area. The community has also faced intimidation, physical violence, and restricted access to a portion of their ancestral territory, effectively preventing the use of community pastures. According to community members, due to the political power of agribusiness farmers in the region, complaints of rights violations are only registered at the police station when victims are accompanied by lawyers.[99] According to AATR, due to the area being registered as a LR, water and electricity companies are barred from providing service there and the municipality has not provided schools, roads and other public infrastructure. Despite multiple complaints from the community and from human rights organizations, the registry of LR's on Capão de Modesto's communal lands has not been canceled.[100]

While the traditional livelihoods of the communities of fundo e fecho de pasto are recognized by the State of Bahia,[101] the communities are still awaiting the regularization of their territory. This

Foto: Fellipe Abreu/ISPN.

Green Land Grabbing: Legal Reserves overlapping the territories of *Fundo e Fecho de Pasto* - Corrente River Basin.

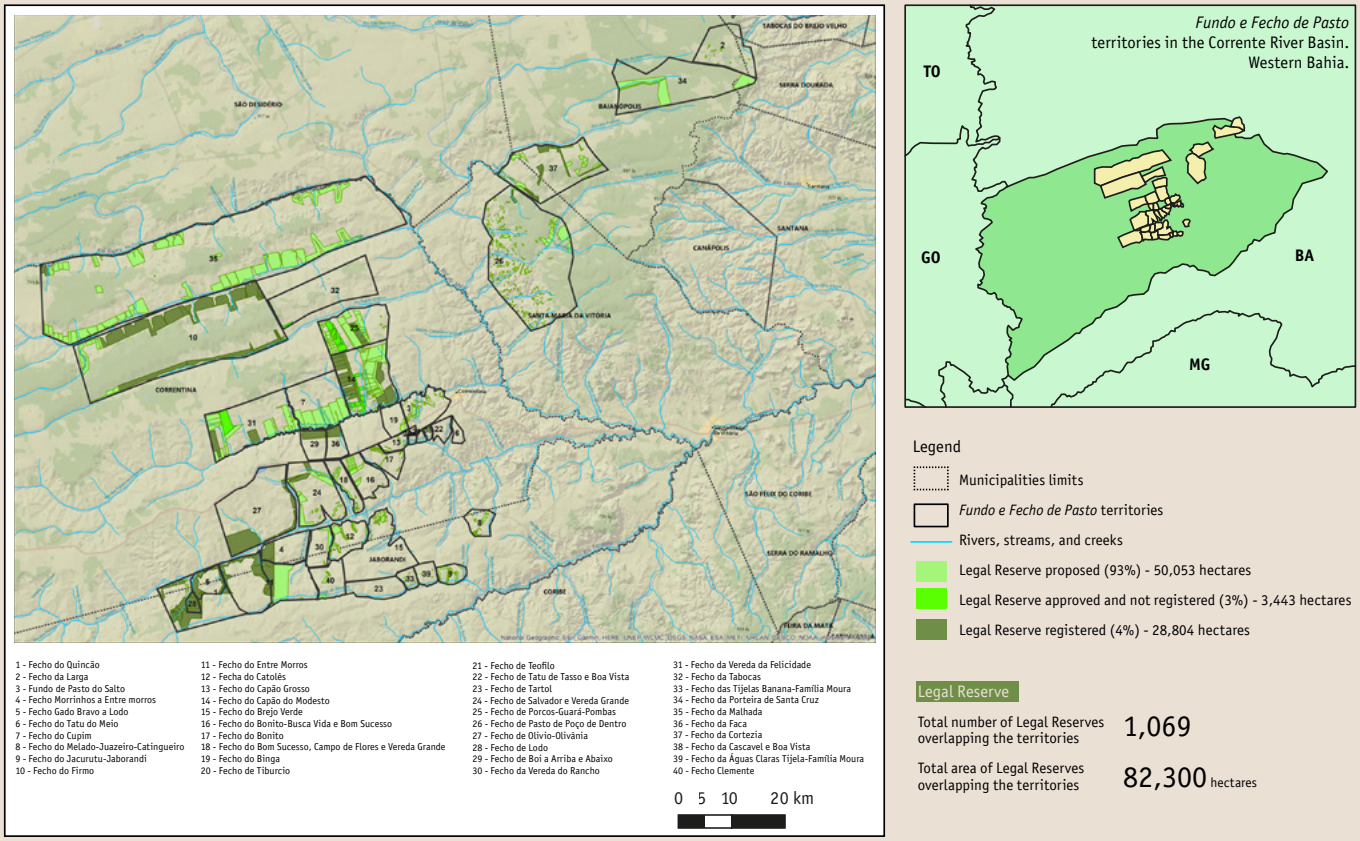


Figure 8 | Legal Reserves (LR) that overlap with the territories of traditional communities in the Corrente River Basin, Bahia. Source: AATR (2021).

situation makes families more vulnerable to third parties appropriating their lands. The possibility of losing their territory to large agricultural producers frightens the families and causes insecurities regarding the maintenance of their way of life. Another negative impact of the agribusiness presence in the region mentioned by the residents of Capão do Modesto and other communities was the flow of the region's rivers, which has been decreasing since agricultural companies installed dams, pumps, and pivots to irrigate their crops.[102]

According to the Global Witness report, in addition to the seven farmers who sued the community members, two others are also claiming part of the land. One of them is Agrícola Xingu, which has the title deed to Fazenda Tabuleiro VII, overlapping the traditional community lands of the Capão do Modesto. The Tabuleiro VII farm is declared as a LR for Agrícola Xingu's other productive farms.[103]

An investigation conducted by Repórter Brasil[104] revealed that in 2021 Agrícola Xingu supplied the silos of ALZ Grãos, a joint venture created by Amaggi, the Dutch Louis Dreyfus Company (LDC) and the local subsidiary of the Japanese group Zen-Noh Grain, through the intermediary Nutrade Comercial Exportadora. ALZ, in turn, exports soybeans to other large trading companies in the sector, as the investigation disclosed. Repórter Brasil found that ALZ Grãos exported the soy to Bunge subsidiaries in Europe. This establishes Agrícola Xingu as an indirect supplier to Bunge.

Additionally, Trase data indicates that in 2020, Bunge was among the four principal exporters of soybeans produced in Correntina, exporting 12.1% of the total volume originating from the municipality (45,615 tons).[105] A substantial proportion of this quantity was destined for China (51.8%), although imports were also received by European Union countries. Approximately 1,060 tons of soybeans produced in Correntina were exported by Bunge to Germany via the port of Salvador in Brazil.

Like Capão do Modesto, the situation in the Vereda da Felicidade's Fecho de Pasto territory is also affected by the conflict with the farmers. The

traditional territory has eight farms overlapping its 28,000 hectares. According to a newspaper report, one of the farms cut down 900 hectares of the Cerrado in 2022.[106] Additionally, members of this territory also reported threats and violence and the destruction of their ranch and fences.

Between August 2020 and July 2023, Correntina lost more than 40,000 hectares of native vegetation, making it the seventh most deforested municipality in this period.

Case 5 - Melancias Traditional Territory, state of Piauí

Farm name: Fazenda Cosmos Agropecuária Ltda.
Potential human rights violations: Land grabbing and green land grabbing.
Link from the farm to Bunge silos: Agricultural pledge contract[107] on behalf of Bunge in 2021. Bunge owns 2 warehouses nearby.

In the state of Piauí, traditional communities situated in the southern region, at the headwaters of the Uruçuí-Preto River, are experiencing a number of challenges, including land conflicts, the advance of deforestation, contamination of water sources by pesticides, and green land grabbing.[108]

The traditional territory of Melancias, for instance, has been engaged in a 30-year-long struggle to secure the demarcation and titling of their land.[109] However, the state government's prolonged inaction in recognizing this territory has created opportunities for companies and individuals to establish properties that overlap with the collective land.

The 53 families who live in the Melancias territory support themselves by subsistence farming, planting crops, grains, and roots, extracting and collecting fruit and raising free-range cattle on natural pastures. Surpluses are sold at fairs in the towns. As mentioned by AATR, the „oldest" residents of Melancias date the occupation of the territory to the last years of the 19th century and the first years of the 20th century.

The territory borders the municipalities of Baixa Grande do Ribeiro, Gilbués, Bom Jesus, Santa Filomena, and Monte Alegre do Piauí. Over the past two decades, the communities have experienced a decline in access to the plateau areas, which were previously utilized for extractive activities and cattle ranching. The accelerated deforestation of the Cerrado on the plateaus has led the communities of the Melancias territory to claim only a part of their traditionally occupied territory, namely to the lowland areas, with 22,583 hectares, on the left and right banks of the Uruçuí Preto River.[110]

The community also claims that deforestation has reduced the volume of water in the Uruçuí-Preto River and that the water is also contaminated by pesticides, which are causing allergies in people. They also mentioned the decline of fish in the rivers.[111] Besides this, in a video documentary, community members also cited the destruction of their subsistence crops by pests attracted to monocultures.[112]

The history of land grabbing and deforestation of the plateaus for crop planting is now triggering green land grabbing in the valley areas. As a result, 80% of the area claimed by the traditional community overlaps with rural properties declared as LR's by other farms (Figure 8).[113]

One of the groups that has benefited from land titles of questionable legality is Agropecuária Cosmos Ltda, located in Baixa Grande do Ribeiro (PI). The AATR report indicated that the company is seeking to expand its original areas and is engaged in 'green land grabbing' in the traditional territory of Melancias. Additionally, the report mentioned that the property was given as an agricultural pledge in March 2021 (corresponding to the 2020/2021 crops), in the name of Bunge Alimentos S/A, with a value equivalent to 35,600 tonnes of soybeans. Bunge owns two warehouses near the farm (within a 50 km radius).[114] Thus, there is potential evidence linking the alleged green land grabbing farms such as Agropecuária Cosmos Ltda to Bunge and its supply chain.

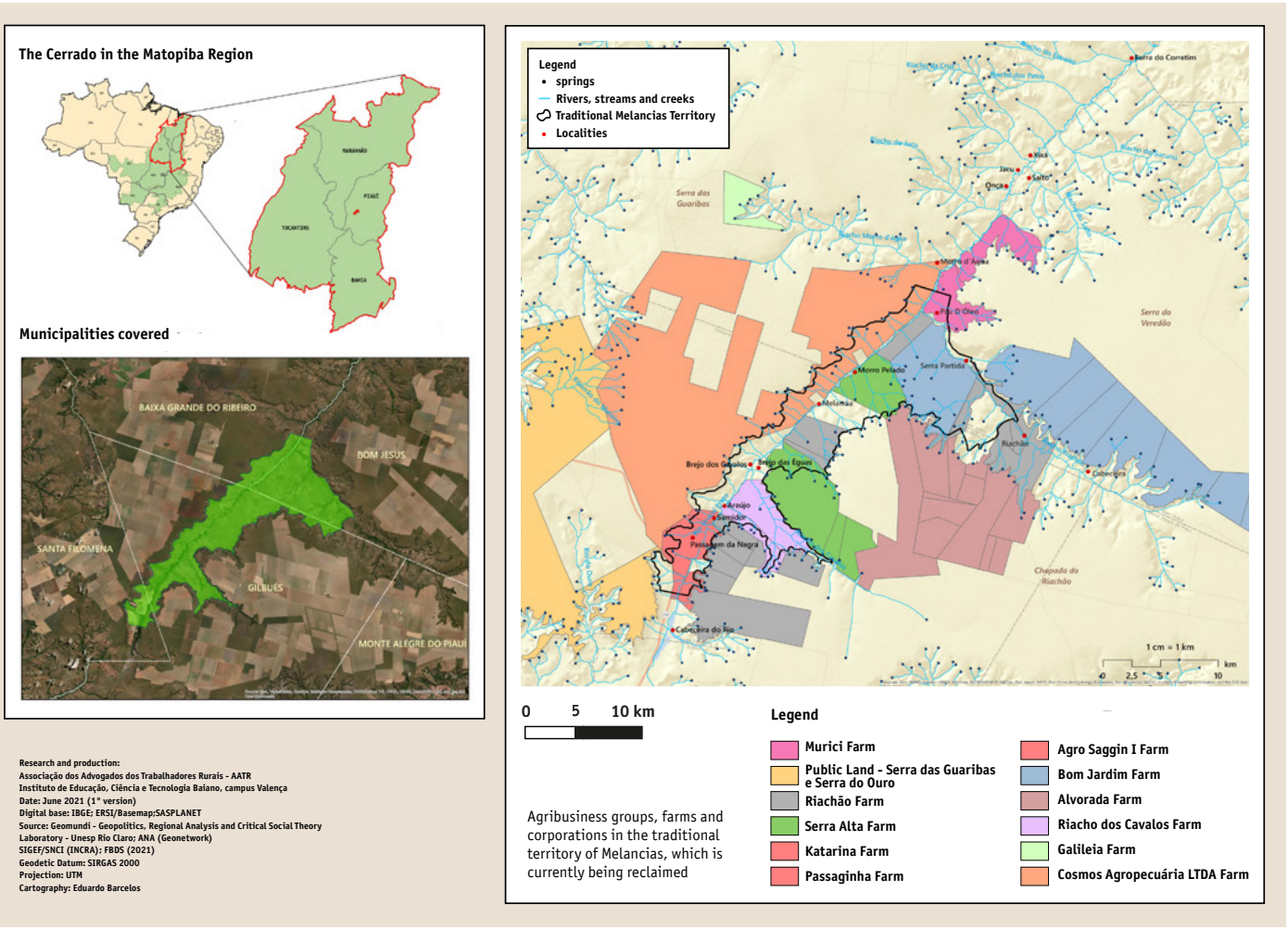
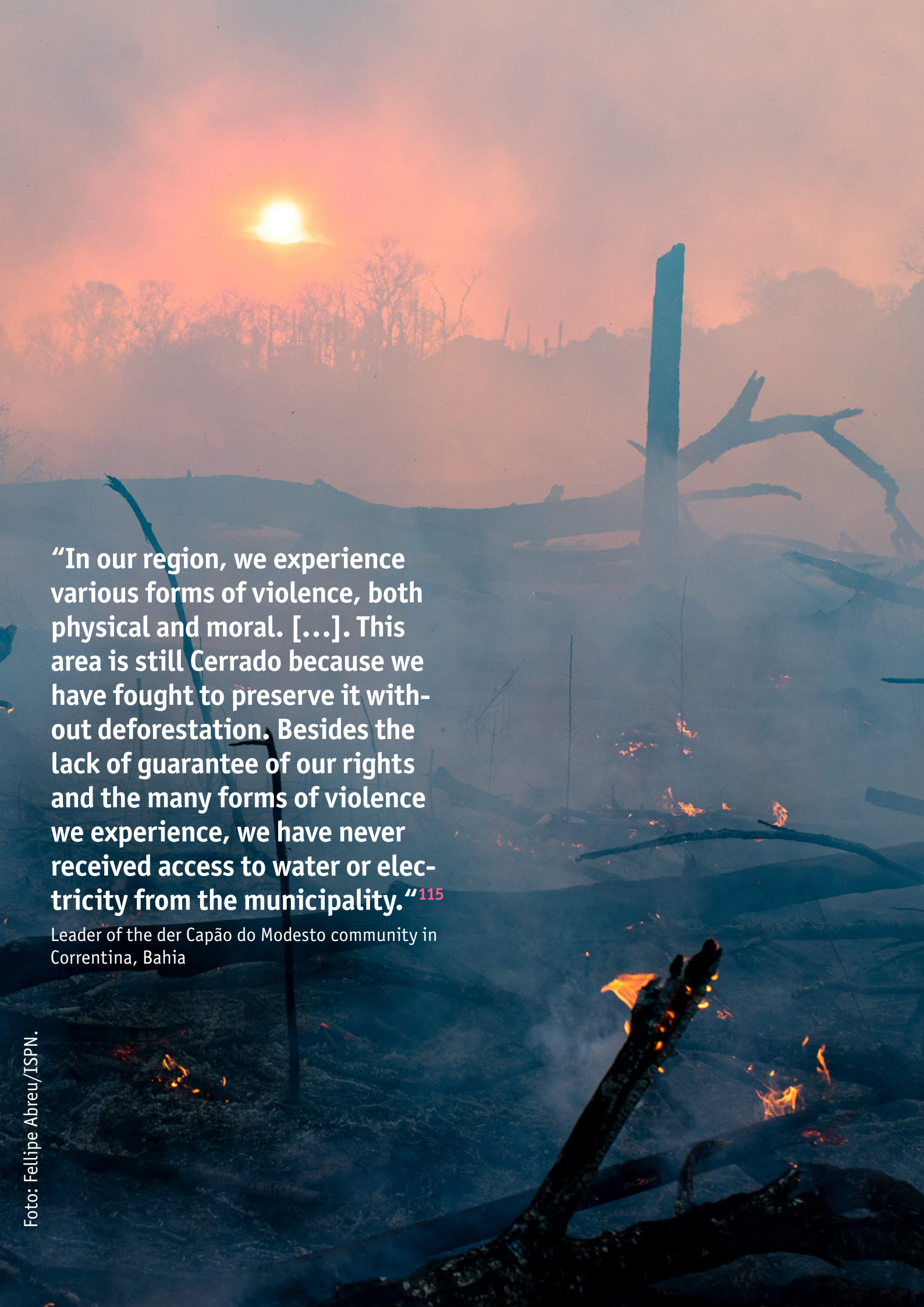


Figure 9 | Agribusiness groups, farms and corporations that overlap with the traditional territory of the Melancias, which is currently being reclaimed. Source: AATR (2021).

