

Cash Cow

How beef giant JBS's links to Amazon deforestation and human rights abuses is aided by UK, EU and US financiers, importers and supermarkets

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Contents

- Executive Summary** 3
- Introduction** 5
- The Seronni ranchers and their environmental and human rights abuses** 7
 - The Seronnis’ Amazon damage 7
 - Modern slavery 7
 - The land-grab 9
 - The cattle-laundering 11
- The auditors, the financiers, the importers and the supermarkets** 14
 - The audits – flaws aplenty 14
 - The financiers - nothing ever changes 16
 - The importers 17
 - The supermarkets – one rule for you, another rule for me 18
- Conclusion** 20
- Recommendations** 21
- Endnotes** 23

This report contains some quotations from press articles, documents and sources that have been translated into English from Portuguese. These are clearly indicated in the references.

Various studies have shown the cattle sector to be the main driver of deforestation in the Brazilian Amazon. *Jonne Roriz/Bloomberg via Getty Images*

Executive Summary

As the United Nation's COP26 climate talks in Glasgow came to an end last November, the governments of 141 countries containing more than 3.6 billion hectares of forests added their names to a [statement](#) pledging to end and reverse deforestation by 2030. They all recognised the importance of forests in the global effort to limit temperature rises to 1.5 degrees celcius, including Brazil – despite [spiralling](#) deforestation under President Bolsonaro. Yet one statistic was conspicuous for its absence at the conference: last year's deforestation [rate](#) in the Brazilian Amazon. Anonymous Cabinet Ministers working for Bolsonaro reportedly told the Associated Press the government [withheld](#) this information to avoid hampering their negotiations. When the figure was later [released](#), it showed the worst rate of Amazon clearance since 2006, almost equivalent to the size of the sprawling metropolitan area of Tokyo, with [experts](#) blaming this on the President's [dismantling](#) of environmental safeguards.

Cattle ranching is at the centre of this destruction. [Analyses](#) have shown that beef is the [leading](#) driver of tropical deforestation, accounting for an area of land the size of [Sweden](#) - four times greater than palm oil, the second-most destructive commodity. In Brazil, [research](#) has shown 70% of the felled Amazon is now populated by cattle,¹ with Brazilian meat company JBS – reportedly the world's [largest](#) - the [top](#) buyer.² The beef giant was also at COP26, [signing](#) high level no deforestation commitments and claiming it has zero tolerance for it. It did not mention that, weeks earlier, an audit of its supply chain by Brazilian prosecutors in one Amazon state had caught it buying over one-third of its cattle from ranches responsible for illegal deforestation. This corroborated the findings of a previous Global Witness [report](#) which exposed how JBS had bought cattle from 327 ranches containing tens of thousands of football fields worth of illegal deforestation, contrary to its legal no deforestation obligations with the prosecutors.

This investigation now finds that in the wake of the above international pledges, JBS continued buying from 144 of the same ranches in the Amazon state of Pará that were exposed in our previous report, once again failing to comply with its legal agreements with the prosecutors. (JBS denied these claims.) It also failed to monitor an additional 470 ranches further up its supply chain, containing an estimated 40,000 football pitches of illegal Amazon clearance – also contrary to its obligations. In response, JBS said it had set up a new system that

was monitoring these suppliers and had established 15 sustainability offices across Brazil to help ranchers comply with environmental law.

Global Witness can also reveal that one of JBS's regular Pará suppliers, the wealthy Seronni cattle dynasty, presided over a decade-long saga of alleged human rights abuses, the use of slave labour, illegal deforestation, land grabs and cattle laundering – exemplifying how the beef giant contributes to many of the ills that currently plague the Amazon. When the allegations of slave labour were put to JBS last year it claimed to have blocked the ranchers. Yet Global Witness found it continued buying cattle from their farms through third parties, even after our warnings, repeatedly failing to implement its legal obligations. In response, JBS said the ranchers acted in bad faith and had deliberately circumvented its monitoring system. The company also said that it blocked the third parties as soon as it evaluated Global Witness's information. The Seronnis failed to reply despite multiple offers for comment. That such ranchers should persistently get around JBS's due diligence efforts – its products then sold across the world – is a sad indictment of the global cattle market.

Yet not only Brazil's government and beef companies are complicit in this destruction. Also implicated are one of the world's most prestigious leather manufacturers, Italian company Gruppo Mastrotto. It imported leather from JBS's problematic Pará slaughterhouses found by Global Witness and Brazilian prosecutors to have purchased hundreds of thousands of cattle from ranches containing illegal Amazon deforestation. The firm also has subsidiaries that source leather in Brazil, but was rated as having a 0% traceability record for the ranch of origin of its products, meaning it has no idea whether its leather is linked to deforestation. Despite this, it services car companies like Volkswagen, owner of Audi, Porsche, Bentley, Lamborghini, as well as Toyota and the furniture maker Ikea.

JBS also exported leather from its problematic Pará operations to a company it owns in Italy, Conceria Priante, in spite of its widespread lack of compliance with its legal no deforestation obligations. European consumers thus risk purchasing products linked to the egregious wrongs mentioned above. Mastrotto said it no longer buys from JBS, though it did not respond when questioned on whether it could identify the ranch of origin of the leather its Brazilian subsidiaries buy. Volkswagen and Toyota, meanwhile, both said their policies ensure the leather



JBS is reportedly one of the largest food companies on earth. Luke Sharrett/Bloomberg via Getty Images

they buy is not linked to environmental crime, but failed to respond on whether they found it acceptable one of their suppliers had been found wanting on tracing its leather. Ikea stated none of its Mastrotto leather came from JBS and that it requires its suppliers to identify the ranch of origin of its products.

Our new investigation also shows how British supermarkets like [Morrisons](#), [Sainsbury's](#), [Iceland](#) and [Asda](#) in February 2022 stocked JBS corned beef sourced from Brazil by a UK supplier,³ even as some of them publicly rejected buying directly from the company and as they all condemned President Bolsonaro's weakening of forest protections. Morrisons told us it would drop the JBS product found in its stores. Sainsbury's and Iceland both claimed they engage with suppliers to ensure they source their beef responsibly, while Asda simply failed to reply despite multiple requests for comment.

Moreover, global banks and asset managers such as Deutsche Bank, HSBC, Barclays, JPMorgan, Santander, and BlackRock have for years funnelled billions of dollars to JBS and continue to do so – while at the same time pledging to remove deforestation from their portfolios. When asked if the findings in this report affected their ongoing exposure to JBS, some variously claimed they were either engaging with the company to improve its performance, or requiring it remove deforestation from its supply chains faster. Others declined to comment or did not reply despite numerous requests.

All these financial actors are encouraged by the credit checking agencies S&P, Moody's and Fitch, that repeatedly give the beef giant favourable ratings, notwithstanding its links to Amazon destruction. In response, all three replied saying they only analyse whether JBS's environmental performance impacts its ability to repay its debts. The global financial sector is thus the fuel that powers harmful agribusiness. Regulating it is arguably the best chance to reduce its contribution to deforestation, given the well [reported](#) failures of their voluntary no deforestation initiatives.

Yet as governments in the UK, the EU and the US plan laws to ensure their companies do not import commodities linked to deforestation, they are currently leaving out the financial sector. At the same time, the UK is also considering only phasing in certain products linked to deforestation for its commodity legislation. This means beef and leather imports linked to forest clearance might be unregulated until at least 2027. These delays risk undermining the new laws. Global Witness calls for governments to ensure they are rapid and effective in tackling *all* the key agricultural commodities associated with deforestation, including cattle and its derived products, and introducing similar requirements for financial institutions. Only then can unwitting consumers and bank account holders know their supermarkets and banks are doing all they can to prevent deforestation linked to companies like JBS and ranchers like the Seronnis.

Introduction

The labourers were obliged to drink, bathe and clean their utensils using dirty water from stagnant pools filled with cow manure. At night they were forced to sleep with farmyard animals, with no running water or electricity. They were required to work for 17 hours a day, and not provided with toilets or clothing. They were given no protection against toxic chemicals used in the farm, nor any protective equipment when operating heavy machinery. Wages went unpaid and they were told they had unspecified debts to settle. When they complained, they were shot at and chased out of the ranch, all their belongings burnt. In short, they were treated as slave labourers.

Those were the conclusions made by Brazil's Ministry of Work during inspections carried out in 2006, 2018 and 2021 on two large ranches in the Amazon state of Pará belonging to Sergio Xavier Luis Seronni and his son, Sergio Seronni.⁴ Global Witness has unearthed evidence

of how these ranchers destroyed vast swathes of Amazon forest, involving land-grabbing and cattle laundering, while repeatedly sending cattle to JBS, the world's biggest beef company. The beef giant then exported leather from its Pará slaughterhouses to top-end Italian leather manufacturer Grupo Mastrotto,⁵ Global Witness has learned. This company supplies Volkswagen Group,⁶ owner of Audi, Porsche, Bentley, Lamborghini, Seat and Skoda. Toyota and⁷ Ikea were also among the clients.⁸ Some of Europe's biggest and most prestigious brands and their customers buy leather from an Italian company linked to Amazon deforestation and serious human rights abuses.

JBS's contribution to Amazon deforestation is well established. In 2020, our report *Beef, Banks and the Brazilian Amazon* revealed that between 2017 and 2019, JBS bought cattle from 327 ranches in Pará containing over 20,000 football fields-worth of illegal deforestation. This was contrary to its no deforestation legal agreements



Aerial images of cattle fields in São Félix do Xingu, Pará State, Brazil, 2019. © Fábio Nascimento / Greenpeace

with Federal prosecutors and voluntary pledges – though it denied the allegations.⁹ Global Witness also exposed how JBS failed to monitor an additional 3,270 Amazon ranches further up its supply chain between 2016 and 2019, containing 98,000 hectares of deforestation in Pará.¹⁰ As of September 2020, the company claimed it would extend its monitoring to such suppliers.