Interim conclusion:

Chapters II and III illustrate that the expansion of industrial soy production in the Brazilian Cerrado is often accompanied by negative impacts on local, Indigenous, and traditional communities and the biome not only in individual cases, but systematically. The five cases presented illustrate that there are considerable risks of human rights violations and environmental destruction within the soy supply chains of the agricultural trader Bunge in the Cerrado of the Matopiba region. In addition to evidence of legal and illegal deforestation, the case reports provide clear indications of so-called green land grabbing and the systematic displacement and threats to traditional communities. These case studies reveal a sad and normally invisible side of animal production in Germany, which sources a large portion of its soy feed from the Matopiba region, commonly via Bunge.



“In our region, we experience various forms of violence, both physical and moral. […]. This area is still Cerrado because we have fought to preserve it without deforestation. Besides the lack of guarantee of our rights and the many forms of violence we experience, we have never received access to water or electricity from the municipality.”[115]

Leader of the der Capão do Modesto community in Correntina, Bahia

Foto: Fellipe Abreu/ISPN.

IV. The Bunge file: The soybean from the Cerrado and its journey to Tönnies and Westfleisch

The previous chapter documented the negative effects of soy cultivation in the Cerrado, which takes place at the expense of local communities and nature in the region. It also assessed the particularly high risk of human rights violations and environmental destruction in Bunge's soy supply chains. This chapter highlights the large quantity of soy from Brazil, especially from the Cerrado, that reaches Germany via Bunge, revealing links to key players in the German pork production industry. We trace the potential journey of the soy, from high risk farms in the Cerrado, via Bunge's silos in Brazil, then by sea to the major soybean hub in Amsterdam, and via inland waterway transport to German feed producers, finally reaching the feed troughs in the German hotspots for pig fattening farms and lastly, the slaughterhouses of Tönnies and Westfleisch.

The global thirst for soy

Due to the global increase in the production of meat, dairy products and eggs in recent decades, the global cultivation of soybeans has experienced rapid growth.[116] Global soy cultivation is concentrated in a few major producing countries. Brazil in particular has seen a significant increase in the soy cultivation area. "Since 2017, the country has been the world's top soy producer, ahead of the **United**

Massive water basins for the irrigation of soy plantations are being constructed in the Cerrado, increasing pressure on the water availability in the region. Source: Fellipe Abreu/ISPN.

States (U.S.). In 2023/24, Brazil is expected to account for about 155 million metric tons or 40% of the world's soy production. About 80% of its crop is exported to international destinations.[117] Important markets are countries with a deficit in vegetable protein linked to the high demand from the livestock sector, like China and European Union (EU) member states." [118]

The majority of harvested soybeans are crushed - either in the producing country or upon arrival at the export market. This process yields approximately 79% soybean meal (soy oil cake) and 18% soybean oil.[119] The meal is used almost exclusively as animal feed, while the soybean oil is mainly used for chemical processes and biodiesel production.

More than just a handful of beans: The relevance of soy in pig feed

Despite the declining pig population, compound pig feed remains the most important feed type in Germany, with 8.2 million tons produced in 2022/2023.[120] Soy is a significant component of this feed. A Profundo report for WWF from 2022 estimated that soybean meal accounts for 9% of compound pig feed in Germany, while it makes up around 26% of chicken feed.[121] Across Europe, broiler production consumes approximately 41%, and pig farming 23%, of the total soybean used in animal feed production.[122]

The leading soy producing countries, Brazil, and the US, are also the main suppliers of soy to the German market. Out of the 3.9 million tons of soy (in the form of soybeans, -meal, and -oil) available on the German market in 2022, 3.1 million tons were soymeal used for animal feed. This makes soymeal the main soy product on the German market.[123] In total, about 1.4 million tons of soybean meal used in animal feed in Germany came from Brazil, representing 46% of the soybean meal used in the country.[124] According to Profundo estimates, approximately 25% of Brazilian soybean meal was used as pig feed.[125]

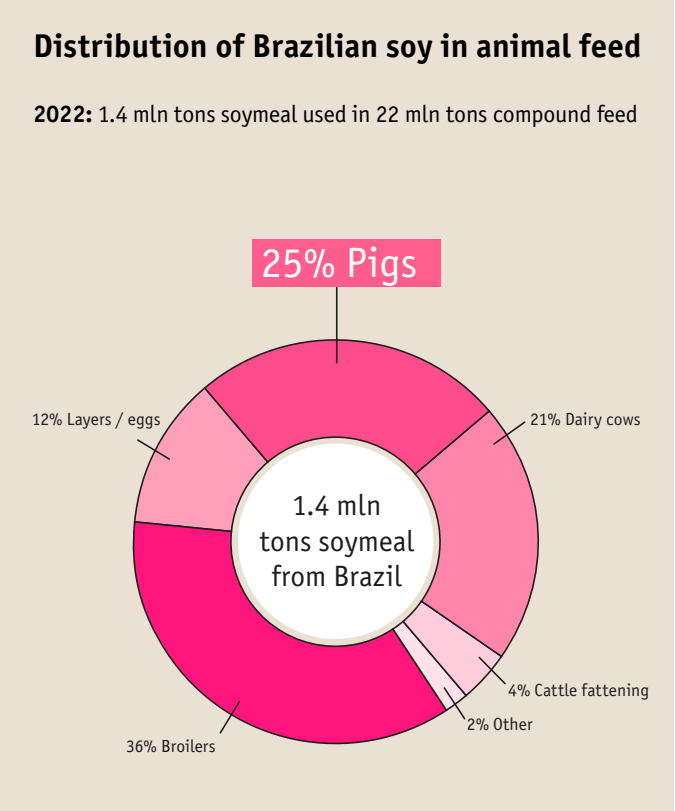


Figure 10 | Distribution of Brazilian soybean meal across different types of animal feeds in Germany, 2022 (Estimates) Source: Profundo on the basis of FEFAC (2023) and Hoste (2016).[126]

A bean on the move: The pathways of soy

According to the Trase database,[127] in 2020 Germany imported almost 1.5 million tons of soy from Brazil, more than half of which (730,000 tons) was confirmed to come from the Cerrado.[128] The actual amount of soy from the Cerrado is likely significantly higher, as around 437,000 tons remain of unknown origin. The Netherlands - as an important transshipment hub for Germany's overseas soy - imported nearly 4 million tons of soy from Brazil, including almost 1.3 million tons confirmed to come from the Cerrado in 2020, as per Trase. Once again, the real figure is likely much higher, as around 845,000 tons are of unknown origin according to Trase.

As the Profundo graphic (Figure 10) clearly illustrates, large parts of the commodity flow of Brazilian soy pass through the Netherlands. This is the primary reason for tracing the transport of soy via this trade route. Additionally, previous reports indicate that inland waterway vessels regularly

depart from the Bunge silo in Amsterdam's port towards the western German meat industry.[129] [130] The Netherlands plays a crucial role as a transshipment point for raw materials imported into the EU. Approximately 28% of these imports reach Germany through the ports of Rotterdam and Amsterdam, either directly or after processing. Key suppliers of soymeal from Brazil to the German market include the international agricultural traders ADM, Bunge, and Cargill, and the Brazilian producer cooperative Coamo.[131]

Bunge is one of the main suppliers of soy from Brazil. In 2020, more than 315,000 tons of Bunge soy were transported from the Cerrado to Germany.[132] This is a rather profitable business for Bunge, as was revealed in the latest Profundo report. The gross margin for the export giant is estimated to be around 8.1% with an annual revenue exceeding EUR 55 billion in 2023.[133]

Detailed information from the shipping trade database Panjiva paints a similar picture. The database reports individual shipments, providing information on the recipient, the goods, the starting and destination ports, and the quantities, among other things. Database excerpts from 2019 through the investigation period in 2023 show that Bunge has a history of several hundred thousand tons of soy deliveries per year from ports in the Cerrado, or with soy deliveries from the Cerrado to Amsterdam, continuing into the recent past. In May 2023, for example, according to Panjiva, Bunge delivered 55,000 tons of soybeans to Amsterdam. The trend indicates a consistent supply relationship with the Netherlands, which serves as an important transshipment point for soy destined for Germany. However, the data from Panjiva only extends to November 2023, as Brazil has since stopped reporting this data. The reasons for the cessation of data reporting were not known to the authors at the time of publication.

The Panjiva figures also show direct shipments from Bunge, for instance, from the Brazilian port of Salvador directly to Brake in Lower Saxony, Germany. However, Bunge doesw not own a silo in Brake. Imports of Bunge soy to Germany are

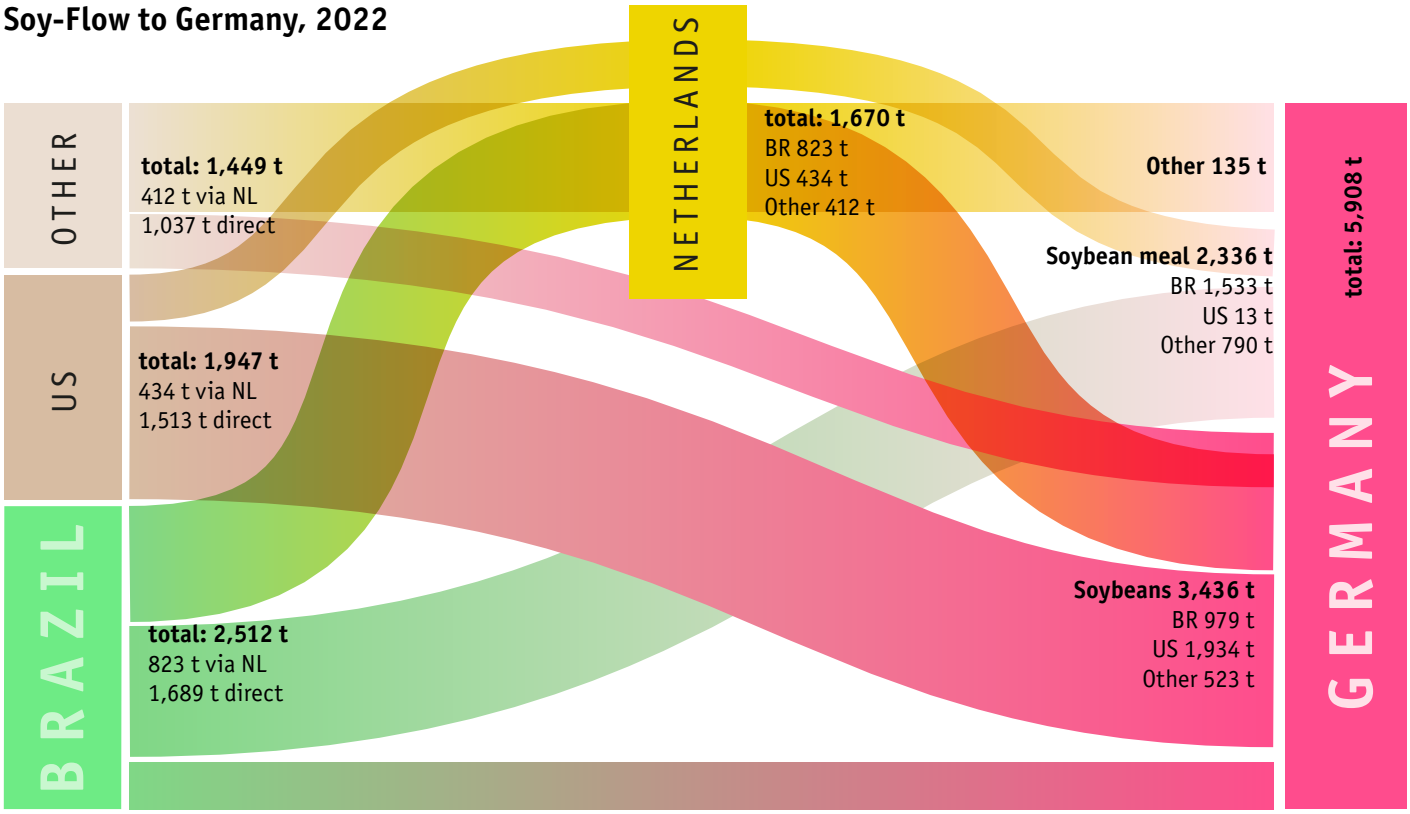


Figure 11 | Flow of Brazilian Soy to Germany. Source: Profundo, based on Eurostat (2024) and own calculations.

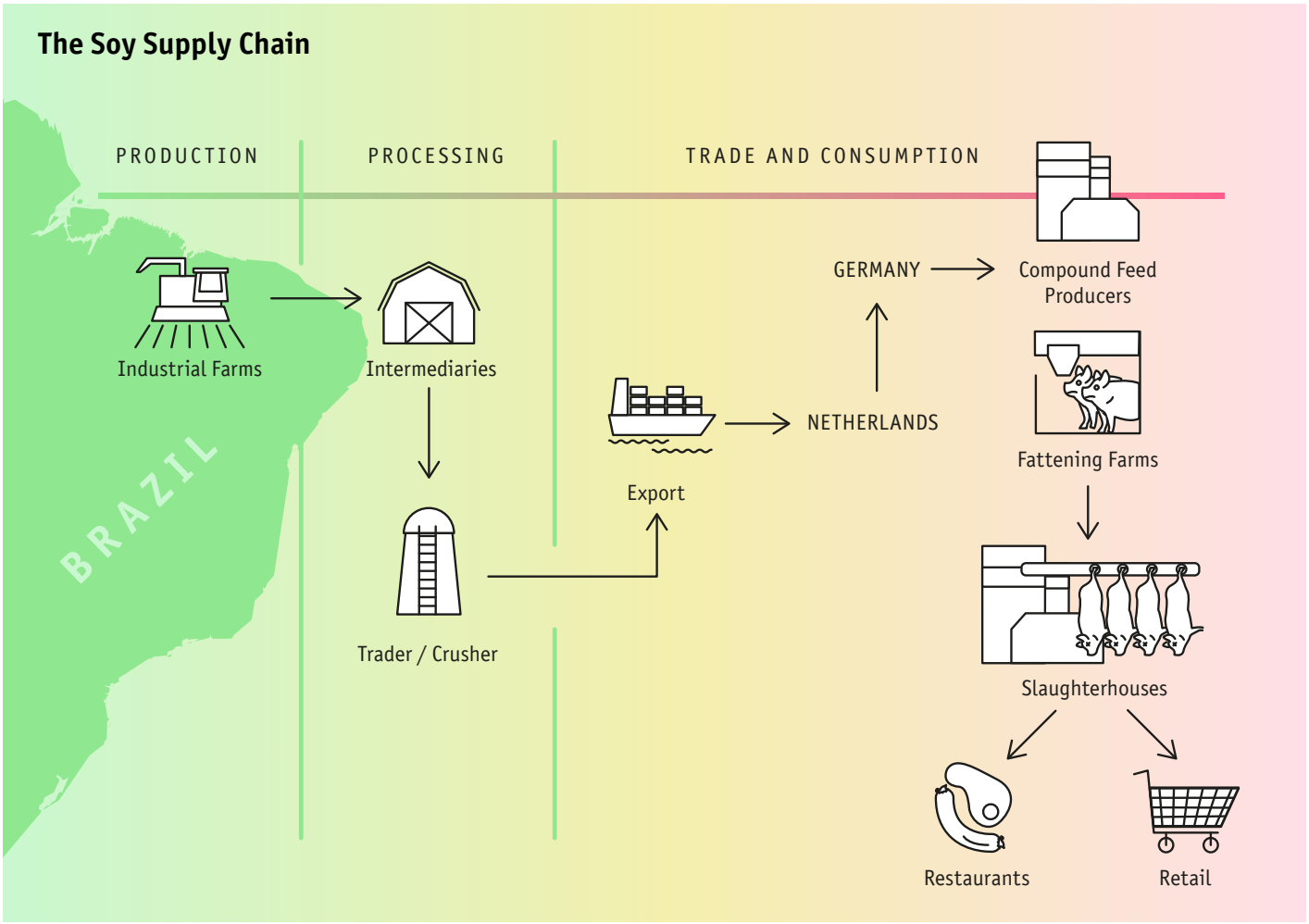


Figure 12 | Overview of the soy value chain: from its production to the consumer. Source: Profundo (2024), FEFAC (2023).

processed through intermediaries such as J. Müller and then sold on to feed producers.[134] This significantly complicates the traceability of soy from high risk regions, which is why this report traces the flow of soy through the Netherlands and via inland waterway vessels to the pork production hotspots in western Germany.

From port to port: the logistics of soy transportation

The transport of soy from Brazilian ports to Germany involves a multi-stage process encompassing international logistics, shipping, and processing. Soy is initially cultivated on large plantations, increasingly in the Cerrado region located in the interior of the country. After harvesting, the soy is transported to regional silos or warehouses operated by large agribusinesses like Bunge. The soy is temporarily stored in the silos until it can be transported further. The warehouses and silos are often situated near roads or rail lines to facilitate onward transportation. From there, the soy reaches export ports, where it is once again temporarily stored.

The USDA provides detailed insights into Brazilian soy transportation in its "Brazil Soybean Transportation" publication.[135] The 2023 edition outlines the main transport routes for soy from inner Brazil to the country's export ports (see Figure 13). These export ports were therefore used as starting points for further investigation into the pathways of soy from Brazil's major ports via the Netherlands to Germany.

The following Brazilian ports were selected due to their likely shipments of soy from the Cerrado and were examined to identify direct routes

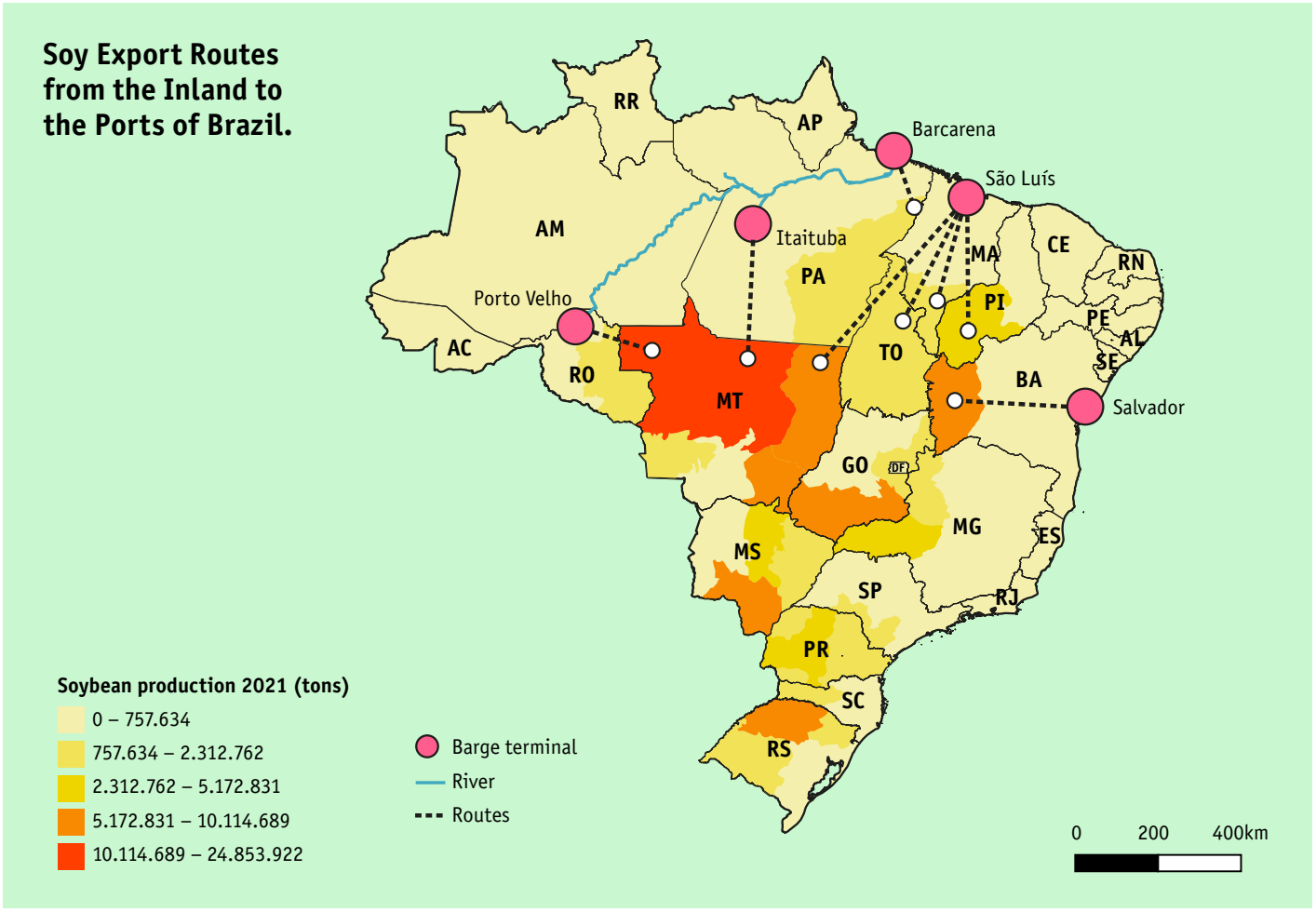


Figure 13 | Brazilian soybean exports routes from the inland of the Cerrado to the exporting ports. Source: USDA - Brazilian Soybean Transportation Overview (2023).

to the Bunge facility in Amsterdam between May 2023 and April 2024:

- Itaqui/São Luis, Maranhão
- Salvador, Bahia
- Barcarena, Pará

From the silos at the export ports, soy is loaded onto bulk carriers and shipped around the world. These massive ships, specifically designed for transporting bulk goods such as soy, can carry up to 100,000 tons in the largest class (Panamax Bulk Carrier). The journey across the Atlantic typically takes 2 to 4 weeks, depending on the route and weather conditions. Large quantities of the soy from the Cerrado arrive at the port of Amsterdam in the Netherlands and then transported to Germany by sea and via inland waterway transport. Once in Europe, the soybeans are unloaded and either processed locally or prepared for further transport. At the latest in specialized facilities at the ports or at the animal feed manufacturers, the soybeans are processed into the final animal feed, often by extracting the oil and using the remaining soybean meal for animal feed. The processed soy is then typically transported by truck to feed manufacturers in Germany. Finally, it ends up as finished soy feed in the pigs' troughs and indirectly on the plates of German consumers after the soy fed animals have been slaughtered.

To determine specific trade relationships between soy traders and the German feed industry, detailed and comprehensive research was carried out. The goal was to accurately trace the transportation routes of shipments from Brazilian export ports to Germany's ports to identify potential trade routes and stopovers.

Ship movements were tracked between May 2023 and April 2024 using ship-tracking software to verify the transportation. This software uses technologies such as GPS (Global Positioning System), AIS (Automatic Identification System), and

satellite communication to collect and present real-time data on a ship's location, speed, route, and other relevant information. The analysis identified bulk carriers departing from Brazilian ports, typically exporting soy from the Cerrado, which headed directly for Bunge's soy silo in Amsterdam within the observed period. The elapsed time between the recorded stops was taken into account, as well as whether there was a direct connection between the locations or if stopovers were made en route. Where intermediate stops occurred, their possible purpose was analyzed and a match was only recorded if a discharge was very unlikely or impossible. Moreover, satellite polygon images were used to confirm that the ships actually headed for the Bunge silo in Amsterdam.

This ship-tracking analysis confirmed eight shipments by bulk carriers from the ports of São Luís, Salvador, and Barcarena to Bunge's Amsterdam soy silo during the observation period from May 2023 to April 2024. These shipments represented a direct connection, i.e. without unloading having taken place en route. The ports in São Luís, Salvador, and Barcarena are the usual ports for exports from the corresponding states in the Cerrado and are all within delivery distance of Bunge's Cerrado silos:

Origin Port	Destination Port	Timeframe	Number of Shipments
Itaqui/São Luís	Bunge Silo Amsterdam	2023	4
Barcarena	Bunge Silo Amsterdam	2023-2024	3
Salvador	Bunge Silo Amsterdam	2024	1

Table 1 | Overview of soy shipments from Brazilian ports to Amsterdam by bulk carriers in 2023/24

To demonstrate the further path of soy, a preliminary selection for the analysis of the transport

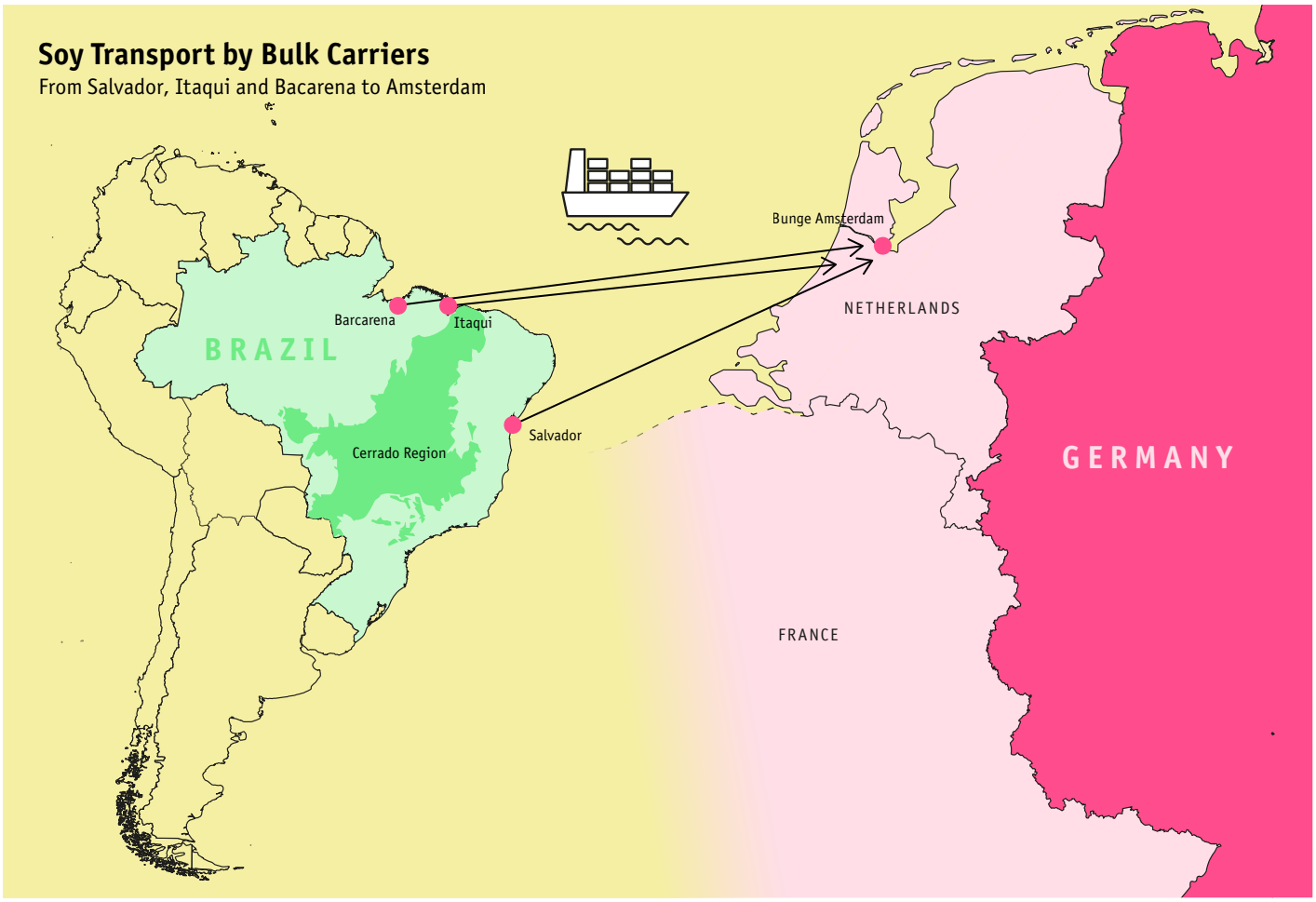


Figure 14 | Analyzed transport routes of soy from the Brazilian Cerrado to Amsterdam in 2022. Source: Profundo (2024), FEFAC (2023).

from Amsterdam to locations in Germany was made. Initially, locations in or in the immediate vicinity of the Oldenburger-Münsterland or Weser-Ems regions, which offer the possibility of unloading soy from bulk carriers, were considered. In the subsequent selection and prioritization of the port facilities and unloading stations to be considered, additional factors were taken into account. These included detailed information about the the location, quantity, and specific type of handled goods. The proximity to a concentration of fattening farms and slaughterhouses was also considered.

For the analysis of the soy transport, port facilities used for loading and unloading goods of the feed producing companies in the region were examined.

According to ship tracking data from the software used, the following transport connections from the Bunge terminal in Amsterdam to the German feed manufacturers or the corresponding port facilities were identified for the period from May 2023 to April 2024:

Company & Location	Number of Shipments from the Bunge Silo in Amsterdam
AGRAVIS Dorsten	11
Raiffeisen Wesel	10
Deutsche Tiernahrung Cremer Düsseldorf	9
AGRAVIS Münster	8
Deutsche Tiernahrung Cremer Neuss	2
AGRAVIS Oldenburg	1
RWS Neuss	1

Table 2 | Overview of soy deliveries from the Bunge silo in Amsterdam to German feed manufacturers via bulk carriers 2023/24

The driving forces in the feed sector

The five largest companies on the German market for animal feed are Agravis, Deutsche Tiernahrung Cremer, Bröring, Mega, and ForFarmers. In addition, there are around 300 medium-sized and smaller companies in Germany, many of which are owned by a cooperative or one or more families.[136] A Profundo study also identified Raiffeisen, Baywa, Agri Supply & Trade, Hauptgenossenschaft Nord, Rothkötter, and GS Agri as the largest producers of compound feed.[137]

AGRAVIS Raiffeisen AG is one of the largest agricultural trading companies in Germany and Europe, with its headquarters in Münster and Hanover in Germany. Founded in 2004 through the merger of Raiffeisen Hauptgenossenschaft Nord AG and Agravis Raiffeisen AG, the company operates in various sectors, including agricultural trade, animal nutrition, crop protection, seeds, agricultural machinery, energy, and building materials. With over 6,000 employees and an annual revenue of around €9 billion in 2022,[138] AGRAVIS operates in Germany, Denmark, and other European countries. In December 2023, in a newsletter on the topic of deforestation-free supply chains, Christian Grütters, then VP of Sustainability & Services at AGRAVIS Raiffeisen AG, stated, "AGRAVIS already sources demonstrably deforestation-free products and documents this seamlessly." At the same time, he admitted: "'In the coming years, we will simply not be able to source demonstrably segregated deforestation-free goods to meet the EU's demand."[139] However, segregated supply chains are a crucial requirement to safely exclude deforestation risks and ensure products remain untainted beyond just the paperwork.

AGRAVIS, when asked by DUH, stated in a letter to it, that it sources Brazilian soy from Coamo in southern Brazil. The large Brazilian agricultural cooperative has been linked to human rights violations, particularly in relation to land disputes with Indigenous communities such as the Guarani and Kaiowá. These human rights violations were uncovered through investigations by **Christian**

Romero Initiative (CIR) and **Repórter Brasil.** Although Coamo has a lower risk of deforestation compared to companies such as Bunge, it is still associated with problems such as land grabbing and the marginalization of Indigenous populations.[140]

Our analysis of ship movements shows that 11 vessels, most likely loaded at the Bunge silo in Amsterdam, arrived at the AGRAVIS Dorsten feed plant during the period under investigation. According to the company, it produces 280,000 tons of feed annually,[141] with older reports stating 170,000 tons of pig feed, which suggests that a significant proportion of their production is for pig feed.[142]

The AGRAVIS feed mill in Münster received eight shipments during the same period. With an annual output of 450,000 tons, the Münster facility is the largest of those examined, though AGRAVIS does not disclose the amount of pig feed produced at this location.