Repeating the analysis, Global Witness has now found that in 2020, JBS directly purchased from 144 of the *same* ranches, failing once again to fully comply with its legal obligations and despite its previous protestations of innocence. We can also disclose that for the same year, 470 of its so-called ‘indirect suppliers’ – who rear cattle sold on to fattening ranches then traded on to JBS – contained an estimated 34,000 hectares of illegal Amazon deforestation in their ranches. In total, around 1,600 indirect suppliers in Pará contained 48,000 hectares of deforestation on their ranches, legal or otherwise.¹¹ JBS’s legally-binding zero deforestation obligations¹² required it to start monitoring these farms as far back as 2011. The company announced in late 2020 it would only fully monitor them by 2025, failing to meet commitments it made over a decade before.¹³ These delayed commitments come at a time when Amazon deforestation reaches record highs under the Bolsonaro government’s dismantling of environmental protections.¹⁴

Yet the beef giant continues to be financed and serviced by Deutsche Bank, HSBC, Barclays, Santander, JP Morgan and BlackRock to the tune of hundreds of millions of dollars,¹⁵ in spite of its ongoing connection to deforestation, land-grabbing and human rights abuses.¹⁶

Last year, for example, Barclays facilitated a bond deal for JBS worth almost \$1 billion. The bank has continually done business with it over multiple years despite numerous Global Witness reports on the company.

JBS’s failure to block ranchers such as the Seronnis, and its continued backing by major UK, EU and US-based financiers and importers, shows that more rigorous due diligence on deforestation risk is required. It underlines the urgent need for governments to implement legislation to prohibit the use and funding of beef and leather fuelling deforestation.¹⁷ Scientists are warning the Amazon could reach a tipping point¹⁸ and become dry savannah if this destruction continues. Allowing banks and investment funds to carry on servicing or financing harmful agribusiness weakens the potential impact the new legislation could have on conserving this crucial ecosystem and the people who live in and rely on it.

Global Witness now focuses in on the particularly egregious case of the Seronni ranches and their use of slave labour, as well as their destruction of vast swathes of Amazon forest, which JBS profited from. Following the supply chain of leather from the beef giant’s slaughterhouses, the investigation shows how products from its problematic Pará slaughterhouses was exported to one of the largest leather manufacturers globally, which has commercial relationships with some of Europe’s most prestigious automobile brands and furniture sellers. We then take a step back to highlight the continued, systematic failings that allow JBS’s destructive business model to endure, fuelled by cheap finance from banks that talk a big game on the environment.

Deutsche Bank 

HSBC 

 BARCLAYS

J.P.Morgan

 Santander

BLACKROCK

The Seronni ranchers and their environmental and human rights abuses

The Seronnis' Amazon damage

Sergio Xavier Luis Seronni, kingpin of the Seronni dynasty, has a long and chequered history of illegal deforestation, human rights abuses and repeatedly treating labourers as slaves. This affords him a lavish lifestyle. He owns both a Cessna and a Piper aeroplane¹⁹ and 10 companies worth almost \$50 million.^{20,21} Satellite imagery reveals a large house with what appears to be a pool in one of their farms,²² surrounded by carefully laid out trees and gardens.

In 1999, Mr Seronni was the second-largest destroyer of Amazon forest on a [list](#) compiled by Brazil's environmental inspection agency Ibama.²³ He finances the election campaigns²⁴ of controversial cattle baron mayors²⁵ also fined for illegal deforestation²⁶ and the use of slave labour.²⁷

The Seronni family own numerous farms in the Amazon state of Pará.²⁸ Global Witness analysis now shows two of their biggest ranches contain a combined 2,700 football

fields-worth of illegal Amazon deforestation carried out between 1999 and 2018.²⁹

Brazilian government satellite data shows 552 hectares of forest was illegally cleared in 2008 in their Fazenda Terra Roxa ranch.³⁰ Between 2012 and 2015, another 30 football fields-worth of forest was illegally felled inside the same ranch.³¹ In 2018, a further 1,600 hectares³² of illegal deforestation - equivalent to an area almost the size of [Geneva](#) - was discovered on another farm by Brazil's forest inspection agency Ibama. For this, the farm was placed on Ibama's list of [embargoed ranches](#).³³

Despite this track record, Global Witness estimates that between 2014 and 2020 the Seronnis may have made anywhere between \$2 to \$7 million profit from its cattle sales to the beef giant JBS.³⁴

Modern slavery

The Seronnis' wealth was gained not only at the expense of the Amazon, but at a tragic cost to their labourers. This



Satellite imagery of the Seronnis' Fazenda Santa Maria Boca do Monte. Credit: Maxar Technologies



Image of some of the conditions of labourers in Fazenda Terra Roxa. From FOI requests to Brazil's Ministry of Work

investigation now reveals a recurring pattern of human rights abuses and use of slave labour carried out on their properties over many years.

In 2006, in the municipality of Cumarú do Norte in southern Pará, sixteen people were rescued from one of the Seronni's ranches, Fazenda Terra Roxa, where they were working under slave conditions. The oldest was 66.³⁵ The labourers worked 17-hour shifts with no rest, their rescuers found. They were given no shelter, no running water, were not paid and told they had unspecified debts. They cleaned their cooking gear in puddles filled with cow manure, while their makeshift slums had bin liners as walls and roofs.

The labourers were awarded compensation after an inspection carried out by Brazil's Ministry of Work, the findings of which have now been obtained by Global Witness under Freedom of Information legislation.³⁶ The inspectors judged Sergio Xavier Luis Seronni and his son Sergio Seronni responsible.³⁷

In 2010 a judge ruled Seronni had illegally stolen 25 cows from a farmer. The case was settled out of court six years later.³⁸ Another incident in 2012 saw a Seronni worker found dead in one of their ranches. A court witness statement seen by Global Witness alleged the labourer may have perished while cutting down a tree that then fell on him. He did not have protective equipment to help him do the job safely, the witness

said.³⁹ The Seronni family compensated the family of the labourer to settle the case.⁴⁰

The abuses continued. Further Global Witness Freedom of Information requests revealed in 2018, three labourers were **rescued** by Brazil's Ministry of Work from another Seronni ranch in Pará, Fazenda Santa Maria da Boca do Monte. One worker said he was forced to sleep with the farm animals. Another said labourers worked 15-hour shifts, were often not paid their salaries, landed with unspecified debts and handled toxic chemicals without protective equipment.

They too were compensated for having endured severe privations,⁴¹ while the inspectors once again blamed both Sergio Xavier Luis and Sergio Seronni.⁴² As of December 2020, the farm remained on the Ministry of Work's **list** of employers involved in slave labour, but only under the name of the son.⁴³

In January 2021, the Ministry of Work carried out another **inspection** in the Fazenda Terra Roxa ranch, finding the use of slave labour yet again. Investigative journalists at Reporter Brasil described how men from the Seronni ranch shot at the labourers and burnt their belongings after they complained about their treatment.⁴⁴

One of the workers told Reporter Brasil: "Look how we live, with the water we drink filled with cow s***."



Image of the barn where one of the workers allegedly slept with farm animals, taken by Ministry of Work inspectors. From FOI requests to Brazil's Ministry of Work

“Life has been difficult... it’s so surreal.”⁴⁵

‘A pervasive problem’

The case was taken to court by the Ministry of Work’s prosecutor, where a judge noted Brazilian law recommends the expropriation of the property in such cases.⁴⁶ The ranchers were fined almost \$260,000 for breaching labour laws.⁴⁷ In an interview with Reporter Brasil, the prosecutor said: “There is the intent to resolve this impunity, and that gives me hope the Seronnis will be held accountable.”

The case is ongoing as prosecutors seek to confiscate the ranch from the family. The Seronnis deny the allegations and have launched various appeals.⁴⁸

Since 1995, more than 17,000 labourers have been rescued nationwide by state inspections from working in ranches under conditions of slavery, according to Reporter Brasil. It speculates there may be many more cases, as inspections have been hit by budget cuts from the Bolsonaro government.⁴⁹

Global Witness can also now reveal new evidence of past and present land-grabbing by the Seronnis. JBS again failed to remove these ranches from its supply chain, once more contrary to its voluntary and legally binding no deforestation agreements.

The land-grab

Land-grabbing in Brazil is known as “grilagem” from the Portuguese *grilo* or cricket, referring to an old practice where land-grabbers would forge land titles and leave them in drawers or boxes with crickets. The insects’ nibbling and defecation would add the patina of age to the documents.⁵⁰ Today, the term is commonly used to describe the illegal occupation of public land.⁵¹ Ipam, a Brazilian NGO, claims land-grabbing has accounted for 2.6 million hectares of Amazon deforestation – an area larger than Turkey.⁵² Imazon, another NGO, reports that since 2017, the government’s revision of a land law has made it easier for this practice to become widespread, increasing Amazon deforestation.⁵³

So emboldened have land-grabbers become that a BBC investigation found they were openly selling illegal plots of Amazon forest on Facebook – including in indigenous and protected areas.⁵⁴ Last year, Global Witness reported how a toxic competition between land-grabbers in the indigenous area of Apyterewa in Pará had led to illegal deforestation, violence and the arrest of cattle ranchers suspected of murder.⁵⁵ This was likely inflamed by Bolsonaro’s rhetoric about not recognising indigenous peoples’ rights. Landgrabbers operating in Apyterewa claimed to Brazilian journalists that land prices on the black market tripled in value there after his election. JBS and rival beef company Marfrig – financed by banks such

as Santander, BNP Paribas and ING – purchased cattle from ranchers linked to the dispute.⁵⁶

New evidence uncovered by Global Witness on the Seronni case illustrates JBS's continued failure to monitor the problem of land-grabbing.

Sergio Xavier Seronni lays claim to the 13,555-hectare property Fazenda Aparecida in the municipality of Santana do Araguaia, Pará. Mr Seronni sent 7,239 cows from this property to two ranches owned by him and his son, Fazenda Boca do Monte and Fazenda Terra Roxa.⁵⁷ These ranches in turn delivered cattle to JBS both in 2020 and in 2021.⁵⁸ JBS should be monitoring all three ranches to ensure their compliance with its no deforestation and land-grabbing obligations with federal prosecutors.⁵⁹

In Pará, all rural property owners must register their land on an electronic database called the Cadastro Ambiental Rural (CAR),⁶⁰ which details a ranch's proprietor, boundaries and any forest cover.⁶¹ Owners⁶² face criminal or civil sanctions for any false or partial information they self-declare on the CAR.⁶³ Global Witness obtained the land titles of Sergio Xavier Seronni's properties held by municipal land registries.⁶⁴ These show that in 2010, a western part of the ranch Fazenda Aparecida claimed by the Seronnis on the CAR was confiscated from them after

a legal case ruled it was land-grabbed.⁶⁵ Yet that area on the CAR database is still declared by the Seronnis as belonging to them 12 years later. Global Witness showed this evidence to two Brazilian legal experts in land disputes, who both said it shows the Seronnis' claim to be the owners of the property on the CAR is fraudulent.⁶⁶ Moreover, Brazilian law prohibits the overlap of private properties onto state forests without a license. These can only be accessed by ranchers once they have had a use defined by the state, and then only through temporary concessions. Any forest clearance is prohibited.⁶⁷ Yet the western extension of the property on the CAR overlaps forest that belongs to Pará,⁶⁸ but has not yet been assigned a purpose.⁶⁹ Brazilian government satellite data also show 13 hectares of forest were illegally cleared in 2012 inside the land-grabbed area, two years after the court's confiscation for the land-grabbing.⁷⁰ The lawyers consulted by Global Witness advised this was illegal as well.

Global Witness also spotted what appear to be cattle grazing near a water source in the land-grabbed area on satellite imagery.

Environmental groups have warned for years that ranchers manipulate the CAR registry to fraudulently declare ownership over properties.⁷¹ They also claim new laws proposed by the Bolsonaro government – titled



What appear to be cattle grazing near a water source in an area of Fazenda Aparecida courts declared as land grabbed, which the Seronnis erroneously claim to own on the CAR. Credit: Maxar Technologies

510/2021 and 2.633/2020 – would legalise the actions of ranchers like the Seronnis by giving them land titles to state forests illegally occupied in this way.⁷² The proposed acts are referred to in Brazil as the “land-grabbing bills”.

The legal⁷³ and voluntary commitments⁷⁴ JBS made in 2009 also committed it to removing land-grabbing ranchers like the Seronnis from its supply chain. Yet the last two audits published by Federal prosecutors in Pará of JBS’s compliance with this promise did not monitor such cases.⁷⁵ Nor are there plans for any such checks to occur in future audits.⁷⁶ This means no one can know if JBS is fulfilling its legal agreements on this issue, nor is it being required to by the prosecutors overseeing their implementation.

But the ranchers also seemingly used trickery to ‘clean’ cattle produced on land grabbed and deforested land – then presenting them as legally-raised.

The cattle-laundering

The 898-hectare Fazenda Boca do Monte ranch is depicted as a square block of land on the environmental land registry of Pará – known as the Cadastro Ambiental Rural, the CAR. Some 85% is still forested, with 120 hectares clear-felled in the north-west corner.⁷⁷

This ranch received cattle from the aforementioned Fazenda Aparecida, part of which was determined by the courts to have been land grabbed. It then sold cattle

directly to JBS in 2020 and 2021.⁷⁸ By this process, cattle from tainted properties are laundered through seemingly “clean” ones into the beef giant’s supply chain. Yet in Fazenda Boca do Monte there are indications of cattle laundering that show the ranch is far from “clean”.

Tell-tale signs

Under guidance endorsed by Federal prosecutors in Pará and agreed to by JBS,⁷⁹ slaughterhouses are legally prohibited from purchasing cattle from ranches where the annual production exceeds an average of three cows per hectare. It stipulates this is currently the upper limit of animals that can feasibly be fattened on a plot of Amazon land, even with the best feed, soil and grass quality.⁸⁰ Production rates higher than that are a certain indicator of cattle being raised elsewhere. Yet Global Witness found that in 2020, Boca do Monte sent 1298 cows to JBS’s slaughterhouses in Pará⁸¹ from just 120 hectares of pasture - an average of almost 11 cows per hectare. For 2021, it received 828 cattle from the same ranch, an average of almost 7 cows per hectare and more than double the permitted amount.⁸² In addition, no cattle confinement infrastructure – identifiable by fences and rooves and used by farmers with high productivity rates to weigh cows and to provide them with extra feed - is visible in satellite imagery of the ranch.⁸³ The guidance stipulates beef companies should check whether such infrastructure exists when buying from a ranch producing more than three cows per



Image of Fazenda Boca do Monte from Brazil’s Environmental Rural Registry (Cadastro Ambiental Rural - CAR).



Satellite imagery of Fazenda Boca do Monte. Credit: Maxar Technologies

hectare.⁸⁴ Therefore JBS should not have purchased from the ranch according to its legal agreements.

Furthermore, a study of soil quality in the vicinity between 2018 and 2020 by the Brazilian University of Goias found over 14% of the pasture contained degraded soil, suggesting grass quality would be below that needed for such a high productivity rate.⁸⁵ Considering the total amount of cattle that left the ranch in 2020, and not only the amount sent to JBS, the productivity increases even higher to almost 14 cow heads per hectare.⁸⁶ All this makes it inconceivable the number of declared cattle were legally fattened on this ranch.

The Seronnis have thus engaged in the use of slave labour, illegal deforestation, land grabbing and cattle-laundering, in a pattern of civil lawbreaking and criminal behaviour spanning twenty years. Yet JBS failed to bar the ranchers from its supply chain, repeatedly sourcing cattle from the family since at least 2014, contrary to its legal no deforestation obligations.⁸⁷

These allegations were put to Sergio Luiz Xavier Seronni and his son, through their lawyer, but they did not reply despite repeated requests.

Changing places

When Global Witness put the allegations of slave labour to JBS in April 2021, the company said it blocked all the Seronnis' ranches, stating it "maintains a zero-tolerance

policy where hard or forced labour is confirmed". The company added that it had already blocked ranches registered to Sergio Seronni, who was on the Ministry of Work's slave labour list.

JBS said Sergio Seronni had used the tax code of his father, Sergio Luiz Xavier Seronni, and the company tax code of a firm owned by both Seronnis that was not on the slave labour list, to dodge its supplier monitoring system.

"When it became aware of this fact, JBS also blocked Sergio Luiz Xavier Seronni and his company, even though the respective [tax] numbers did not figure on the blacklist," a spokesperson said last spring.

Global Witness analysis of cattle transport permits confirmed the names and tax codes of father and son Seronni were no longer used to send cows to the company after that month. Yet then, other Seronni names began appearing more frequently on documentation of cows purchased by JBS. Between April and August 2021, Maria Aparecida Xavier Seronni, Sirlane Honorato Seronni and Gustavo Seronni appear on the paper trail. The trio sent a total of 426 cows to JBS from the very same father and son owned ranches involved in cattle laundering and slave labour the company claimed to have blocked, Fazendas Boca do Monte and Terra Roxa respectively.⁸⁸ One of the biggest beef companies on earth once again failed to stop buying from ranches that do not comply with its legal obligations, despite being warned.

When this was put to JBS, it said the Seronnis had “been using several family members to continue to sell to JBS”.

“In line with this new information, the company has blocked Sirlane Honorato Seronni, Gustavo Seronni and several other possible connections to them.

“Several CPFs [unique tax codes belonging to individuals] and farms have also been preventively blocked until we can confirm whether or not they are linked to Seronni’s family.”

The company added: “We do not condone this behaviour and have acted to preventatively block bad faith actors as soon as this new information was available.

“Unfortunately, this episode showed that even when there is a property and a producer able to supply in accordance with the terms of the protocols and policies already used by JBS and other companies in the sector, some suppliers may be deliberately circumventing JBS’s socio-environmental criteria and its monitoring system.”

Its statement continued: “In order to fully investigate this and other cases, JBS will establish a Supplier Audit Committee to verify the facts and guide the company’s decision.

“During the investigation, the producer will remain preventively blocked for new purchases and will have the opportunity to present its explanations.”

The Seronni case study illustrates JBS’s negligence in continuing to buy cattle from 144 ranches Global Witness found contained illegal Amazon deforestation. But these purchases are a drop in the ocean compared to the hundreds of ranches it is supposed to be monitoring further up its supply chain – the so-called indirect suppliers. A new Global Witness analysis reveals that in Pará alone, for 2020, 470 such farms contained an estimated 40,000 football pitches of illegal Amazon clearance. Once again, this breached the company’s legal agreement with prosecutors.⁸⁹

Worse, 1,600 of JBS’s indirect suppliers contained an estimated 57,000 football fields of deforestation, legal or otherwise.⁹⁰ JBS had committed to monitoring its Amazon-based indirect suppliers as far back as 2009, but has now said it will only fully do so by 2025 – and then only for illegal deforestation.⁹¹ Global Witness’s analysis is also limited to just one Amazon state of the many JBS operates in. No one knows just how many cases like those of the Seronnis are escaping its checks in other eco-systems like the Cerrado savannah, the Pantanal wetlands, the Caatinga shrublands and Brazil’s Atlantic forests.

JBS responded saying it recognised cattle purchases from 143 of the mentioned ranches. It added that 96 of these suppliers had requested to join a program implemented by the state of Pará to ensure they start complying with Brazil’s forest laws. The company continued to say a further 41 ranches had areas of deforestation smaller than 6.25 hectares and could thus be purchased from according to its commitments. It added that in six cases the forest clearance in those ranches was found in a deforestation data set by Brazil’s National Institute for Space Research it was not previously using to monitor compliance with its legal obligations.

On its indirect suppliers, the company said that in 2021 it had created a system to monitor its “suppliers’ suppliers, always respecting the confidentiality of data required by Brazilian law. Because of this, the implementation of this tool requires the engagement of producers, who need to voluntarily register their information,” JBS said. The company stated that by 2025, its entire supply chain will be on this platform, adding that an “essential part of this strategy is the implementation of 15 Green Offices, which aim to assist producers in critical farm-level environmental actions, so they can produce while preserving the biome. Any supplier not registered by this time will not be able to supply to JBS.”

Despite this litany of problems, global powerhouses of both food and finance continue doing business with JBS.

The auditors, the financiers, the importers and the supermarkets

The audits – flaws aplenty

As stated above, in December 2020, Global Witness revealed that between 2017 and 2019, JBS had bought cattle from 327 ranches that failed to comply with its no deforestation obligations. (It denied these allegations.) Since then, the prosecutors have carried out an official audit of JBS's cattle buying in Pará between 2018 and mid-2019, which was published in October last year. This found 43.69% of the company's audited purchases were not compliant with its legal obligations, though JBS contested 11.70% of these, arguing their purchases were justified. It was the worst performing of the audited companies for deforestation, confirming the findings of our previous report, and at a time when Amazon deforestation is at its highest since 2006.