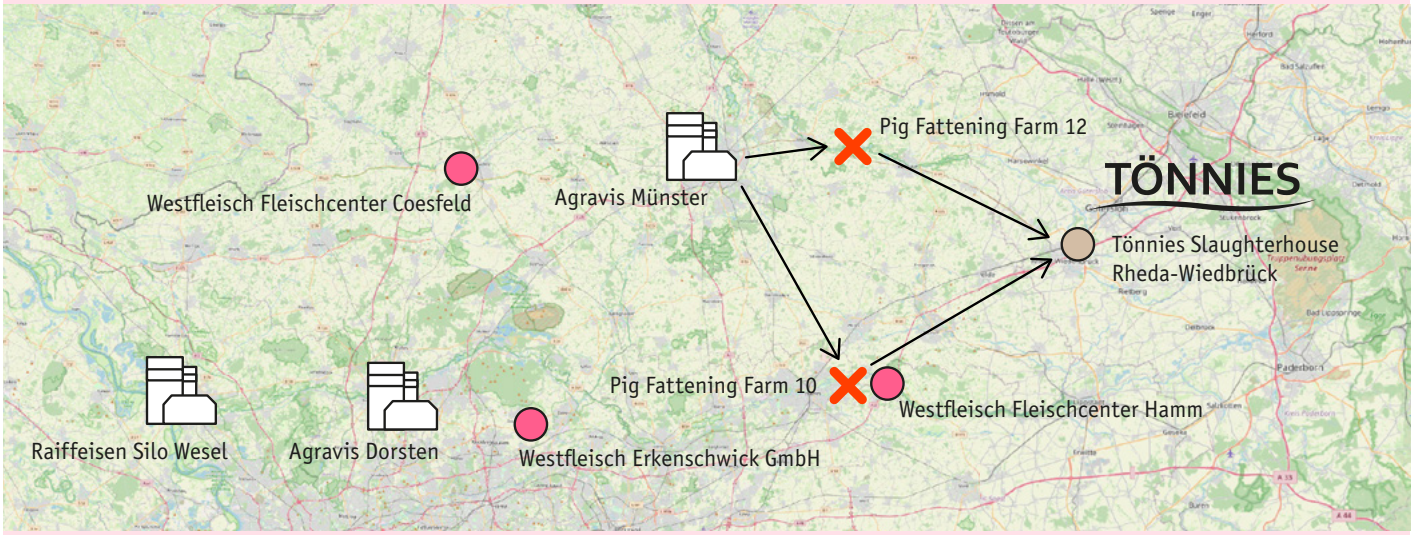
Raiffeisen Wesel, or more precisely **HOMA Raiffeisen GmbH**, is a subsidiary of Raiffeisen Hohe Mark Hamaland eG.[143] [144] The company belongs to a group primarily engaged in agricultural trade. HOMA Raiffeisen operates a compound feed production facility in Wesel, producing approximately 80,000 tons of compound feed annually. The company was established in 2013 through the acquisition of a former plant and is one of three concentrated feed plants operated by Raiffeisen Hohe Mark Hamaland eG. Raiffeisen Hohe Mark Hamaland eG is a cooperative with seven large operating sites in Münsterland (Dorsten-Lembeck, Gescher, Heiden, Reken, Ramsdorf, Stadtlohn, and Wesel), which handle all procurement and sales activities of its agricultural member companies. The Raiffeisen plant in Wesel received 10 shipments during the period under investigation. According to Raiffeisen Hohe Mark Hamaland eG, the Wesel site is specialized in the production of pig feed.[145]

Deutsche Tiernahrung Cremer GmbH & Co. KG, based in Düsseldorf, is a compound feed producer. With 700 employees, it claims to be Germany's largest private feed manufacturer, operating 15 production sites across the country. The company is part of Peter Cremer Holding, an internationally active company with roots in the trade of agricultural and industrial goods.

Figure 15 | Transport route of the soy from the Bunge silo in Amsterdam to AGRAVIS in Dorsten. Source: Own research.

Tönnies

Probable supply relationships from Agravis Münster via pig fattening farms to Westfleisch slaughterhouses. Based on research and direct interviews (2023/2024, Agravis Münster was sailed to several times by ships from Bunge Amsterdam).



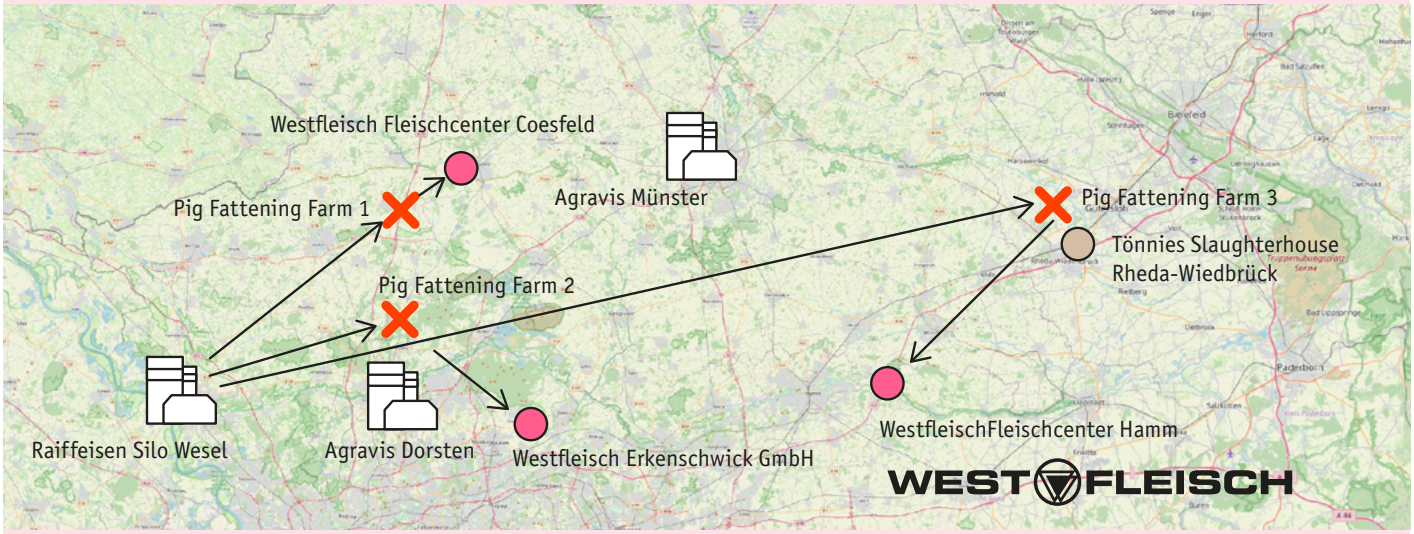
Pig fattening farms whose supply chain is linked to Bunge:
- supplied by Agravis Münster

Feed Production Facilities:
- compound feed production facilities supplied by Bunge 23/24

Slaughterhouses:
- Slaughterhouse, Pigs and Cattle
- Slaughterhouse, only Pigs

Westfleisch

Probable supply relationships from Raiffeisen Silo Wesel via pig fattening farms to Westfleisch slaughterhouses. Based on research and direct interviews (2023/2024, Raiffeisen Wesel was sailed to several times by ships from Bunge Amsterdam).



Pig fattening farms whose supply chain is linked to Bunge:
- supplied by Raiffeisen Wesel

Feed Production Facilities:
- compound feed production facilities supplied by Bunge 23/24

Slaughterhouses:
- Slaughterhouse, Pigs and Cattle
- Slaughterhouse, only Pigs

Figure 16 & 17 | Probable supply chains of the slaughterhouses Tönnies and Westfleisch. Source: Own research.

Soy supply chain
Overview of actors and geographical analysis of the soy supply chain in the West German pig industry (focus area Weser-Ems and Münster)

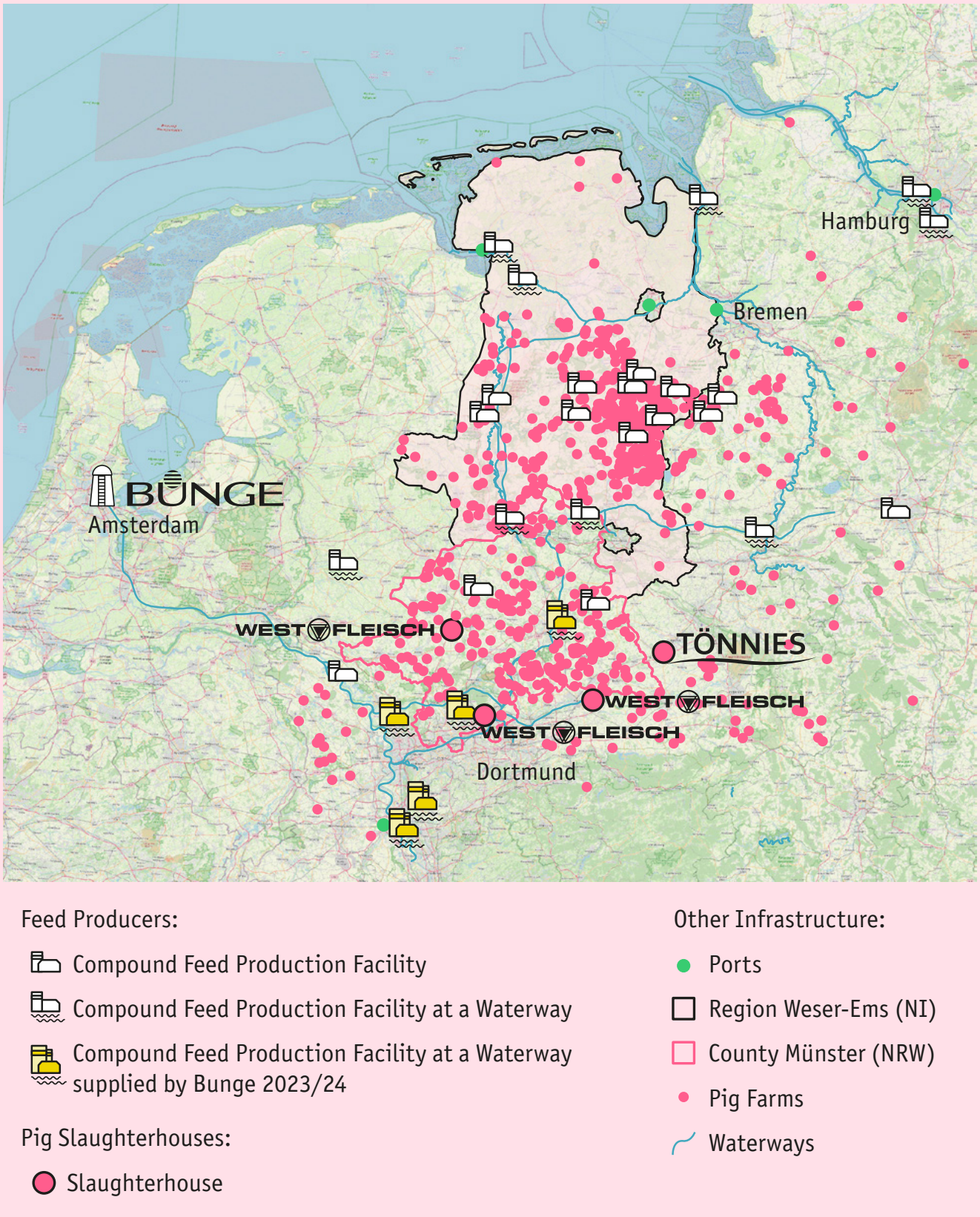


Figure 18 | Analysis of the actors in the soy supply chain of the German pig industry in the focal area Weser-Ems and Münster. Source: careco based on data from company reports and publications in accordance with the Federal Immission Control Act and pollutant release and transfer registers.

Connections between feed producers, pig fattening facilities and the slaughterhouses of Tönnies and Westfleisch

Initially, we documented the connections between the Bunge silo in Amsterdam and the feed producers AGRAVIS, Deutsche Tiernahrung Cremer, and Raiffeisen, as illustrated above. We then followed the soy to pig fattening facilities and slaughterhouses.

To this end, several hundred publicly available documents were examined, based on various criteria, to identify possible connections and trade relationships between feed producers, fattening farms, and slaughterhouses. The criteria included, for example, the geographical proximity between feed plants, fattening farms, and slaughterhouses, as well as personal connections between feed producers and farmers, such as shared positions on supervisory boards or executive committees. In addition, the farmers were asked about their relationships to feed producers and slaughterhouses via third parties.

Using the data collected, we identified pig fattening farms that are likely supplied by feed producers, which were previously found to be supplied by the Bunge plant in Amsterdam and which, at the same time according to their own statements, deliver to slaughterhouses owned by Tönnies or Westfleisch.

In this way, connections were identified between pig fattening farms, which likely use feed from Raiffeisen Wesel, and the Westfleisch sites in Coesfeld, Erkenschwick, and Hamm. In addition, links were discovered between fattening farms that presumably use feed from Raiffeisen sites in Beelen and Warendorf and which, according to their own statements, supply pigs to Tönnies or Westfleisch.

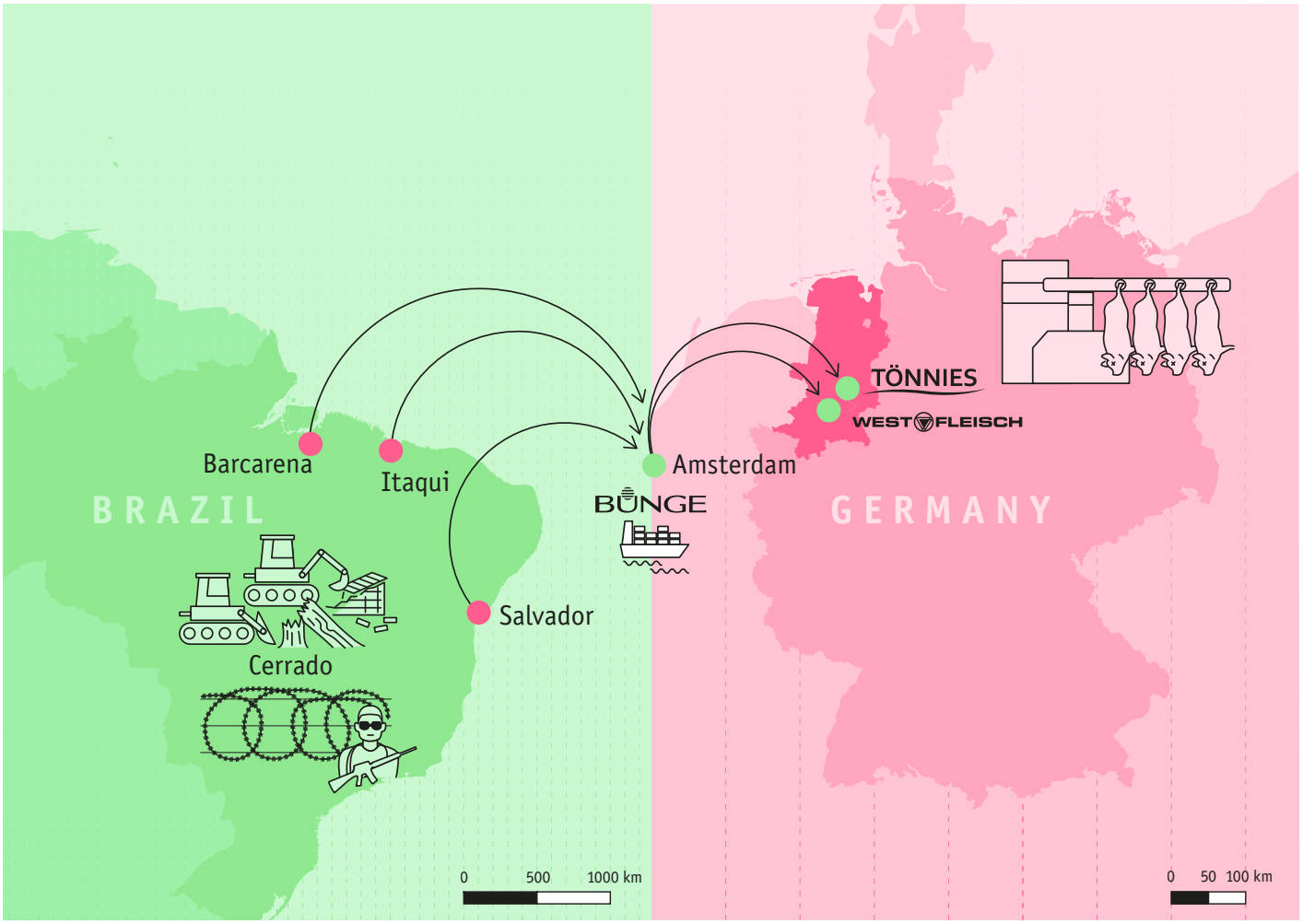


Figure 19 | The presumed route of soy from the export harbors of the Cerrado in Brazil to Tönnies and Westfleisch in Germany. Source: Own research.