As a result of these failures, JBS [agreed](#) with prosecutors to pay almost \$1 million to the state of Pará, to be spent on improving ranchers' compliance with Brazil's forest law. The new agreement obliged JBS to adopt more stringent controls, mirroring one of our [report's](#) recommendations. Prosecutors also announced an [investigation](#) into JBS's cattle purchases from one of the ranches featured in our exposé.

The prosecutors opened an investigation based on a complaint provided by an anonymous individual. That person [stated](#) as part of the complaint that JBS “invests a lot of money in marketing, to cover up the crimes it has carried out at any cost, respecting absolutely no authority, including the Federal Prosecutor's Office...”, adding that even after having signed an agreement with the most important enforcement authority in the country “the company continues promoting unfair competition, and worse, condones and feeds the harms caused by Amazon deforestation and stimulates the illegal commerce of animals.”

This devastating critique should be a major red flag for any company that backs JBS.

Global Witness also exposed that flawed audits of JBS's voluntary no deforestation pledges by Norwegian auditor DNV-GL between 2016 and 2019 masked the company's true exposure to Amazon clearance. JBS used these audits to flaunt its supposedly green credentials to its investors and backers⁹² – though it denied the allegation.

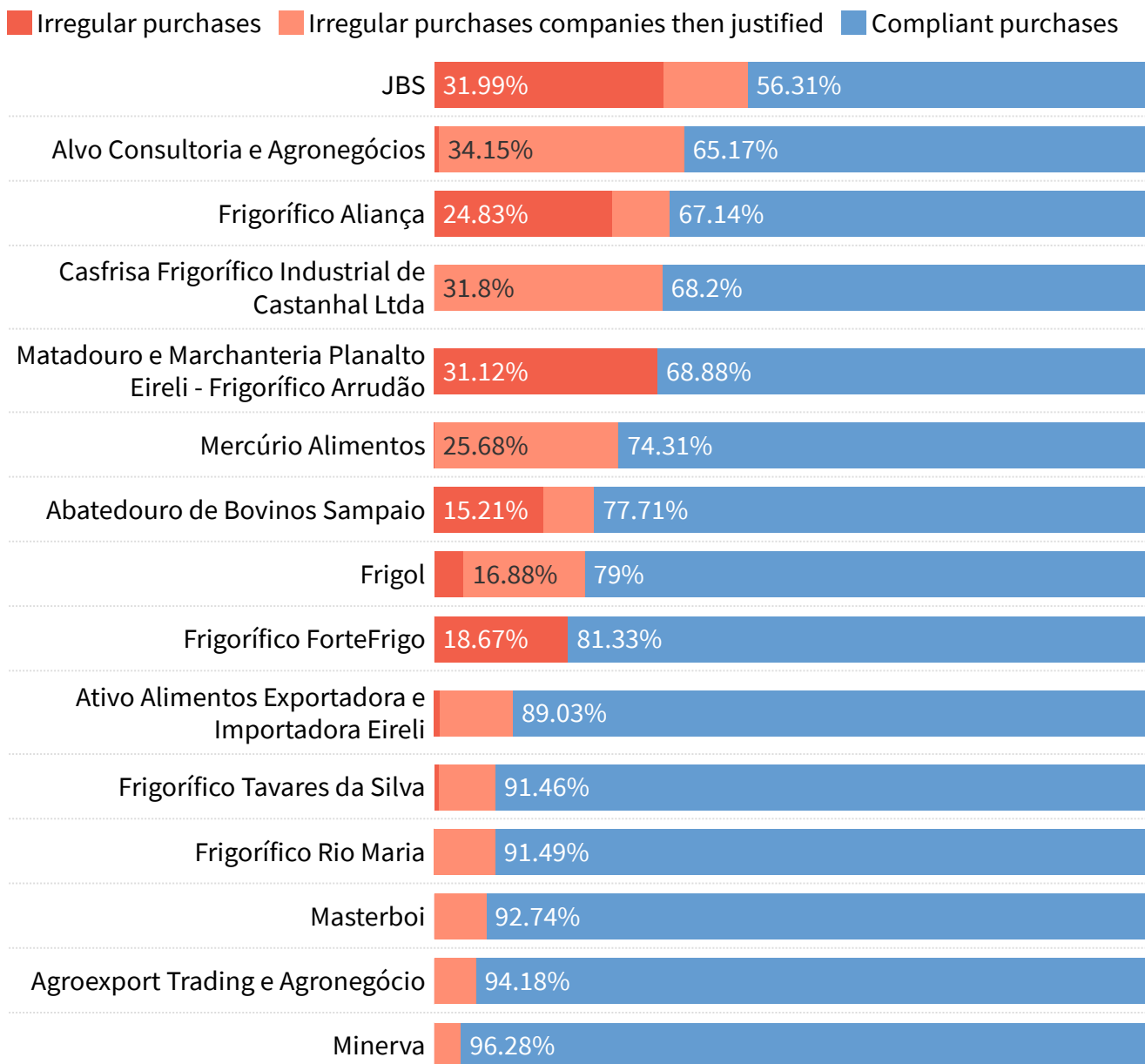
DNV said at the time that it stopped auditing JBS and claimed restrictions in the methodologies of the audits may have accounted for the discrepancies found by Global Witness.

Grant Thornton,⁹³ the giant US auditor also criticised in our previous report, then took over auditing JBS for its voluntary pledges. In August 2020, it published its results of auditing the company's compliance with its voluntary commitment for its 2019 cattle purchases, finding that of its direct suppliers “nothing has come to our attention that causes us to believe that the procedures adopted by the Company in the period from January 01 to December 31 were not compliant, in all material respects, with the criteria”.⁹⁴ This despite Global Witness's December 2020 report, *Beef, Banks and the Brazilian Amazon*, finding that at least 117 ranches JBS bought cattle from in Pará in 2019 contained over 4,600 football fields of deforestation. In response to these allegations, JBS insisted its purchases were compliant.

The beef company continues to rely on the use of a weak methodology for these audits. Grant Thornton noted in the 2019 audit that it only checked “a random sample, equivalent to 10% of the total [cattle] purchases” of each of JBS's Amazon slaughterhouses. This means non-compliant ranches can easily slip through the net. All audits of the company's voluntary agreement as far back as 2015 used the same sample percentage.⁹⁵ Grant Thornton has justified its sampling by citing auditing guidelines published by Brazil's Federal Accounting Council (CFC),⁹⁶ a government regulated body that oversees the implementation of accounting standards.⁹⁷ Yet the CFC's auditing standards indicate the dangers of sampling, and state that they should take into account risks of “distortions not being identified, when in reality, they exist”.⁹⁸ In 2020, Global Witness and other NGOs exposed many cases of non-compliance which escaped the audit's attention, likely because they were in the 90% of cases not assessed. This was widely reported by the media.⁹⁹ In spite of this, Grant Thornton did not increase its sample size in subsequent JBS audits. This was followed up last year by another audit for the 2020 calendar year, this time carried out by global auditing company Control Union. Again, the same inadequate sample was used and once more no issues were found on JBS's compliance with its voluntary no deforestation agreement.¹⁰⁰

Federal audit found 43.69% of JBS' cattle purchases in Pará "irregular"

The audit assessed whether the meatpackers' cattle purchases complied with the legal no deforestation agreements they had made with federal prosecutors.



The audit considers the time period spanning January 2018 to June 2019, and was carried out in 2020.

Source: Ministério Público Federal 2021 audit

Asked to respond, Grant Thornton said its report “shows in great detail the limitations we experienced in gathering the information necessary to reach a conclusion about JBS S.A.’s compliance, and our report is appropriately qualified as a result of those limitations”.

Despite questioning by Global Witness, the auditors did not address the issue of the inadequate sample size.

Control Union said all previous audits had used the same protocol which had been agreed on with Greenpeace, and that it does not “deviate from the contracted service”. Pressed on whether it should have increased its auditing sample in light of various exposés of JBS’s failures on deforestation, including by Greenpeace, it did not respond.

One might think all this was enough to put off responsible banks from doing business as usual with the company. Yet none of the above has dissuaded JBS's financial backers.

The financiers – nothing ever changes

“We prize sustainability, and are passionate about leaving things better than we found them.” (Barclays)¹⁰¹

“JBS USA Announces Successful Issuance of Sustainability-Linked Bond [using Barclays as an underwriter]” (GlobeNewswire)¹⁰²

JBS could not operate without the backing of international finance. In 2019, Global Witness [revealed](#) UK, EU and US based-financiers funnelled almost \$2.5 billion to JBS between 2013 and 2019. This was despite civil society and the media repeatedly exposing the company's links to deforestation.¹⁰³ These included Deutsche Bank, Santander, HSBC, Barclays, JP Morgan and BlackRock. Then, in 2020, Global Witness [revealed](#) JBS had failed to prevent cattle from ranches with over twenty thousand football fields worth of illegal Amazon deforestation entering its supply chains – allegations it denied. This was while receiving hundreds of millions of dollars from some of the same financiers, despite their having voluntary no deforestation policies.¹⁰⁴ In response, BlackRock claimed it had engaged with the company to seek improved compliance with its commitments. Barclays said it could not comment due to “confidentiality reasons”, while Santander said it had engaged with the company and if any illegality was verified it could demand its investments be repaid. Deutsche Bank claimed its investments were on behalf of others, but failed to respond to evidence of two loans it provided to an American subsidiary of JBS worth \$2.8 billion and which mature in 2022 and 2023 respectively.¹⁰⁵

Despite this series of excuses, Global Witness can disclose that between September and October of last year, investment companies controlled by Deutsche Bank, HSBC, Santander, BlackRock and JP Morgan *still* held shares worth over \$293 million in JBS.¹⁰⁶ Meanwhile Barclays facilitated a bond sale for an American subsidiary of the beef giant in March 2021 worth almost one billion dollars.¹⁰⁷ In October 2021, Global Witness revealed how Barclays bankrolled firms across the world linked to deforestation, to the tune of \$3.66 billion.¹⁰⁸ Once again, voluntary policies are consistently shown to be ineffective at affecting investor behaviour. And for three years now, the banks and asset managers backing JBS have told Global Witness one thing whilst doing quite another. Other lesser-known financiers of JBS appear

not to have any forest policies at all aimed at dealing with their exposure to deforestation. [Vanguard Group](#), [Fidelity Management](#) and [Dimensional Fund Advisors](#) for example, through investment companies registered in the US and the UK, hold a combined \$540 million worth of shares in the beef giant. This track record shows why only regulation in global financial centres like the UK, the EU and the US that would require their banks and investor companies to screen out deforestation will halt their complicity in the destruction of tropical rainforests.

Asked whether Global Witness's new allegations against JBS would affect its ongoing financial exposure to the company, HSBC said its asset management business held shares in the beef giant on behalf of others. The bank said it had no influence over the decision to invest in JBS. It added that in such cases, it engages with companies and investors to “raise any concerns” on issues like deforestation.

Barclays simply repeated its answer to Global Witness's previous JBS investigation, claiming it was committed to helping its “corporate clients achieve zero net deforestation”. JP Morgan declined to comment, as it has to previous Global Witness investigations. Santander, meanwhile, said it was working proactively with its beef processing clients to end deforestation, requiring them to have a “fully traceable supply chain that is deforestation-free by 2025 as a prerequisite for granting credit”. The bank said this was the “most ambitious lending standard of any bank in the region” and it can “demand the early repayment of financing in cases where illegality is verified”. Pressed on whether Santander felt JBS's lack of compliance with its no deforestation legal obligations was a verified illegality, it said it “could not comment on the actions of our clients to third parties”.

BlackRock referred to its voting record at JBS's annual shareholders meeting, where it objected to the company's poor oversight of risk management processes, including on its sustainability performance. Fidelity Management replied thanking Global Witness for the offer of comment, stating it was important to “understand different concerns and views and we appreciate your taking the time to share your thoughts about this matter”. When pushed for a more substantive response, it did not reply. BNP Paribas stated it updated its agriculture sector policy as of April 2021, and that it does “not finance clients that produce or purchase beef and soy from areas cleared or converted after 2008”. When told that, in October 2021, JBS was found by prosecutors to be doing precisely what BNP's updated policy claimed it would not finance, the bank remained silent. Vanguard Group, Dimensional Fund Advisors and Deutsche Bank made no comment, despite multiple requests.

Key UK, EU and US investors in JBS for 2021¹⁰⁹

Shareholders	Value of shares in USD
Fidelity Management	\$253,590,355
BlackRock Group	\$241,890,000
Vanguard Group	\$202,362,029
Dimensional Fund Advisors Group	\$84,940,000
Santander Group	\$36,750,000
Deutsche Bank Group (via majority share of DWS Group)	\$10,310,000
HSBC Group	\$3,590,000
BNP Paribas Group	\$2,222,095
JP Morgan	\$623,946

Source: Refinitiv Eikon

The importers

Grupo Mastrotto, headquartered in Italy, is a big global producer of leather for the upholstery, leather goods, footwear, clothing, aviation, boat and automotive sectors. It boasts an annual turnover of 400 million euros¹¹⁰ and **supplies** the Volkswagen Group, owner of Audi, Porsche, Bentley, Lamborghini, Skoda, Seat and Bugatti.¹¹¹ Some of Mastrotto's other reported customers include Toyota. IKEA has also been identified as a **regular**¹¹² Mastrotto **customer**.¹¹³ It also has subsidiaries in Brazil that source leather.¹¹⁴

The company is a member of the Leather Working Group (LWG), which claims its members implement environmental best practices throughout their supply chains.¹¹⁵ The LWG has maintained Mastrotto's 'Gold' rating for its environmental performance - despite criticism from an environmental group. Last year, the NGO Earthsight **revealed** leather from the Gran Chaco region in Paraguay¹¹⁶ potentially entered Mastrotto's supply chain. This is the **second largest forest** in South America,¹¹⁷ and deforestation is rife. Conversely, an LWG audit of the company's traceability procedures gave it a 0% rating, showing it could not ensure leather did not originate from the destruction of the Gran Chaco's

forests.¹¹⁸ When Earthsight asked Volkswagen whether it knew where Mastrotto's leather came from, it replied that it "just asks suppliers for written confirmation that leather doesn't come from the Amazon region".¹¹⁹

Global Witness can now reveal that in 2019, Mastrotto imported over 200,000 kilograms of wet blue bovine leather from JBS's tannery in the Amazon municipality of Marabá in Pará,¹²⁰ where its slaughterhouses were found by prosecutors to purchase hundreds of thousands of cattle from ranches with illegal deforestation. Throughout 2020, JBS also exported leather from these same slaughterhouses to an Italian company it owns, Conceria Priante.¹²¹ As stated above, the beef giant bought cattle from at least 327 ranches that had committed illegal deforestation in that state between 2017 and 2019, some of which were linked to serious human rights abuses.¹²² Cattle from further up JBS's supply chain, meanwhile, came from ranches containing 98,000 hectares of deforestation. Leather from any of those tainted cows could have ended up in Mastrotto's warehouses. Given that LWG claims Mastrotto has 0% traceability in its supply chains, the Italian company would have had no idea if its leather might have resulted from the destruction of the Amazon and associated crimes.

Replying to these allegations Mastrotto said JBS leather imports represented a "negligible quantity" of its yearly production, adding that "following that purchase, Gruppo Mastrotto Spa no longer bought hides from JBS". Asked whether its operations in Brazil could trace the leather it buys there back to a ranch of origin, it stated a new audit result from the LWG would be forthcoming, but did not comment on the previous audit results.

Global Witness asked Volkswagen Group, Toyota and Ikea whether they felt it acceptable to do business with a company that had a 0% traceability rating for the origin of its leather and that had sourced from problematic JBS slaughterhouses. Volkswagen said its "purchasing policy excludes the use of leather material from South America that is linked to illegal deforestation". Toyota said it expected suppliers to have "respect for human rights (including diversity) and due consideration for the environment". Ikea, meanwhile, said it "requires suppliers to offer traceability of leather to direct farms which goes beyond the Leather Working Group's (LWG) traceability requirements".

It seems some brands appear to require more than others about the origin of their leather.



Credit where it's not due

Credit Ratings Agencies are key actors in ensuring companies like JBS receive cash from financial institutions. Companies pay these agencies to evaluate their capacity to pay off their debts, and investors then use the ratings to assess whether to invest in a company. Yet analysts point out that environmental concerns are still not directly impacting ratings, even as agencies publicly tout their green credentials.¹²³ In 2020, Global Witness revealed three agencies that dominate the sector - S&P, Fitch and Moody's - failed to account for JBS's links to deforestation when upgrading its credit rating. This was despite Amazon deforestation reaching a twelve-year high and laws being developed limiting future markets for commodities linked to deforested land. Moody's said issues such as deforestation are only incorporated into a credit assessment if these affect the company's capacity to pay off its debt. Fitch said deforestation did have a significant impact on its credit assessment of JBS, while S&P did not reply to Global Witness at all.¹²⁴

Yet far from holding JBS to account for the multiple failings documented by Global Witness in 2020, in April last year Moody's upgraded JBS's credit rating once more, again failing to mention it driving deforestation.¹²⁵ The announcement referred to a methodology Moody's uses to assess how environmental factors might affect a rating. This states climate change may have a limited immediate impact on ratings as it develops "over very long-time frames".¹²⁶

The Inter-Governmental Panel for Climate Change (IPCC) has found 23% of all greenhouse gas emissions due to human activity between 2007 and 2016 came from agriculture, forestry and land use.¹²⁷ Yet the Moody's methodology makes no mention of any IPCC reports, nor of the Paris Climate Agreement's emissions reduction plan. This raises questions over what information it uses to assess how environmental issues impact JBS's financial rating.¹²⁸ In response, Moody's stated its

"research reflects that cattle sourcing in Brazil has links to deforestation and we have identified managing this issue as a key credit challenge for JBS".

Fitch recently upgraded the company's rating too. While Fitch mentions JBS's links to Amazon deforestation, it claimed this environmental risk was offset by the company's global scope, so that its credit score reflects its "strong business profile".¹²⁹ This appears to contradict its previous claim that environmental issues have a "significant impact on its rating".¹³⁰ When Global Witness put this to Fitch, it said: "Credit ratings are forward-looking opinions on the relative ability of an entity or obligation to meet financial commitments. They do not directly address any risk other than credit risk."

Fitch added that its analysis of a company's performance on environmental, social and governance issues (ESG) is "not a measure or indication of good or bad ESG practice by a company. They inform investors about the impact of ESG factors on credit and the rating determinations."

S&P also upgraded JBS's credit rating in October 2020 and reaffirmed it in August last year.¹³¹ In a comment piece published last April, part of which briefly mentioned JBS's no deforestation commitments, S&P stated "it remains unclear when and if attestations (JBS had originally pledged to monitor indirect suppliers by 2011) and technologies will halt the deforestation of the Amazon".¹³² This lack of clarity did not appear to impact the upgrade.

In response S&P said it incorporates ESG "credit factors into its credit rating analysis through the application of sector-specific criteria when we consider they are, or may be, relevant and material to our credit ratings".

All this encourages investors to funnel cheap cash to JBS, even as its suppliers tear down the Amazon.

The supermarkets – one rule for you, another rule for me

Mastrotto is just one of many importers and supermarkets that trade in JBS products. Trade data accessed by Global Witness shows that in 2020 alone, JBS exported beef products from Brazil worth almost 340 million euros to 160 companies located in Europe, some 30% of which went to the UK.¹³³ All of them are thus implicated in deforestation, and are buying a product linked to a

company consistently failing to remove land-grabbing, cattle laundering and human rights abuses from its supply chains. Legislation under development in the UK, EU and US, could make some of these products illegal in their respective markets. However, until the details are agreed and the laws take effect, the deforestation associated with their backing of JBS looks set to continue.

A swift investigation of the websites of UK supermarkets, such as [Morrisons](#), [Sainsbury's](#), [Iceland](#) and [Asda](#), for example, found in February 2022 all four offered cans

with corned beef from JBS's Brazilian operations.¹³⁴ Each of the cans bear the number code '385' from Brazil's [phytosanitary inspection service](#), which approve the export of the product. This code refers to a JBS subsidiary located in Andradina, Sao Paulo, Brazil. Responding to Global Witness's investigation in 2020, Morrisons told *The Times* it would no longer source its own brand of corned beef from JBS.¹³⁵ Yet Morrisons still offers these other corned beef products originating from JBS, such as the [Exeter](#) brand.¹³⁶

Morrisons said it does "not have a direct trade relationship with JBS".

"This branded product was bought as part of our world foods range and sold in a limited number of stores," the supermarket said. "Following the information provided by Global Witness we will discontinue this product."