Feed deliveries from the AGRAVIS Münster and Dorsten plants were also identified to fattening farms that, according to their own statements, delivered to Tönnies and Westfleisch in Rheda-Wiedenbrück and Hamm.

In summary, we were able to link seven pig fattening farms to both a feed producer likely supplied with Bunge soy from Amsterdam and a Tönnies or Westfleisch slaughterhouse.

Interim conclusion:

The research presented thus far shows that significant quantities of soy from the agricultural trader Bunge, whose supply chains show a high risk of environmental destruction and human rights violations in Brazil's Cerrado, are very likely to reach the German animal feed market. We were able to show that the Bunge silo in Amsterdam, which presumably supplies several feed companies in the West German hotspot regions of pork production, was also likely supplied from Brazilian risk areas for deforestation, land rights conflicts, and human rights violations during the period under investigation. In addition, we were able to uncover probable relationships with the feed suppliers Raiffeisen Wesel, Agravis Münster, and Agravis Dorsten, which were likely supplied from the Bunge silo, to pig fattening farms that supply the Westfleisch slaughterhouses in Coesfeld, Erkenschwick, and Hamm and the Tönnies slaughterhouse in Rheda-Wiedenbrück.

In this respect, the analysis showed that the supply chains of meat companies Tönnies and Westfleisch are likely to include soy feed from the agricultural trader Bunge, which originates from high risk areas in the Cerrado and may be linked to cases of legal or illegal deforestation, land rights conflicts and human rights violations.

Destroyed villages of traditional communities as a result of agro-industrial expansion in the Cerrado. Source: Fellipe Abreu/ISPN.

V. The German pork market and its challenges

Pork is by far the most consumed meat in Germany, with the average person consuming 27.5 kg of pork in the year 2023.[146] However, the consumption of meat has been steadily declining in recent years, almost exclusively at the expense of pork consumption. Just ten years ago, the per capita consumption of pork was ten kilograms higher. This change can be attributed to various factors, such as the increased preference for poultry meat and scientific recommendations for a low-meat and more plant-based diet with a focus on fruit and vegetables, whole grains, pulses, nuts, and vegetable oils.[147] Trends such as the "Planetary Health Diet", a nutritional recommendation that aims to protect the health of people and the planet in equal measure, are also significant.[148] Globally, food is the second largest source of human-produced greenhouse gas emissions after fossil fuels.[149] Meat and dairy products are the most climate-damaging, accounting for nearly two-thirds of the total climate impact of food.[150] The large amount of land required for feed production is particularly problematic, as it leads to the destruction of ecosystems that are essential for climate regulation and species protection.

Strong regional concentration – tendency towards ever greater market concentration

Pork production plays an important role in German agriculture. Around one quarter of the production value of animal products in German agriculture is attributable to pig farming. According to the Ministry of Agriculture, the production value for pigs in 2023 was approximately €8.9 billion.[151]

There is an overproduction of pork in Germany. Since around 2007, gross domestic production of pork has rapidly exceeded the amount consumed in the country. In 2023, Germany's self-sufficiency rate for pork was 134%.[152] Pork accounted for just over half (51%) of German meat exports in 2022, with exports totaling nearly 1.5 million tons, although this figure is declining.[153] For example, the emergence of swine fever significantly dampened pork exports. The volume of imported pork has also decreased. In the same year, around 700,000 tons of pork were imported.[154]

Today, pig farming largely takes place in specialized farms with large numbers of livestock. These farms focus on specific stages of production, such as breeding, piglet production, or fattening. As of May 2024, the German pig population stood at a total of 20.9 million, with fattening and young pigs comprising the largest share at 13.2 million.[155] Spain is the only EU country with a larger pig population than Germany.

Pig farming is widespread throughout Germany, but it is mainly concentrated in two federal states. By far the largest number of pigs are kept in Lower Saxony, where 6.9 million animals were being fattened in May 2024. North Rhine-Westphalia followed in second place with 5.8 million pigs.[156] According to a 2020 agricultural census, the districts of Vechta, Cloppenburg, Emsland, Osnabrück and Grafschaft Bentheim in Lower Saxony and Coesfeld, Borken, Warendorf, Steinfurt, and Recklinghausen in North Rhine-Westphalia have particularly high stocking densities, with 700 or more pigs per 100 hectares of agricultural land. This is about four and a half times the national average of 159 pigs per 100 hectares.[157]

Unfair prices are causing more fattening farms to close

The declining demand has led to a significant reduction in the pig population, despite attempts to boost export numbers in response. The number of pigs decreased by 25% in the ten years follow-

Pig strongholds of Lower Saxony and North Rhine-Westphalia

Number of pigs slaughtered 2022 by German federal state, in millions.

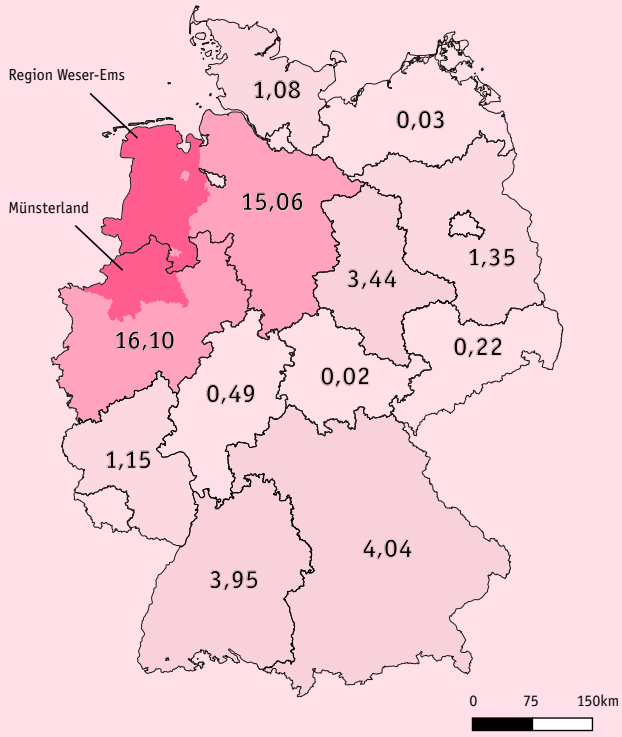


Figure 20 | Map of pig stock densities in Germany in 2022. Source: ISN according to Destatis.

ing 2013, although there were occasional brief increases.[158] The number of pig farms has dropped even more sharply, decreasing by 42% during the same period.[159] These figures illustrate the structural changes in pig farming. The average number of pigs per farm nearly doubled, rising from 460 in 2010 to 825 in 2020.[160] Simultaneously, the number of small farms continues to decrease and farms with over 1,000 pigs are becoming the norm.

The focus on exports by large German slaughterhouses contributes to the need for these companies to maintain raw pork prices at the global market level, exposing pig fattening farms to the volatility of global pork prices. However, since the global market does not account for the higher production costs in Europe, production companies in Germany - at the lower end of the value chain - are under immense pressure. Pig farmers often struggle to pass on increased operating costs, such as feed expenses, to slaughterhouses for months or even years.

At the same time, a trend persists in Germany: consumer prices remain high for longer than producer prices. Powerful market players - such as supermarkets, dairies, and meat producers (slaughter companies) - can influence prices, as their dominance weakens the negotiating position of farmers. As a result, the profit margin for processing and retail grows, while pig farmers lose out when it comes to the distribution of added value.[161] Ultimately, pig farmers do not receive prices that cover their costs.[162]

In addition, slaughterhouses are increasingly passing on sustainability requirements to fattening farms without taking responsibility themselves. However, given the low producer prices, farms at the lower end of the value chain in Germany have little leeway to pursue more sustainable practices in areas such as sustainable feed or improved animal welfare.

DUH believes that the costs incurred at the producer level for increasing environmental and animal welfare standards must be compensated by the purchasing party, including the slaughterhouses. To this end, in 2023, we founded the “Initiative faire Preise in der Lebensmittelkette” (Fair Prices in the Food Chain Initiative)[163] and, together with farmers‘ associations, are campaigning for the right to enforce cost-covering producer prices against trade and the industry. If production costs rise as a result of implementing deforestation-free supply chains, farmers must have the right to pass on the increased costs to the next link in the value chain.

Feed costs account for the majority of operating costs

Feed cost is the most significant production cost. At times, for example in 2022, feed costs accounted for around 60% of pig fattening costs. This year, the feed cost for a single fattening pig rose to €100 or more.[164] The pressure on producers to save costs on feed and to use it as efficiently as possible is enormous. In 2023, pigs (from domestic breeding) were slaughtered at an average weight of 98.7 kilograms, a slight decrease compared to previous years. Under optimal conditions, pigs achieve an

average daily weight gain of just over 1,000 grams, requiring approximately 2.4 kg of feed for each kilogram of gain.[165] With rising feed prices, it is often advantageous to slaughter the pigs earlier.[166]

Meat production occupies vast areas for feed production

Industrial meat and dairy production is highly resource-intensive and requires multiple times the amount of land, compared to the cultivation of plant-based foods. The extremely large amount of land required for feed production is problematic as it leads to the destruction of ecosystems that are essential for climate regulation and species protection. It also creates competition for land needed to produce food for direct human consumption, and fuels social conflicts in some production regions. For example, in the European Union, nearly two thirds of the produced grain is used as animal feed, while about one third is intended for human consumption.[167]

According to preliminary results, the total feed production in the 2022/23 fiscal year amounted to 158.7 million tons in Germany. The largest share of this is accounted for by farm own produced feed, such as grass silage (56.0 million tons), silage maize (34.1 million tons), and grain (23.1 million tons).[168] In addition to the farm's internally produced feed, compound feed is also used, which contains protein components such as soybean meal and various additives such as minerals, vitamins, and fats. Compound feed is optimally tailored to the respective livestock. In 2022, around 22 million tons of this feed was provided by the German animal feed industry.[169] The regional distribution of compound feed producers is closely linked to livestock farming.[170]

Animal production remains highly dependent on soy feed

Soy is a legume and an important protein component in animal feed, especially in compound feed for pigs and poultry. Soybeans contain very high quality protein and can be purchased at relatively low cost. This made soy an important cornerstone for the development of industrial livestock farming with high-performance animals.

In the 27 EU countries plus the United Kingdom, the estimated amount of soy used for the production of animal products per kilogram (retail weight) is highest for broiler chickens (956 grams), farmed fish (951 grams), and pork (415 grams).[171] Only a very small proportion of the soy harvest is consumed directly by humans, for instance in the form of tofu. Soy for direct human consumption is mostly grown in Germany or Austria.

Due to the excellent and low-cost availability of soy feed from abroad, domestic legumes like peas and fava beans have largely fallen out of focus. However, with the increasing cultivation of the oilseed rape, primarily for biofuel production, rapeseed has gained importance as a protein component. Rapeseed meal is a cost-effective and GMO-free by-product of oil production, which is mainly used in dairy cattle feed. There, soy can be completely replaced by rapeseed meal without any loss of milk yield. The consumption of soybean meal and cake decreased by 34.7% between 2010/11 and 2020/21, while the use of rapeseed meal and cake increased by 45.1%.[172] [173] In pig fattening, however, replacing soybean meal is more challenging, as soy proteins have clear advantages over rapeseed proteins here. According to WWF estimates, soybean meal still accounts for around 9% of pig compound feed.[174] In the feed sector, soy and rapeseed are considered the most important oilseeds. Their prices have a significant global impact on the competitiveness of other protein components like fava beans and peas, as well as GMO-free soy from European sources such as Danube soy.[175] [176]

Alternative protein feeds and the protein gap

When feeding livestock, farmers can actually draw on a variety of domestic feed components that contribute to meeting protein needs. Domestic protein feeds include clover, alfalfa, legumes like fava beans and peas, and soy from regional and European sources, as well as by-products from

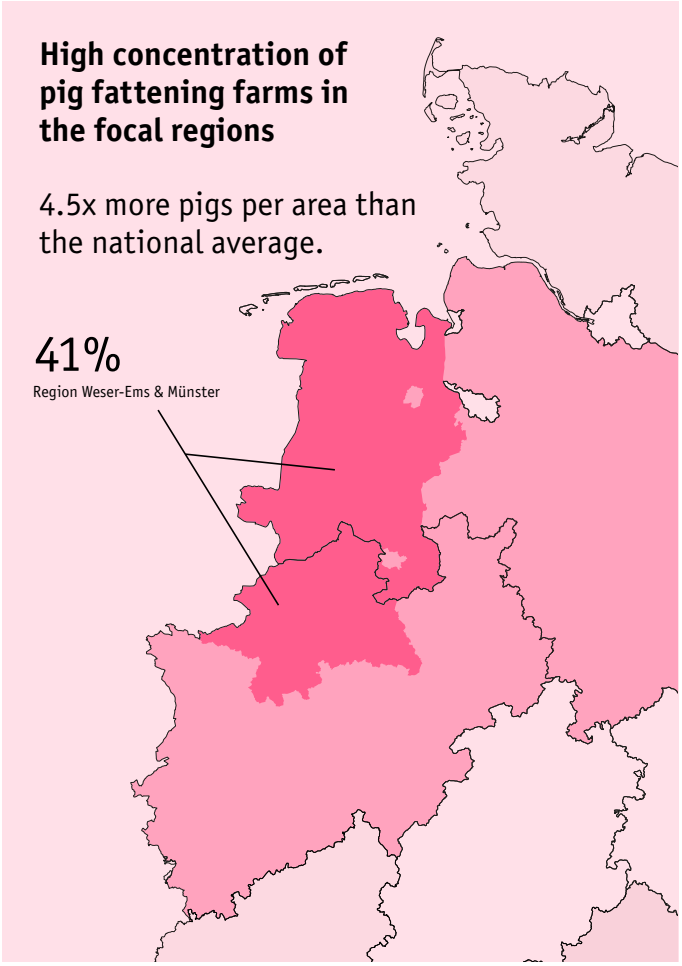


Figure 21 | Pig stock density in NRW and Lower Saxony in 2022. Source: ISN according to Destatis.

oilseeds such as rapeseed and sunflower meal.

In the EU, however, legumes (including soy) are grown on only about 3% of arable land. At the same time, the EU imports about 70% of its protein feed, mainly from Brazil, Argentina, and the United States.[177] This is despite the fact that legumes in particular possess a number of properties that have a positive effect on crop rotation and the agricultural ecosystem, among other aspects.