Sainsbury's said it took "reports of this nature seriously", adding it was investigating the matter and that it was "committed to responsible sourcing". The supermarket also said it was "working together with the wider industry to tackle deforestation in both our supply chains and beyond so we can play our part in preserving the essential ecosystems in the Amazon and Cerrado".

A spokesperson for Sainsbury's said it had a "strong track record of engaging on this issue" and would "talk to manufacturers responsible for the branded products available to our customers about their sourcing".

Iceland admitted it sells "Exeter corned beef". It said the "allegations you have raised with respect to the overall operations within JBS and its supply chain will need to be addressed to and by JBS, we cannot address these matters on behalf of branded product manufacturers."

The frozen food specialist added: "Illegal deforestation is completely unacceptable, and we are actively collaborating through initiatives such as the UK Soy Manifesto to tackle deforestation.

"We expect Iceland product suppliers to uphold our standards, and actively manage the risks to ensure legality all the way through the supply chain."

Targeter UK, owner of the Exeter brand, and Asda did not reply, despite many requests for comment.



Conclusion

International financiers, importers, supermarkets, credit rating agencies and auditors continued to back the biggest beef company in the world despite myriad red flags – some of which are revealed in this report and by many others. Together they are setting in motion a chain of deforestation complicity reaching all the way down to corned beef in your local supermarket and European leather products.

Despite being called out repeatedly, JBS continues to source cattle from ranchers that have carried out Amazon deforestation. These failures contradict its own legal obligations and its high profile COP26 ‘shared [commitment](#) to halting forest loss associated with agricultural commodity production and trade’. Cattle laundering, land grabbing and slave labour also escape its checks – with ranchers like the Seronnis profiting from their crimes and barely held to account.

The company has given [itself](#) three more years to iron out problems with its Amazon suppliers - even though first it promised to deal with them over a decade ago. When it breaches its no deforestation agreements with federal prosecutors, this has little consequence for its bottom line. Meanwhile audits that monitor JBS’s compliance with its legal agreements have not set out how they will report on the meat company’s screening of land-grabbers, a major driver of deforestation, while the audits of its voluntary no deforestation pledge repeatedly use small samples that do not capture non-compliant cases.

Deforestation may worsen as the Bolsonaro government seeks to legalise land theft linked to vast swathes of Amazon clearance that would enable companies like JBS to keep buying from environmentally damaging ranchers like the Seronnis. It is a perfect storm, requiring more than voluntary due diligence proposals.

Global Witness has documented significant sums of financing from Western banks to companies like JBS in each of the last three years, continually undermining their own environmental policies. The UK government’s own taskforce, set up to advise on how it should ensure British companies are not linked to deforestation, concluded that financial institutions need to be regulated to stop the money pipeline linked to forest clearance embedded in the supply chains of companies such as JBS. Yet despite high-profile pledges at COP26 in Glasgow from world leaders to end and reverse deforestation by 2030, such laws are yet to be introduced in any financial hub.

Nor would JBS be engaged in these practices without a market for their tainted products. Leather importers such as Grupo Mastrotto fail to ask enough questions and do enough robust checks. UK supermarkets such as Asda continued to sell beef products originating from JBS, even as some of the supermarkets stop buying their own branded products from it and as they publicly condemn the Bolsonaro government for its failures on deforestation. Meanwhile, the destruction of the Amazon has hit a fifteen-year high.

Legislation in the EU and UK could put a squeeze on the market for commodities grown on deforested land and the issue is gaining traction in the US. This report – and well publicised data on the cattle sector’s global deforestation footprint – demonstrates how necessary this is.

Current due diligence efforts are falling short of what consumers would expect. Few people want products from companies that are failing to check on whether their products are linked to rainforest destruction and its associated human rights abuses. While we wait for the implementation of much-needed legislation, JBS, and its financiers and prestigious clients, must demonstrate that deforestation and ranchers like the Seronnis have no place in their business model.

Recommendations

Governments in countries whose businesses import or finance beef and derived products in Brazil should:

- > introduce legislation requiring businesses, including the financial sector, to identify, prevent, mitigate and report on deforestation risk and related human rights risks
- > ensure legislation and policies aiming to tackle the role of imported products driving deforestation globally address cattle and derived products, including leather and canned beef
- > ensure that trade negotiations and development finance with Brazil do not increase the pressure on Brazil's forests by promoting trade in cattle and derived products linked to deforestation

The financial actors, importers and supermarkets linked to JBS should:

- > suspend any services, financing or contracts with JBS, or products sourced from JBS, until it can be transparently shown the company is complying fully with its no deforestation agreements
- > ensure that where their services or relationship with JBS have caused, contributed to or are directly linked to deforestation and human rights abuses provide remedy and redress for affected communities and ecosystems
- > adopt a zero-tolerance policy for threats and attacks on environmental and human rights defenders
- > call for Brazilian state authorities to ensure that publicly available and independent data that tracks the lifecycle of cattle, such as cattle transport permits, are easily accessible

Credit rating agencies should:

- > suspend ratings services to JBS until it has addressed deforestation, land grabs, cattle laundering and human rights abuses across its entire supply chain

JBS should:

- > ensure full, accessible and publicly available data on its cattle purchases which would allow independent scrutiny, including by civil society, of its entire supply chain and any actions taken against non-compliant suppliers identified
- > voluntarily enter into agreements with federal prosecutors to monitor all its cattle purchases across Brazil, and carry out independent annual audits that are published in full and that monitor 100% of its cattle buying
- > proactively check for land grabbing and human rights abuse cases across its supply chain
- > require suppliers, at point of purchase, to provide full documentation that tracks the cattle's lifecycle and owner throughout the supply chain as well as proof of full compliance with Brazil's Forest Code
- > provide redress and remedy to communities affected by land grabs and land-related disputes in its supply chain, recognising that in sourcing from ranchers involved JBS has sided with one party in the dispute and provided a material incentive for the prolonging of the land conflict
- > immediately commit to a mandatory reporting policy, which requires staff to report to relevant authorities if they become aware of any suspected breach of Brazilian law or human rights abuses by their suppliers

Future auditors of JBS's voluntary no deforestation pledge should:

- > annually audit 100% of the beef company's cattle purchases
- > ensure the relevant information on all ranches found to be non-compliant is published
- > guarantee that company comments provided to auditors to clarify or justify purchases from non-compliant ranchers be published in full

- > drop the legislative package that would legalise indigenous rights violations and further land grabs
- > ensure that publicly available and independent data that tracks the lifecycle of cattle, such as cattle transport permits, are easily accessible
- > ensure each state has a due diligence system in place, such as 'Selo Verde', that enables meatpackers to immediately check on the compliance of their suppliers with Brazil's environmental law.

The Brazilian government should:

- > work to re-establish its credibility on deforestation and indigenous rights, given the escalation of deforestation and land rights violations in recent years and:
 - > reverse the de-funding of enforcement of the Forest Code by the current administration
 - > ensure that the rights of local communities, including of indigenous, afro-brazilian and landless communities, are strengthened, rather than weakened

Please see the methodology for our report [Beef, Banks and the Brazilian Amazon](#) to see how we came up with the number of ranches JBS purchased from contrary to its agreements and the illegal deforestation in them, as well as images of all the ranches in question.

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- 11 Global Witness methodology for how it estimated this can be found in Beef, Banks and the Brazilian Amazon, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6e84bd04-dc84-47eb-8729-7e3459916bbd>, and access to the results of our data source can be found here: <https://observablehq.com/@globalwitness/para-beef-deforestation>
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- 13 Beef, Banks and the Brazilian Amazon, December 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6e84bd04-dc84-47eb-8729-7e3459916bbd>
- 14 Mongabay, Brazil guts agencies, 'sabotaging environmental protection' in Amazon: Report, February 2021 <https://news.mongabay.com/2021/02/brazil-guts-agencies-sabotaging-environmental-protection-in-amazon-report/>
- 15 Refinitiv Eikon, JBS Shareholders report 2021, https://1drv.ms/x/s!AuSRli60yCbpgV7qU6bI3_IHg4u9
- 16 Global Witness, Beef, Banks and the Brazilian Amazon, December 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6e84bd04-dc84-47eb-8729-7e3459916bbd>
- 17 UK: <https://www.globalwitness.org/en/campaigns/forests/parliamentary-briefing-three-key-improvements-needed-uk-deforestation-law/>; EU: <https://www.globalwitness.org/en/blog/eu-needs-hold-financial-sector-account-if-it-end-its-complicity-global-deforestation/>; US: <https://eia-global.org/reports/20210303-tackling-global-deforestation-letter>;
- 18 Environmental Research Letters, Recent deforestation drove the spike in Amazonian fires, December 2020, Adrián Cardil1,2,3, Sergio de Migue1,2, Carlos A Silva4,5, Peter B Reich6,7, David Calkin8, Pedro H S Brancalion9, Alexander C Vibrans10, Javier G P Gamarra11, M Zhou12, Bryan C Pijanowski12; <https://iopscience.iop.org/article/10.1088/1748-9326/abcac7> AND <https://www.sciencedirect.com/science/article/pii/S2666049021000244> <https://iopscience.iop.org/article/10.1088/1748-9326/abcac7/pdf>
- 19 Base de dados do Registro Aeronáutico Brasileiro - RAB - Agosto - 2017, [base-internet-agosto-2017.xlsx](#)
- 20 CNPJ Services, Número de Empresa(s) que pertencem ou já pertenceram a Sergio Luiz Xavier Seronni, [Seronni owned companies and USD value.xlsx](#)
- 21 [Seronni onwed companies and USD value.xlsx](#)
- 22 Digital Globe, <https://services.digitalglobe.com/myDigitalGlobe/login> (Satellite imagery from Digital Globe for the ranch [Fazenda Santa Maria Boca do Monte](#) was obtained using the geographic coordinates in the linked document (LAT: -9.66457 : LON: -50.6959), which was downloaded from the Para state's official environmental and rural registry: <http://car.semas.pa.gov.br/#/consulta/mapa>. The ranch is registered under the ownership of MAXS ADMINISTRAÇÃO DE BENS LTDA, which, according to an inspection carried out by the Ministry of Work in said ranch, belongs to Sergio Luis Xavier Seronni and his son Sergio Seronni: <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:296db348-8f1c-4558-b08b-2f316600294d>. Additional evidence of the father and son as owners of the company can be found here: <https://www.vercnpj.com/nome/maxs-administracao-de-bens-ltda>. This is also confirmed by cattle transport data that Global Witness accessed, which shows that Sergio Seronni emits cattle transport permits from that ranch: <https://1drv.ms/x/s!AuSRli60yCbpgWeZ0MPLW00oi-j3>.
- 23 Evidence of the fact that the Mayor JOAO CLEBER DE SOUZA TORRES owned the ranch fined for slave labour can be found in the following sources: [Joao Cleber Farm owns.docx](#); and evidence that he owns the company Jurity that owns the farm here: <https://politica.estadao.com.br/eleicoes/2020/candidatos/pa/sao-felix-do-xingu/prefeito/joao-cleber,15> and [Globo, Multas ambientais podem ir a R\\$ milhoes, Seronni second largest deforester in the Amazon in 1999.PDF \(Shared\) - Adobe Document Cloud](#)
- 24 Tribunal Superior Eleitoral, <https://divulgaandcontas.tse.jus.br/divulga/#/> consulted in April 2021. Using Sergio Seronni's personal CPF number (unique tax code) 210.825.611-34, in the search engine reveals he donated 13 thousand Reais to the election of Mayor Joao Cleber de Souza Torres. The research on this is accessible in this document: <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:f93648bb-1e54-45ff-a203-7039ce6fadce>
- 25 Folha do Bico, Ex-prefeito João Cleber é preso, <https://www.folhadobico.com.br/sao-felix-ex-prefeito-joao-cleber-e-preso/> also found in the following document: [Controversial Cattle Baron Mayor.docx](#)
- 26 Ibama, Nome ou Razao Social, João Cleber De Souza Torres <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php> and fines downloaded from <https://dadosabertos.ibama.gov.br/dataset/fiscalizacao-auto-de-infracao> and placed in [cleber_multas.xlsx](#)

27 Ministério do Trabalho, Lista Suja de Trabalho, [Lista Suja Ministerio do Trabalho RB 2014.xlsx](#)

28 According to data we obtained from the environmental rural registry (CAR) of the Amazon state of Pará, ranchers Sergio Xavier Luis Seronni, (unique tax code CPF: 210.825.611-34) and his son, Sergio Seronni (unique tax code CPF: 016.209.211-38) claim to own numerous ranches in that state:

Name of ranch / Unique number on the CAR (numero de recibo):

Fazenda Santa Maria Da Boca Do Monte / PA-1506708-2A1D3B9E2E514F3FBAC A06413B3A511A* (9033)

Fazenda Aparecida / PA-1506708-27897B1F464F478FA0A5F009EC696F8F (13555)

Fazenda Boca de Monte / PA-1506708-6C116EE990CF4D598105138FA3409F5C (898)

Fazenda Terra Roxa / PA-1507300-30DEDD74F73448D685FE207D63C5515F (2.12)

Fazenda Terra Roxa / PA-15073005282BAE3A7424A5F88A2E706B3557E3B (5003)

Fazenda São José / PA-1507300-9E3FBFA21F544D2EBCC319C795BCFDCD (244)

*Note that Fazenda Santa Maria Boca do Monte is claimed to be owned on the CAR by MAXS ADMINISTRAÇÃO DE BENS LTDA (CNPJ: 10.248.520/0001-71), which, according to the Ministry of Work, is in part owned by Sergio Xavier Luis Seronni, who through the company rents the property to his son, Sergio Seronni

29 Fazenda Terra Roxa contained 578 hectares of illegal deforestation between August 2008 and 2015 – see methodology for our previous report, *Beef, Banks and the Brazilian Amazon*, for how we arrived at this figure and consult the following document for a summary: <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6df294cc-a6ab-4c1f-b2d6-bc32d7f9613b>; Fazenda Santa Maria da Boca do Monte was inspected by Ibama and had an area embargoed for illegal deforestation encompassing an area of 1695 hectares; Add together 578 ha + 1695, and multiply by 1.2 to arrive at the amount in football fields of illegal deforestation in these ranches owned by the Seronnis. We used the measurements based on the standards of the governing world body of soccer, known as the Federation Internationale de Football Association, or FIFA, where one hectare comprises between 1.2 and 1.6 “football pitches”, taken from: <https://www.reference.com/science/many-football-pitches-hectare-c79dcfb34def6acb>

30 Britannica, Monaco, Total area in square kilometres is 2.03 square kilometres, which converted into hectares is 203, britannica.com/place/Monaco; *Fazenda Terra Roxa*, whose owner is Sergio Seronni, contained 552 hectares of deforestation according to Brazilian government satellite data of 2008, (see methodology for our report *Beef, Banks and the Brazilian Amazon* to see how we arrived at this figure). 552/203 = 2.7. Therefore one on the Seronnis’ ranches contained deforestation “almost three times” the size of Monaco.

31 *Fazenda Terra Roxa*, whose owner is Sergio Seronni, contained 25 hectares of deforestation between 2012 and 2015, according to Brazilian government satellite data cross checked with official deforestation permit data, (see methodology for our report *Beef, Banks and the Brazilian Amazon* to see how we arrived at this figure), <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:8fd55387-5543-4929-a071-b23f2f748f91>

32 Ibama, Consulta de Autuações Ambientais e Embargos, <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php>, AND <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:6cb83664-c9dd-4144-aa3f-a0b3a781c0d4#pageNum=1>; Cadastro Ambiental Rural do Para (SICAR), <http://car.semas.pa.gov.br/>. To work out the area in hectares involved in Ibama’s embargo of Fazenda Santa Maria Boca do Monte, we downloaded the layer of the ranch from SICAR, overlaid that with the Ibama embargo layer, wherein can be seen the amount in meters squared of the embargoed area in the ranch, which was converted to hectares using google, arriving at the stated amount in the text. For documentary proof of this process please consult: <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:83b55ba6-abdc-4bc7-8f54-b7a7b8d1a6ba>

33 Ibama, Consulta de Autuações Ambientais e Embargos, <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php>, AND <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:6cb83664-c9dd-4144-aa3f-a0b3a781c0d4#pageNum=1>

34 IDESAM, A Cadeia Produtiva da Carne Bovina no Amazonas, October 2015 (Page 34 - Average profit per cow was estimated to be 212 Brazilian Reals) <http://www.idesam.org.br/publicacao/cadeia-produtiva-corte-amazonas.pdf>.

Average exchange rates between the US dollar (USD) and Brazilian Real (BRL) were taken for each year from 2014 to 2020, taken from <https://www.exchangerates.org.uk/USD-BRL-spot-exchange-rates-history-2014.html>, (2014: 2.3533 BRL to USD/2015: 3.3345 BRL/2016: 3.4867 BRL/2017: 3.1925 BRL/2018: 3.6535 BRL./ 2019: 3.9457 BRL./ 2020: 5.156 BRL.). Each average was then added up over the years and divided by 7 years, to reach an average exchange rate of 3.5 BRLs to USD over the period. Cattle transport permits were then consulted (GTAs) for all the Seronnis’ transport of cows to JBS between 2014 and 2020, arriving at a figure of 32,859 cows (<https://1drv.ms/x/s!AuSRli60yCbpgWV3atmslRR-8hgx>). This figure was then multiplied by the average profit per cow estimated by IDESAN (212 BRLs), arriving at 6,966,108 BRL. This was then converted to USD using the average exchange rate estimated above (3.5), arriving at an estimated 1,990,316 USD in profits over the period, which was rounded up to “almost 2 million USD”. We also looked at other studies that showed much higher profit margins per cow sold. For example one study done by the Federal University of Southern and Southeastern Pará claimed in a 2019 study that ranchers they studied reported profit margins per fattened cows sold to be between R\$646 and R\$818. If we use this figure the high end estimate and multiply it by the number of cows sold by the Seronnis to JBS and divide that by the average exchange rate we reach a high end estimate of 7,679,617 USD (See page 13 for low end and high end estimate): <https://www.aedb.br/seget/arquivos/artigos20/8530147.pdf>

35 Ministério do Trabalho e Emprego, Secretaria de Inspeção do Trabalho, Erradicação do Trabalho Escravo, Relatório de Fiscalização, Fazenda Terra Roxa, CUMARÚ DO NORTE / PA, Período: 31.05.2006 a 10.06.2006, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f0fed847-c702-40dc-a5f4-c94369152a2b>

36 Ministério do Trabalho e Emprego, Secretaria de Inspeção do Trabalho, Erradicação do Trabalho Escravo, Relatório de Fiscalização, Fazenda Terra Roxa, CUMARÚ DO NORTE / PA, Período: 31.05.2006 a 10.06.2006, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f0fed847-c702-40dc-a5f4-c94369152a2b>

37 Ministério do Trabalho e Emprego, Secretaria de Inspeção do Trabalho, Erradicação do Trabalho Escravo, Relatório de Fiscalização, Fazenda Terra Roxa, CUMARÚ DO NORTE / PA, Período: 31.05.2006 a 10.06.2006, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f0fed847-c702-40dc-a5f4-c94369152a2b>

38 Poder Judiciário Tribunal de Justiça do Estado do Pará Consulta de Processos do 1º Grau, <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:dd908515-67fb-40a4-b55e-fbde4fa0198a>

39 Poder Judiciário Federal, Justiça do Trabalho da 8ª Região, VARA DO TRABALHO DE REDENÇÃO; page 5, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6b2e6f4d-3530-46ed-8960-e92add611d69>

40 Poder Judiciário Federal, Justiça do Trabalho da 8ª Região, VARA DO TRABALHO DE REDENÇÃO; page 5, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:6b2e6f4d-3530-46ed-8960-e92add611d69>

41 Ministério do Trabalho e Emprego, Secretaria de Inspeção do Trabalho, Erradicação do Trabalho Escravo, Relatório de Fiscalização, 2018, Fazenda Santa Maria Boca do Monte, <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:b257d41c-a6c7-435f-9c8c-5112dabb125b>

42 Ministério do Trabalho e Emprego, Secretaria de Inspeção do Trabalho, Erradicação do Trabalho Escravo, Relatório de Fiscalização, 2018, Fazenda Santa Maria Boca do Monte, <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:b257d41c-a6c7-435f-9c8c-5112dabb125b>