Fattening trials by the Chamber of Agriculture in Lower Saxony show that excellent results could be achieved with local protein feeds from fava beans. "The fava bean group achieved daily weight gains of 952 grams and a feed consumption of 2.53 kg per kg of weight gain, which is equal to the performance of the feed group using only extracted meal as protein components."[...] "By feeding fava beans, approximately 7.2 kg of soybean extraction meal and 7.8 kg of rapeseed extraction meal could be saved per fattening pig."[178]

Pig slaughtering dominated by a few large-scale slaughterers

The number of pigs slaughtered has decreased significantly in recent years. The Raiffeisen Annual Report 2022 assesses the situation as follows: "The declining livestock numbers have [...] a noticeable impact. A total of 4.5 million tons were produced, a decrease of 9.8 percent. The number of pigs slaughtered also dropped sharply by 9.2 percent or 4.8 million compared to the previous year, bringing the total to 4.7 million. The number of domestically sourced pigs slaughtered decreased by 9.5 percent to just under 45.8 million animals during the same period."[179] In contrast, nearly 60 million pigs were slaughtered in Germany in 2016.[180]

Even though all sectors of the industry are shrinking, the decline among the ten largest companies is smaller (8.2%) compared to the average decline (13.4%), indicating, too, a market concentration within the slaughtering industry. In 2022, the largest four companies had a market share of 68%.[181] Similar to livestock numbers, pig slaughtering figures also show a strong regionalization. Together, Lower Saxony (30.6%) and North Rhine-Westphalia (37.3%) accounted for around 68% of the total number of pigs slaughtered in Germany in 2022.[182]

Market concentration was further driven by Vion's near-complete withdrawal from the market, along with the closure or sale of most of its sites.[183] The Danish corporation Danish Crown, which had a market share of 6.4% in Germany in 2022, also announced the closure of a cutting plant and the reduction of slaughter volumes in Essen (Oldenburg) last year.[184] This leaves Tönnies and Westfleisch as by far the most significant slaughterhouses in Germany.

Focus on Tönnies

The Tönnies Group, headquartered in Rheda-Wiedenbrück, is the largest meat processing corporation in Germany and one of the world's largest companies in the meat industry. Founded in 1971, the company had approximately 19,640

employees[185] and a recorded turnover of €6.82 billion in 2022.[186]

In 2022, Tönnies slaughtered 14.79 million pigs. With a market share of 31.4%, Tönnies is the clear market leader in the pork sector.[187] Tönnies has four slaughtering sites: Rheda-Wiedenbrück (in North Rhine-Westphalia), Weißenfels (in Saxony-Anhalt), Sögel (in Lower Saxony), and Kellinghusen (in Schleswig-Holstein).

Merely the plants in Rheda-Wiedenbrück and Sögel are relevant for this report due to their location in the focus area. The Rheda-Wiedenbrück facility is the largest of Tönnies' operations. In 2019, the number of pigs slaughtered at the Rheda-Wiedenbrück site ranged from 20,000 to 25,000 per day between March and June. Its capacity limit is 30,000 animals per day.[188] About 80% of the pigs at the Rheda-Wiedenbrück site come from within a 100 km radius.[189] [190]

Focus on Westfleisch

Westfleisch is a cooperative slaughterhouse group based in Münster with around 4,900 members. Founded in 1928, it is the second-largest slaughterhouse group in Germany and one of the largest in Europe. In 2023, Westfleisch increased its turnover by 11% to €3.35 billion. Its **earnings before interest and taxes (EBIT)** rose by nearly 7% to €37.7 million.[191]

With 6.51 million slaughters in 2022, Westfleisch is the second-largest pig slaughterer in Germany, holding a market share of 14.8%.[192] According to its 2022 annual report, the sites for pig slaughtering and cutting are the "Westfleisch Fleischcenter Hamm", the "Westfleisch Fleischcenter Coesfeld" and "Westfleisch Erkenschwick GmbH"[193]. All facilities are located in North Rhine-Westphalia.

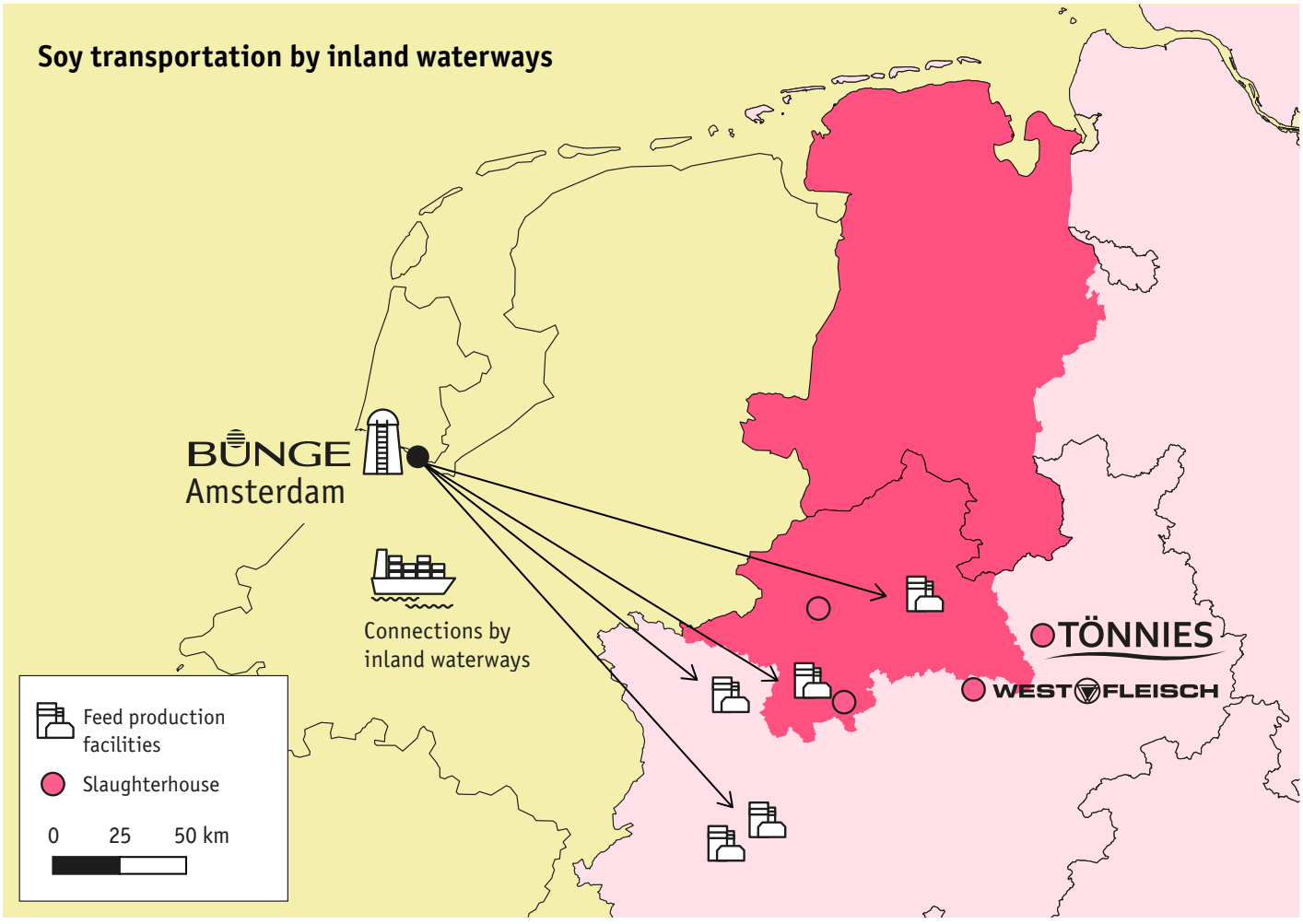


Figure 22 | The soys transport routes from the Bunge silo in Amsterdam to the harbors and feed producers in Germany. Source: Own research.

The Westfleisch Fleischcenter Hamm has a slaughtering capacity of approximately 1,440,000 pigs per year.[194] In Coesfeld, the slaughtering capacity is about 2,860,000 pigs annually,[195] while the Westfleisch Erkenschwick GmbH facility has a capacity of around 2,300,000 pigs per year.[196] According to Westfleisch, it had around 2,500 contracted farmers for the production of pigs in 2023.[197]

Unlike the poultry industry, where integrated supply chains are very common, the pork sector is still characterized by relatively independent actors. In the poultry sector, integration means that many steps, such as hatcheries, feed production, fattening, and slaughter, are closely connected or under the control of a single company. This development towards a more integrated supply chain is gradually changing in the pork sector as well. Large meat producers are increasingly tying the supplying pig fatteners to them through contracts. However, this is not yet the norm.

Case study from the poultry industry: Rothkötter's risk of human rights violations and environmental destruction

The Rothkötter Group is one of the largest companies in the meat industry and - after the PHW Group, which owns the Wiesenhof brand - has the highest turnover in Germany's poultry industry. The company employs over 4,500 staff members and owns, among other assets, three feed mills in Meppen, Haren, and Boizenburg, a hatchery in Dohren, and chicken slaughterhouses Emsland Frischgeflügel in Haren and Celler Land Frischgeflügel in Wietze. The distribution company Landgeflügel is responsible for the sales and logistics of chicken meat products.[198] This structure creates a highly integrated value chain that also extends to contracted fatteners for poultry fattening. In contrast to players in the pig production sector, Rothkötter therefore has great control over the use of its feed. As a result, the company was able to ensure the use of both non-genetically modified and certified deforestation-free soy feed relatively early on. Rothkötter often uses the ProTerra standard, which excludes both deforestation and the use of genetic engineering.[199] More and more retailers in Germany are demanding sustainable meat products of this kind, but according to discussions with various retailers and food service companies, the pig industry has so far been unable to provide them. Rothkötter supplies major retail chains in Germany, such as Lidl, Netto Marken-Discount, and ALDI Süd, as well as McDonald's.[200] According to the respective companies, the fresh poultry sold or used by them was fed exclusively with ProTerra soy. Ensuring the GMO-free status requires complete physical segregation of both the corresponding feed and the poultry.

Rothkötter continues to be supplied with soy by Bunge

However, Rothkötter does not exclusively use sustainably produced soy. As detailed in the June 2023 report by DUH and Mighty Earth, data from a maritime analysis provider revealed multiple shipments from Bunge's soy silo in Amsterdam to the Rothkötter silo at Europort Emsland in Haren between April 2022 and April 2023. These shipments have been occurring regularly since 2018.[201] [202] Further analysis for the period between May 2023 and April 2024 also recorded five movements of ships between Bunge's Amsterdam silo and Rothkötter's Haren silo. This suggests that Rothkötter is likely using Bunge soy from Brazil's Cerrado region, which may be linked to instances of legal or illegal deforestation, land rights conflicts, and human rights violations. As a result, significant doubts remain as to whether Rothkötter can reliably rule out human rights risks and therefore meet the requirements of the LkSG.

It is unclear to whom Rothkötter's chicken, fed with Bunge soy, is sold. It is possible that the poultry ends up in sectors with lower sustainability standards and less scrutiny from civil society, such as smaller retailers or foodservice companies. For years, Rothkötter has remained silent regarding the origin of its soy and how it eliminates associated risks. The company has repeatedly been contacted by DUH, for example through the Feed Radar initiative (Futtermittelradar) and the publication of the "Save the Cerrado" report (Rettet den Cerrado) in 2023, and has been questioned about its relationship with Bunge. Rothkötter's feed is sold in Germany, the Netherlands, and Denmark.

Rothkötter silo in Haren. Source: Knut Hildebrandt/Robin Wood.

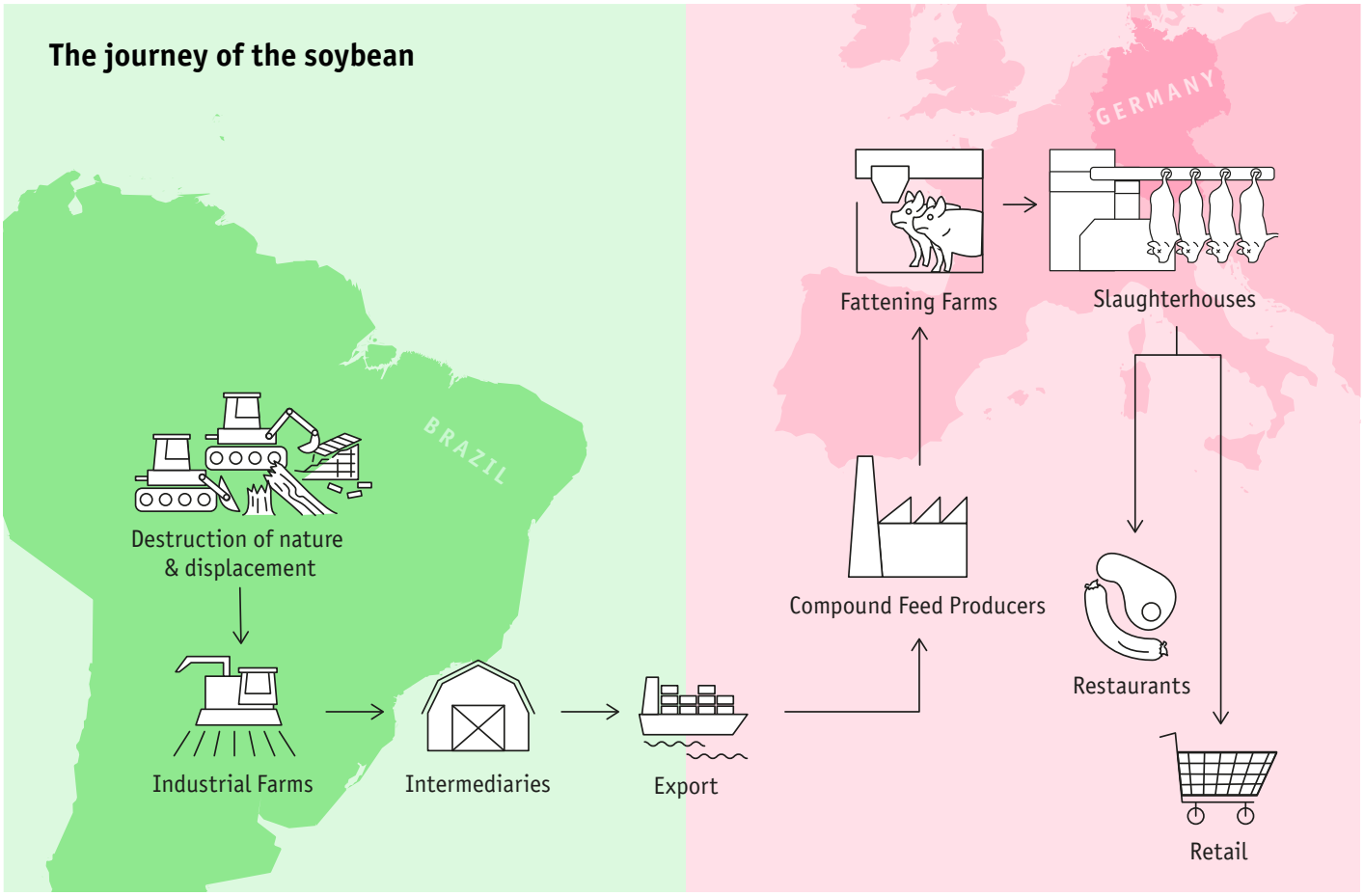


Figure 23 | The journey of the soybean from Brazil to Germany. Source: Own research.

Interim conclusion

Unfair pricing policies, declining sales figures and a strong focus on exports are putting the German pork sector under severe pressure. Pig fattening farms are often unable to cover their costs. There is a trend towards ever larger fattening facilities in order to compensate for low producer prices with larger quantities. Feed accounts for a large portion of operational costs, which creates significant pressure to cut expenses in this area.

Pork production is still heavily reliant on overseas soy. While rapeseed meal has gained importance as a protein component, it cannot fully replace soy. Domestic legumes such as fava beans and peas, or even soy from European, non-GMO sources, could play a larger role.

The multitude of actors makes the pork meat supply chains complex and opaque for the large pork producers. This also complicates due diligence obligations, for example with regard to risks relating to environmental destruction and human rights violations. For example, Germany's second-largest poultry producer, Rothkötter, can relatively easily demonstrate full sustainability certification for certain product lines by simply supplying its contracted farmers with specific feed and ensuring separation of the poultry in its slaughterhouses. However, this is far more difficult in the pork sector. Pork producers try to circumvent this problem by attempting to shift more and more sustainability requirements, such as deforestation-free standards, on to their supplying fattening farmers. The numerous pig fattening farms that supply Tönnies and Westfleisch all independently purchase their feed from various producers and frequently sell their pigs to different buyers.

VI. Overview of German and European supply chain laws

In response to the enormous negative impacts on human rights and global ecosystems caused by value chains of transnationally operating German and European companies, several legislative efforts to regulate supply chains have been initiated in the EU and Germany in recent years. For a long time, voluntary measures by companies were relied on to avoid such risks. However, these failed to achieve the desired results. In addition, pioneering companies that avoided risks more consistently than others faced disadvantages on the markets. Recurring reports of human rights violations and environmental destruction along the value chains increasingly led legislators to recognize that voluntary approaches are insufficient and that binding rules for human rights and environmental due diligence are therefore necessary.

In Germany, the Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz or LkSG) came into effect on January 1, 2023. The law requires companies to implement a system for human rights and certain environmental due diligence obligations for their supply chains.[203]

At the EU level, the EU Timber Regulation (EUTR), which came into force in 2013, was aimed at banning the import of illegal timber and timber products into the EU for the first time. It will be replaced by the new EU Regulation on Deforestation-Free Products (EUDR). This regulation bans the import of seven key raw materials, as well as many products derived from them, into the European Union if they are linked to deforestation, forest degradation, or violations of relevant legislation of the country of production.

In this chapter, we aim to provide an overview of the due diligence obligations and standards relevant to soy supply chains in the livestock industry.

1. The German Supply Chain Due Diligence Act:

The LkSG[204] requires companies to observe human rights due diligence and some environmental due diligence throughout their supply chains. The law also provides everyone (including affected rights holders) with the opportunity to file complaints with companies and the supervisory authority, the Federal Office for Economic Affairs and Export Control (BAFA).

Section 2 (2) of the LkSG[205] covers a range of different rights, which companies must consider. In the context of soy production in Brazil, some of these rights are more relevant than others. At this point, a simple assessment is provided elucidating which rights might be adversely affected by practices related to soy production.

Section 2 (2) No. 9 of the LkSG206 - Environmental impacts that affect access to the protected legal provisions

Soybean production is often associated with the use of pesticides, significant water consumption, and other practices which negatively affect access to protected legal provisions.[207] [208] Soil degradation can be caused by a number of factors, including deforestation, the use of pesticides, as well as lacking erosion protection in soybean cultivation. Water consumption for artificial irrigation may be considered excessive if it reaches the level where it prevents other users from having equal access to the resource. Additionally, the use of pesticides can compromise the water quality required for human use, or adversely affect human health.[209]

Section 2 (2) No. 10 of the LkSG - Unlawful expropriation

Number 10 refers to unlawful forced evictions and the prohibition of unlawful deprivation of land, forests, and waters whose use secures a person's livelihood. The cases of land grabbing we describe in Chapter 3 could constitute cases of such unlawful expropriation.

Personal scope - Which companies fall within the scope of the LkSG?

The LkSG applies to all companies that have headquarters or a branch in Germany, regardless of industry or legal form.[210] Since January 1, 2023, all companies with more than 3,000 employees fall within the scope of the LkSG. And as of January 1, 2024, the scope of the LkSG expanded to include companies with 1,000 or more employees. Under the LkSG, the supply chain includes all stages domestically and internationally that are necessary for the production of goods or the provision of services. It starts with the extraction of raw materials and ends with delivery to the end customer. This encompasses both the company's own business activities and those of its direct and indirect suppliers. The term ‚supply chain' is to be understood broadly.[211]

What types of due diligence obligations apply to soy value chains originating in Brazil?

Due diligence obligations apply primarily to the company's own operations and its immediate contractual partners (direct suppliers).[212] According to Section 9 (3) of the LkSG, indirect contractual partners are only to be included on an *ad hoc* basis if the company has actual indications that an indirect supplier has violated a human rights or environmental obligation (substantiated knowledge).

In our view, the due diligence standards for indirect suppliers must be applied to the companies covered in this report, as there are factual indications of human rights or environmental risks that activate the company's obligations.

Pesticides being sprayed on a soybean field in the Cerrado. Source: Thomas Bauer/ISPN.

2. European supply chain laws

In response to the immense threat to global ecosystems and biodiversity posed by European supply chains, the EU has initiated several legislative efforts to regulate European supply chains. The **EUDR** follows a product-specific approach with concrete market access restrictions. The **EU Supply Chain Due Diligence Directive (CSDDD)**, to which the German Supply Chain Act must be adapted to by summer 2026 at the latest, takes a cross-sectoral approach that imposes due diligence obligations on certain companies regardless of the product.

2.a EU Regulation on Deforestation-Free Products

The EU Regulation on Deforestation-Free products (EUDR)[213] was adopted in June 2023 and, according to the EU Commission, will now likely come into effect after a transitional period at the end of 2025. For the first time, it bans the import of seven key raw materials, as well as many products derived from them, into the European Union if they are linked to deforestation, forest degradation, or violations of relevant legislation of the country of production. Accordingly, companies that place cattle (beef, leather), cocoa, coffee, palm oil, rubber, soy, and wood on the market must prove that their products do not originate from deforested areas or areas with degraded forests that were cut down or degraded after December 31, 2020 - otherwise they could face fines, blacklisting, and other sanctions.

The EUDR is for the time being limited to forests as defined by the **Food and Agriculture Organization of the United Nations (FAO)** and to some particularly critical raw materials. The FAO definition excludes wooded savannas or bushland, and thus largely excludes areas such as the Brazilian Cerrado. However, a significant portion of environmental destruction related to European demand for soy feed is occurring precisely in these areas. Nonetheless, the EUDR does include various review processes to assess the expansion to other ecosystems. Moreover, it is important to note that the legality requirements of the EUDR apply to all regions of origin of the products. This means that even soy from the non-forest parts of the Cerrado must not violate national laws, for example with regard to deforestation, human rights or the environment, if it is to be sold on the EU market.

Personal scope - Which companies fall within the scope of the EUDR?

After a transitional period for small and micro-enterprises until the end of June 2026, the EUDR applies to all companies that place relevant products on the market or export them as part of a commercial activity. It will foreseeably apply to all other companies from December 31, 2025.

What types of due diligence obligations apply to soy value chains originating in Brazil?

Companies that place cattle, cocoa, coffee, palm oil, rubber, soy, and wood on the market or export them must register their goods in an EU information system and enter the corresponding areas of origin. This means that for each product, it must be clear from which area it originates. The goods are then assigned a reference number, which is passed along the supply chain. At the same time, companies must confirm that they have complied with the required due diligence obligations, meaning that they have taken appropriate measures to verify the origin of their products and comply with the applicable laws and regulations of the producer countries. Environmental destruction and violations of local laws can thus be clearly assigned to a supply chain and the related companies. This represents a milestone for transparent supply chains. Products linked to deforestation and EUDR-compliant goods may not be mixed. Segregated supply chains become mandatory if there is a risk of such mixing.

2.b EU Corporate Sustainability Due Diligence Directive

The CSDDD[214] came into force on July 25, 2024. It is often referred to as the ‚EU supply chain law'. The

aim of the directive is to ensure that companies minimize human rights and environmental risks and take countermeasures when negative impacts occur within their so-called ‚chain of activities' and in their own business operations. To this end, companies are required to implement due diligence processes to identify and address human rights and environmental risks.

With the entry into force of the CSDDD, EU member states have two years, namely until July 25, 2026, to transpose the directive into national law. In Germany, this will require an amendment to the LkSG, which came into force on January 1, 2023. In certain aspects, the EU supply chain law goes beyond the provisions of the German LkSG. In particular, the due diligence obligations under the CSDDD apply to the chain of activities, which, in addition to the supply chain also covered by the LkSG, includes parts of the downstream value chain.

In addition, member states must establish a civil liability provision in their national law for damages caused by a breach of the duty to take preventive or remedial measures. Furthermore, the catalog of protected rights, such as environmental protection, is expanded compared to the LkSG.[215]

The directive stipulates that companies must pay penalties based on turnover for infringements. The exact amount of the fine, as well as the responsible supervisory authority will be determined by the member states.

Personal scope - Which companies fall within the scope of the CSDDD?

The EU Supply Chain Act outlines various transitional periods for the scope of application. For instance, it must apply no later than five years after its entry into force (i.e., on July 26, 2029) for companies with more than 1,000 employees and more than €450 million in net revenue. No minimum turnover applies under the LkSG.

As a result, significantly fewer companies would be covered by the CSDDD compared to the LkSG. However, Article 1(2) of the CSDDD states that, under certain circumstances, an already achieved level of protection at the national level may not be lowered. According to a legal opinion by Prof. Dr. Mittag,[216] this 'non-regression clause' also applies to the scope of the law. Accordingly, the CSDDD would have to be implemented in Germany in such a way that it still applies to all companies that are currently covered by the LkSG.

What types of due diligence obligations apply to soy value chains originating in Brazil?

The due diligence obligations under the CSDDD relate to avoiding, preventing, or bringing to an end specific adverse human rights and environmental impacts. What constitutes a negative environmental impact is primarily defined in Part II of the CSDDD Annex (on provisions included in international environmental instruments).[217]

Part I of the Annex, in turn, refers to human rights provisions but also includes, as per points 15 and 16, references to environmental damages, such as pollution, land degradation, and deforestation, when these threaten or violate human rights.

As explained above, the environmental and human rights due diligence obligations formulated in the LkSG remain in force. Once transposed into national law, the expanded environmental due diligence obligations will also apply. The following obligations from international environmental agreements are particularly relevant for the soy supply chain:

- Protection of biodiversity based on the **Convention on Biological Diversity (CBD)**, the **Cartagena Protocol**, and the **Nagoya Protocol,**
- Protection of endangered species under the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),**
- Protection of natural heritage under the **Convention Concerning the Protection of the World Cultural and Natural Heritage,**
- Protection of wetlands under the **Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention).**[218]

Interim Conclusion:

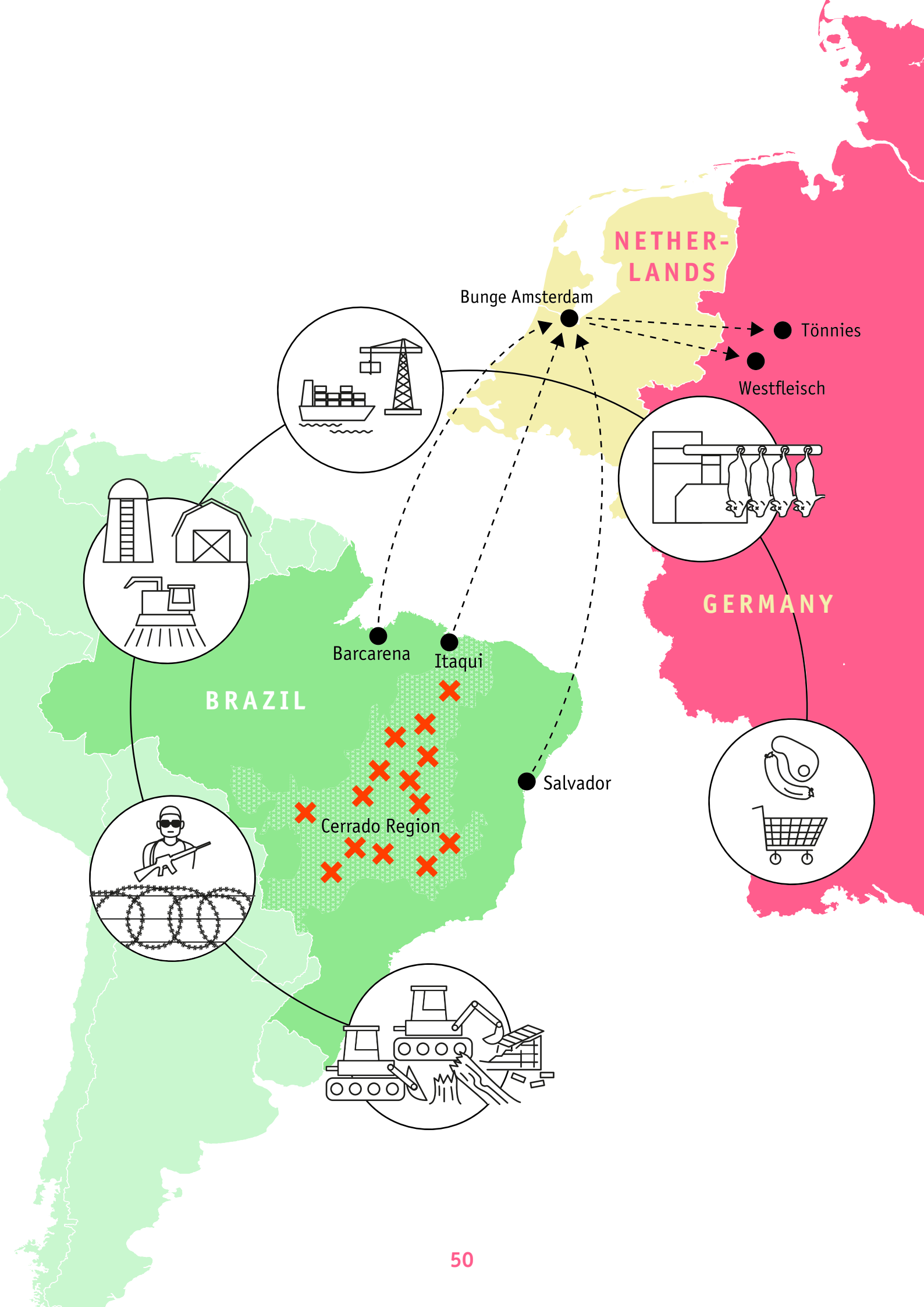
The German and European supply chain laws have a significant impact on companies in the German feed and meat production industries. The soy supply chains of the German animal production industry pose considerable risks of violations of human rights and environmental obligations to which companies must respond.

The German LkSG requires companies to take measures against human rights and environmental risks in their soy supply chains. These risks include excessive water consumption, the use of pesticides in soy cultivation, and land rights conflicts in Brazil. Even though Bunge is an indirect supplier, the actors in the German meat industry are, in our view, subject to the due diligence obligations of the LkSG in relation to Bunge, as there are factual indications that suggest possible violations of human rights or environmental obligations by Bunge. Consequently, the due diligence obligations of the LkSG are activated in relation to the indirect supplier as well.

Accordingly, companies like Tönnies and Westfleisch would need to actively review their soy supply chains for relevant risks and address any issues in a targeted manner.

In the future, the EUDR and the alignment of the LkSG with the CSDDD will impose additional obligations on companies.

Water Problems: Artificial irrigation of soy plantations in the Cerrado. Source: Fellipe Abreu/ISPN.


NETHER-
LANDS
Bunge Amsterdam
Tönnies
Westfleisch
GERMANY
Barcarena
Itaqui
BRAZIL
Salvador
Cerrado Region

VII. Conclusion

There are substantial indications that the German meat producers **Tönnies** and **Westfleisch** use soy feed from the agricultural trader **Bunge** - sourced from the Brazilian Cerrado - in their supply chains. This soy is possibly linked to cases of legal or illegal deforestation as well as land rights conflicts and human rights violations.

As various national and international efforts to protect the Amazon rainforest are ongoing, Brazilian soy production for export is increasingly shifting to the Cerrado, a species-rich forested savannah in eastern Brazil, which is one of the most important water sources for the Amazon basin. A large proportion of the soy destined for German livestock production now comes from this biome. Numerous studies cited in this report demonstrate that the expansion of industrial soy production in Brazil's Cerrado regularly goes hand in hand with negative impacts on local communities and ecosystems. In particular, the international agricultural trader Bunge is linked to environmental destruction for soy cultivation in the Cerrado, and possible human rights violations. Bunge accounts for around one quarter of all imports of Brazilian soy from the Cerrado to Germany.[219]

The cases presented in Chapter III illustrate these risks connected to Bunge. For instance, the case studies describe instances of land grabbing in connection with soy farms in the region known as "Matopiba", which spans four Brazilian states. These farms are said to have supplied Bunge directly (in four cases) and indirectly (in one case). Besides the legal and illegal deforestation, the cases also document how traditional communities are systematically threatened or displaced, and denied access to their traditional territories.

The slaughterhouses Tönnies and Westfleisch are therefore themselves at considerable risk of having human rights violations in their soy supply chains. This risk already exists in an abstract sense due to the generally high quantities of soy from the risk regions in the Cerrado that are feed used in German pig fattening farms. Moreover, the risk also exists specifically due to the clear indications that the pigs they slaughter were fed soy from the agricultural trader Bunge, which is sourced from the Cerrado. Hence, soy from the cases we described in Chapter III could be contained in their supply chains.

Through tracing ship movements from Brazil to the feed producers in Germany, market research, and interviews with third parties, this report shows the possible supply relationships leading all the way to the slaughterhouses of Tönnies and Westfleisch. Our research provides strong indications that soy from the high-risk regions in the Cerrado reaches the Brazilian export ports by land, from where it is transported on bulk carriers via the Bunge silo in the port of Amsterdam to the German feed producers Raiffeisen Wesel, AGRAVIS Münster, and AGRAVIS Dorsten in the pig production hotspots in the Oldenburger-Münsterland and Weser-Ems regions. Through the troughs of fattening farms in these hotspots the soy then reaches Westfleisch slaughterhouses in Coesfeld, Erkenschwick, and Hamm, as well as Tönnies' slaughterhouse in Rheda-Wiedenbrück.

Efforts by Tönnies and Westfleisch to minimize risks are insufficient

The current efforts by **Tönnies** and **Westfleisch** to minimize risks of human rights violations and environmental destruction in their soy supply chains are, from our point of view, inadequate.This is primarily because **physically segregated traceability** of soy down to the farm level is not yet being implemented universally. This means that even soy certified as sustainable can be mixed with soy that originates from areas linked to land grabbing and environmental destruction. In the following, we will review the efforts made so far by the meat and animal feed industry to eliminate risks in their supply chains.

Tönnies and Westfleisch have been addressing the risks of environmental destruction in their soy supply chains for several years. Westfleisch, for instance, is a member of the 'Forum für nachhaltigere Eiweißfuttermittel' (Forum for More Sustainable Protein Feed or FONEI). In their 2022/2023 progress report, Westfleisch pointed to the difficult market conditions: "Nevertheless, with a slight delay, the feeding of all animals produced in the QS scheme was switched to sustainably certified soy from January 1, 2024. Further synchronization with the requirements of the EUDR is in progress." "Our cooperative members primarily use homegrown feed and focus on domestic protein feeds in their feeding practices. In price-sensitive markets, regional sourcing of protein components is possible for regional programs - though it is not mandatory in other markets."[220] Westfleisch did not provide any information for the 2023 DUH Feed Radar survey.

In November 2021, Tönnies publicly committed to rely exclusively on the use of sustainable protein feed in the feeding of pigs in Germany from the end of 2022 onwards.The press release reads: "The complete renunciation of soy from rainforest areas and valuable savannahs in South America is our contribution to saving important ecological resources for the world and the climate."[221] The goal was that „German pigs delivered to Tönnies will be largely fed with local protein feeds, and any soy used will only come from certified components that are not sourced from deforested areas."[222] It is interesting that Tönnies has set itself the goal that the soy should not come from such areas, as this would require physical separation, meaning at least segregated supply chains, and thus exclude various certification systems.

However, Tönnies soon retracted its promise. In its 2023 update to the T30 agenda, the goal of using 100% protein feed from sustainable sources and the elimination of soy from tropical forests is not envisioned until 2030. It was also admitted that in 2023, only 78% of the soy used as feed was sustainably grown.[223] Therefore, the promise made in 2021 was not upheld.

Environmental destruction in the Cerrado due to slash-and-burn in preparation for industrial agriculture. Source: Thomas Bauer/ISPN.

Certifications: Not a universal remedy

To demonstrate the sustainability of their soy, **Tönnies** and **Westfleisch** primarily refer to the mandatory soy module QS Soy Plus of the **QS** inspection system, which has been in place since January 1, 2024. This scheme requires the exclusive use of **sustainable-certified** and **conversion-free soy** in feed of QS-certified meat. Conversion-free means that no natural ecosystem can be converted into agricultural land for the cultivation of a product. The soy module's criteria are based on the soy sourcing guidelines of the **European compound feed association FEFAC.**[224] These also include requirements for **responsible working conditions, good agricultural practices** and **legal land use.** The QS soy module website states, somewhat vaguely, that „in principle, the legal use of land must be clearly defined and verifiable. Land use conflicts in areas with traditional land users must be avoided."[225]

QS Soy Plus is an important step towards more sustainable and conversion-free soy in meat production. As it is mandatory for the regular QS seal, it covers nearly the entire fresh meat market. However, the system has significant shortcomings, such as its focus on certification models, some of which are very weak and do not adequately counteract the risks of human rights violations and environmental destruction.

For instance, mass balance, and in some cases the even weaker Book & Claim (B&C) supply chain models, are permitted for the obtaining of QS Soy Plus until the end of 2025.[226] "As an alternative to sourcing QS Soy Plus-compliant goods, a company can also purchase non-compliant goods according to Annex 4.2 and offset them by buying certificates (Book & Claim)."[227] B&C makes no demands on the origin of the goods. With the purchase of certificates, the company receives soy that is considered sustainable on paper, but in reality, could come entirely from recently deforested areas.

Even with mass balance, no physical segregation of compliant soy and non-compliant soy is required. "In mass balance, mixing of QS Soy Plus-compliant goods with other goods is possible. There are no requirements for the physical segregation of goods. The balancing system requires a balance between the amount of soy purchased and sold."[228] It is only from 2026 onward that segregation of QS-compliant soy will be mandated, as the transition periods for B&C and mass balance will expire. Those relying on mass balance cannot be certain that they are receiving soy exclusively from farms that meet sustainability requirements. Ultimately, only segregated supply chains can guarantee that the soy comes solely from farms that comply with the standards.

A particularly problematic aspect is that QS relies solely on certificates and has moved away from solely accepting gold standards - those that perform very well in benchmarking, such as Donau Soja, ProTerra, or Round Table on Responsible Soy (RTRS)[229] - and now practically accepts all corporate standards of major agribusinesses, such as ADM, Bunge, or Cargill.[230] These corporate standards generally perform worse in certification evaluations, particularly with regard to safeguarding standards.[231]

In an analysis by Profundo, the certification systems of Bunge, Cargill and ADM accepted by QS only achieved just over 60 percent and 68 percent respectively in the assessment of social and human rights criteria.[232] However, there is a particular need for improvement regarding the protection of land rights. Although all the certificates examined prohibit the illegal expropriation of land, the study also points to a lack of implementation and safeguarding of these standards. In this respect, it is questionable whether the systems accepted by QS can actually guarantee the human rights standards relevant to the LkSG and whether the companies' due diligence obligations are therefore automatically fulfilled.

In addition, it is problematic to purchase certified goods from agribusinesses like Bunge and Cargill, whose supply chains have a particularly high risk of environmental destruction and human rights violations. If a soy farm producing for Bunge violates human rights or clears forests, the production of soy according to high standards on other lands for the German market does not contribute to solving these problems. Positive change can only occur if the feed industry, for instance, exerts

pressure on Bunge to exclude all problematic farms from its supply chain.

The feed industry was also involved in negotiating the QS-soy module. For them, too, the module is the key instrument for meeting sustainability requirements and complying with legal regulations, such as the EUDR, which will apply to them from the end of 2025. However, it has become clear over time that the QS module by itself does not automatically ensure compliance with the EUDR. For good reason, the regulation is designed in such a way that certificates are not sufficient to meet the requirements; instead, companies that are not small and mid-sized enterprise must fulfill the due diligence obligations themselves and must therefore ensure segregated traceability down to the area of cultivation and provide corresponding proof that the goods are deforestation-free and legal. Also according to the LkSG, industry agreements such as QS and the corresponding certifications do not automatically release companies from their due diligence obligations.[233]

In a newsletter from December 2023 AGRAVIS stated: "AGRAVIS already sources demonstrably deforestation-free products and documents this seamlessly." At the same time, Christian Grütters, then VP of Sustainability & Services, admitted: "'In the coming years, we will simply not be able to source demonstrably segregated deforestation-free goods to meet the EU's demand."[234] "The approximately 30 million tons of soybean meal required by the EU cannot currently be completely segregated in its origins as beans or meal. On the one hand, domestic logistics to the major export ports result in mixing with non-certified goods at the origins and, on the other hand, the terminals are already reaching their limits without segregation. At the export ports at the latest, it is currently impossible to distinguish between certified and non-certified goods. Massive investment in concrete is needed in the ports and inland in order to meet the requirements. This will take years, and additional land must be cleared, silos and storage facilities built, and products transported over longer distances by truck to be consolidated in segregated storage facilities."[235]

Non-transparent soy supply chains jeopardize human rights

Soy supply chains in pork production remain largely non-transparent. Segregated traceability systems are not yet widely implemented. Most certification systems, which are now becoming mandatory for large parts of the meat industry through the QS soy module, do nothing to change this. Segregated traceability systems for soy required to comply with the EUDR are still being developed.

As a result, farmers and slaughterhouses often lack knowledge about the origin of their products and the conditions under which they were produced. In its replies to DUH and Mighty Earth, Tönnies often refers to the fact that it does not use soy directly. This shifts responsibility onto the pig farmers and feed producers, who, as discussed in Chapter V, are already under significant cost pressure and are often dependent on the market power of the slaughterhouses. The QS module was likely designed to resolve this conflict by establishing uniform standards across the industry.

However, the German LkSG obliges companies to take measures against human rights and environmental risks in their soy supply chains. These risks include excessive water consumption, the use of pesticides in soy cultivation, and land rights conflicts in Brazil. Even though Bunge is an indirect supplier of Tönnies and Westfleisch, we believe that the actors in the German meat industry are subject to LkSG due diligence obligations in relation to Bunge, as they have actual indications, which suggest Bunge may be in breach of its human rights and environmental obligations. This is because, over the past few years, DUH and Mighty Earth have repeatedly informed Tönnies, Westfleisch, and key players in the feed industry in writing about risks in their soy supply chains, including those relating to Bunge - most recently in the early summer of 2023. Accordingly, Tönnies and Westfleisch would have to fulfill the due diligence obligations under the LkSG with regard to their indirect supplier Bunge, follow up on the tip-offs, as well as to take appropriate measures.

In summary, our research provides strong indications that Tönnies and Westfleisch have soy from Bunge in their supply chains, which may be linked to human rights violations in Brazil's Cerrado. By focusing solely on certifications - some of which do not ensure physical segregation of soy, have weaknesses in the enforcement and safeguarding of standards and have shortcomings in social and human rights standards - meat companies are not adequately addressing the risks of human rights violations in their physical supply chains. There are therefore serious doubts as to whether they meet the requirements of the German LkSG.

“We are horrified witnessing how the industrial soy production for export, including to Europe, is expanding like an uncontrollable cancer in the Cerrado. Nature, biodiversity and people are being ruthlessly sacrificed for consumption of the Global North.“

Instituto Sociedade, População e Natureza, Brasilia.

Instituto Sociedade, População e Natureza (ISPN) is a Brazilian non-profit civil society organization. It advocates social justice and sustainable development by supporting traditional communities and family farms, and promoting strategies for adapting to climate change.

Foto: Fellipe Abreu/ISPN.

VIII. Demands

The risks and problems described above reveal there are necessary steps that should be implemented by stakeholders in various sectors, namely the business and politics ones. These should be aimed towards being able to safely exclude the risk of human rights violations and the destruction of the environment in the supply chains of German pork. These stakeholders should also actively use opportunities to influence important players such as agricultural traders in order to effectively improve the situation in the producing regions.

Demands for German meat processors and feed producers

Stop the deforestation and conversion of all natural ecosystems in one's own business and in the soy supply chains as defined by the AFi.[236]

Respect internationally recognized human rights, including the rights of Indigenous peoples, local communities, workers and others who may be affected by the company's activities. These should also be respected in regards to **property and the right to give (or withhold) free, prior and informed consent to land use change (FPIC).**

Adhere to cut-off dates with the latest cut-off date being no later than 2020 (taking into account established earlier cut-off dates, see AFi).
Rigorously implement segregated soy supply chains. Other models such as mass balance cannot comprehensively eliminate risks in the supply chains. Segregation offers transparency and traceability, and also guarantees compliance with environmental and social standards.

Certificates alone are not enough to consistently rule out risks of human rights violations and environmental destruction. Certificates play an important role, for example in the development of standards, transparency and information gathering. However, they cannot replace the implementation of independent due diligence obligations and interactions with the suppliers. Additionally, many certification systems have serious shortcomings, particularly with regard to separate traceability, the supply chain model and the independent assurance and guarantee of standards. Certain certificates from companies such as Bunge or Cargill, which generally have a high risk of human and environmental rights violations and only selectively enforce sustainability standards, should be excluded.

Consistently exclude problematic soy suppliers. Urge agricultural retailers like Bunge to consistently exclude suppliers that do not adhere to the established sustainability standards. Studies indicate that only relatively few farms in Brazil are associated with the environmental destruction and human rights violations.[237] These must be consistently excluded from the supply chain which consequently increases the pressure on unsustainable companies to change their practices.

Clearly demand agricultural traders such as Bunge to consistently exclude problematic farms from their supply chains. Otherwise, threaten them with concrete consequences.

Encourage the transformation of your suppliers. Support suppliers' sustainable practices. Build long-term partnerships with actors that comply with standards and act sustainably to ensure a future oriented and responsible supply of raw materials.

Implement advanced MRV systems. Use Monitoring, Reporting, Verification (MRV) systems for your soy supply chain. These systems are essential to increase transparency and ensure that supply chains are deforestation-free and human rights compliant. Use these tools to document progress towards the sustainability goals, submit regular reports and have independent audits carried out. This is the only way to guarantee sustainable production

and meet the requirements for responsible supply chains. These systems also increase the operational efficiency while minimizing the operational risks.

Industry solutions should not be based on certification systems alone. Push for the implementation of MRV systems in industry agreements.

Additional demands for meat processors

Rely on sustainable cooperation with suppliers. Do not simply pass on sustainability requirements to the supplying farms, but support the fattening farms in switching to more sustainable protein feed. If production costs rise in the course of implementing conversion-free supply chains, farmers must be given the right to pass on the rising production costs to the next link in the value chain.

Advocate for domestic feed. Support approaches that aim to use domestic and sustainably produced feed crops, especially legumes, to reduce dependence on imported feed and minimize environmental impacts.

Support alternative feeding concepts. Develop and encourage alternative feeding concepts that focus on sustainability and resource conservation in order to minimize the ecological footprint of meat production.

Additional demands for feed producers

Continuously increase the proportion of domestic/European sourced high-protein feed in the feed rations. By optimizing the feed ration (e.g. lowering the crude protein content), the proportion of soy in the feed ration can be reduced depending on the species. In addition, soy from overseas can be substituted in the feed ration by domestic/European sourced high-protein feed, in particular legumes such as peas, faba beans or lupins.[238]

Demands for supermarkets and the foodservice industry

Transparency and traceability. Demand full transparency and segregated traceability in the supply chains. This is the only way to comply with legal requirements and increase the sustainability of the soy value chain.

Exclusion of high-risk actors. Put pressure on suppliers of animal products to exclude high-risk suppliers such as Bunge from their supply chains until they can prove to have mitigated the risks. Support suppliers in this endeavor.

Develop a strategy towards a plant-based diet. Promote the sale of vegetarian alternatives and develop public and measurable targets for the promotion of vegetarian proteins and reduction of the amount of animal proteins sold.

Domestic feed. Increase demand for domestic alternatives such as legumes or sunflower seed meal to reduce soy imports from overseas.

Domestic soy. Promote the sourcing of sustainable soy from Europe and consequently strengthen the supply of soy from Germany and Europe through increased demand.

Demands for the German Federal Government

Strict enforcement of the LkSG. The Federal Government should strictly enforce the implementation of the LkSG, consistently review due diligence obligations, and follow up on information from third parties.

Strict national implementation and enforcement of the EUDR. The Federal Government should strictly implement the EUDR and ensure that the prescribed controls and sanctions are carried out consistently. The Federal Office for Agriculture and Food (BLE), which is responsible for implementing the EUDR, must be strengthened financially and in

terms of staff in order to effectively enforce the regulations.

Engagement in Brussels. The German government should consistently defend the EUDR in Brussels against further attempts to weaken and water it down following the recently announced postponement.

Widening of the EUDRs scope. The German government should advocate the extension of the regulation to other ecosystems, other wooded lands and the financial sector. Otherwise, the destruction of forests for the cultivation of soy (among others), threatens to shift to other important ecosystems. The financial sector must also act to prevent the financial backing of companies that are responsible for environmental and human rights violations.

Support for producing countries. The German government should work to support smallholders in the implementation of the EUDR and support producing countries in complying with its standards. This includes involving smallholders in discussions on traceability, costs and fair prices to ensure that their interests are safeguarded. In addition, the EU should provide technical, financial and legal support to enable smallholders to meet the requirements of the EUDR. National traceability systems should be promoted to facilitate access to sustainable supply chains. Lastly, direct market access for smallholders should be improved to strengthen their position within the sustainable supply chains.

Deforestation frontier in the Cerrado. Source: Victor Moriyama/RFN.

Endnotes

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