43 Ministério do Trabalho, Inspecao do Trabalho, Cadastro de Empregadores que tenham submetido trabalhadores a condições análogas à de escravo, <https://documentcloud.adobe.com/link/track?uri=urn:aaid:scds:US:cb02e2af-bdaa-42e8-bb32-67f6a91590cb#pageNum=1>

44 Reporter Brasil, Escravizados denunciam condições desumanas e são expulsos a tiros no Pará, 2021, [Escravizados denunciam condições desumanas e são expulsos a tiros no Pará \(reporterbrasil.org.br\)](https://reporterbrasil.org.br)

45 Reporter Brasil, Escravizados denunciam condições desumanas e são expulsos a tiros no Pará, 2021, [Escravizados denunciam condições desumanas e são expulsos a tiros no Pará \(reporterbrasil.org.br\)](https://reporterbrasil.org.br)

46 Poder Judiciário, Justiça do Trabalho, Tribunal Regional do Trabalho da 8ª Região, Ação Civil Pública Cível, 0000044-74.2021.5.08.0118, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:b1c9ceb9-7fc0-40f3-bcfb-1feeda5df288>

- 47 An average exchange rate of 3.0492 was worked out by taking the average exchange rate in 2006 and in 2019, adding these up and dividing them by 2 to reach the stated amount, taken from https://en.wikipedia.org/wiki/Tables_of_historical_exchange_rates_to_the_United_States_dollar. The fines paid by the Seronnis' in Brazilian Reals were taken from [page 4 of the Ministry of Work's inspection](#) concerning the use of slave labour in the Seronnis' ranch for 2006 (BRL 80646 before tax), and from [page 5 of the 2018 inspection](#) (10690+40000+13324 = BRL 64014). The total fines obtained amounted to BRL 144660, which was then divided by the stated exchange rate of 3.0492, to reach an estimated USD 47,441. For the [2021 inspection](#), fines have not yet been paid – but the amount requested to be paid was 1.162.728 BRL, which we converted to USD on Google, reaching USD 210,326, which we added to the previous total, reaching the stated amount in the text.
- 48 Poder Judiciário, Justiça do Trabalho, Tribunal Regional do Trabalho da 8ª Região, Ação Civil Pública Cível, 0000044-74.2021.5.08.0118, (place the aforementioned number in the “Consulta Processual” on the following web page) Consulta Processual - TRT-8 (trt8.jus.br) <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:b1c9ceb9-7fc0-40f3-bcfb-1feeda5df288> AND also: <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:74601cef-7634-346c-a1b5-08eb2cd335ad>
- 49 Monitor, Reporter Brasil, Trabalho Escravo na indústria da carne, page 8, <https://reporterbrasil.org.br/wp-content/uploads/2020/12/Monitor-8-Trabalho-escravo-na-ind%C3%A9stria-da-carne.pdf>
- 50 Unearthed, As deforestation surges, Brazil moves to weaken indigenous and environmental safeguards, April 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:fafa2d32-36f8-4e7a-a13f-71c28db9451d> AND Vanderlei Lopes gives new meanings to symbolic Brazilian artworks in “Grilagem” - PIPA Prize
- 51 OECO, O que é grilagem e o que ela tem a ver com o desmatamento na Amazônia, August 2017, <https://www.oeco.org.br/salada-verde/o-que-e-grilagem-e-o-que-ela-tem-a-ver-com-o-desmatamento-na-amazonia/>
- 52 IPAM, Scientists map land-grabbing in public forests in the Brazilian Amazon, July 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:b1b6544a-3eab-44d5-b522-f27a46956af6>
- 53 (<https://amazon.org.br/publicacoes/stimulus-for-land-grabbing-and-deforestation-in-the-brazilian-amazon-2/>)
Deforestation Trajectories on a Development Frontier in the Brazilian Amazon: 35 Years of Settlement Colonization, Policy and Economic Shifts, and Land Accumulation, <https://link.springer.com/article/10.1007/s00267-020-01354-w>
- 54 BBC, Amazon rainforest plots sold via Facebook Marketplace ads, February 2021, <https://www.bbc.co.uk/news/technology-56168844>
- 55 Global Witness, Beef, Banks and the Brazilian Amazon, page 22, Marfrig, Landgrabbers and Indigenous Land, December 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f6fa39e1-2892-4d13-b866-41a0eba06d42>
- 56 Global Witness, Beef, Banks and the Brazilian Amazon, page 22, Marfrig, Landgrabbers and Indigenous Land, December 2020, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f6fa39e1-2892-4d13-b866-41a0eba06d42>
- 57 [Fazenda Aparecida sales JBS.xlsx](#)
- 58 Cattle transport permits accessed by Global Witness show Fazenda Aparecida sending cattle to Fazenda Boca do Monte between 2015 and 2018 and to Fazenda Terra Roxa in 2020: <https://1drv.ms/x/s!AuSRli60yCbpgW3CVHAVSj-hKEm>. Fazenda Boca do Monte then appears on cattle transport permits as sending cattle to JBS over the same period and beyond, to 2020 and 2021: [sergio_luiz_seronni_RB_17_03.xlsx](#). For more on how Global Witness obtained this data, please refer to the methodology described in our report, Beef, Banks and the Brazilian Amazon, published in December 2020: <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:f6fa39e1-2892-4d13-b866-41a0eba06d42>
- 59 Ministério Público Federal, Termo de Ajuste de Conduta, JBS, <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:cc2ee8e0-7350-4806-93a6-df516cdfcc1e>
- 60 Brazilian Forest Service, FAQ What is CAR, <http://www.florestal.gov.br/inventario-florestal-nacional/61-car/167-perguntas-frequentes-car>
- 61 Brazilian Forest Service, FAQ What is CAR, <http://www.florestal.gov.br/inventario-florestal-nacional/61-car/167-perguntas-frequentes-car>
- 62 Brazilian Forest Service, FAQ What is CAR, Who can register the CAR, <http://www.car.gov.br/#/suporte>
- 63 Decreto nº 7.830, de 17 de outubro de 2012, Seção II Do Cadastro Ambiental Rural, “Art. 6º A inscrição no CAR, obrigatória para todas as propriedades e posses rurais, tem natureza declaratória e permanente, e conterá informações sobre o imóvel rural, conforme o disposto no art. 21: § 1º As informações são de responsabilidade do declarante, que incorrerá em sanções penais e administrativas, sem prejuízo de outras previstas na legislação, quando total ou parcialmente falsas, enganosas ou omissas.” <http://www.siam.mg.gov.br/sla/download.pdf?idNorma=22096>
- 64 Lei de Registros Públicos, LEI Nº 6.015, DE 31 DE DEZEMBRO DE 1973, TÍTULO V
Do Registro de Imóveis, Article 19, § 11, says “In terms of registering properties, the entire certification of the property through the “matricula”, contains the reproduction of all its content, and is sufficient to prove ownership of the property”. Article 176, para 4, sub para I, “every property shall have its own “matricula”, which shall be opened by the first act of registration. CAPÍTULO VI, Da Matricula, L6.015compilada (planalto.gov.br)
- 65 Comarca de Santana de Araguaia, Cartorio de Registro de Imóveis, Matricula 2409 – the last post referring to the fact that the Matricula 2409 was cancelled due to fraudulent land grabbing, in accordance with the court’s announcement number 132/2010 CJCI, in compliance with its decision 002/2010 CJCI, in compliance with the decision reached by the National Justice Procurator Minister Gilson Dipa, according to the official document Number 001943-67.2009.2.00.0000. - <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:365108d1-cebc-47f0-8e41-edd4d74c8b2b>. To work out the location of the cancelled property, we used the coordinates of INCRA’s description of a [neighbouring parcel of land](#) to matricula 2409, and then used the description in the municipal land registry document for the same [matricula 2409](#). The following methodology explains in more detail how we were able to draw out the area of the property using these data points: <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:a45343a6-d4c4-45b4-9e92-a5a292b3c12a>
- 66 Cadastro Ambiental Rural, Para, <http://car.semas.pa.gov.br/#/consulta/mapa> (place in CPF 210.825.611-34 and find ranch number PA-1506708-27897B1F464F478FA0A5F009EC696F8F). Decreto nº 7.830, de 17 de outubro de 2012, Seção II Do Cadastro Ambiental Rural, “Art. 6º A inscrição no CAR, obrigatória para todas as propriedades e posses rurais, tem natureza declaratória e permanente, e conterá informações sobre o imóvel rural, conforme o disposto no art. 21: § 1º As informações são de responsabilidade do declarante, que incorrerá em sanções penais e administrativas, sem prejuízo de outras previstas na legislação, quando total ou parcialmente falsas, enganosas ou omissas.” <http://www.siam.mg.gov.br/sla/download.pdf?idNorma=22096>
- 67 Presidência da República, Casa Civil, Subchefia para Assuntos Jurídicos, LEI Nº 11.284, DE 2 DE MARÇO DE 2006, http://www.planalto.gov.br/ccivil_03/_Ato2004-2006/2006/Lei/L11284.html
- 68 Serviço Florestal Brasileiro, O Serviço Florestal Brasileiro (SFB) tem a missão de promover o conhecimento, o uso sustentável e a ampliação da cobertura florestal, tornando a agenda florestal estratégica para a economia do país, <https://www.florestal.gov.br/institucional>
- 69 Cadastro Nacional de Florestas Públicas - Atualização 2019, [Cadastro Nacional de Florestas Públicas - Atualização 2019 \(florestal.gov.br\)](http://www.florestal.gov.br) AND refer to Global Witness’s use of QGIS for this layer.
- 70 Global Witness downloaded the shapefile of Fazenda Aparecida from the Cadastro Ambiental Rural (CAR), and overlaid this with Brazil’s official National Space Institute deforestation satellite data ([INPE-PRODES](#)), showing a 13 hectare hotspot in the area of the ranch that court’s declared land grabbed (see relevant reference above for proof of landgrabbing), and we also overlaid this with data by [Brazil’s Forest Service \(SFB\)](#), which showed how INPE’s deforestation polygon overlapped into areas the <https://documentcloud.adobe.com/link/review?uri=urn:aaid:scds:US:4cca3dd6-ca82-4ca4-81a3-b7cfc94f82a>
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The total of both cattle transport permits to JBS from the ranch for the fiscal year of 2020 add up to 1,298 cattle, which we divided by the “Area consolidada” of the ranch as declared on the CAR (the area without forest and used for pasture and which the protocol stipulates as the area needed to be used to do the calculation,) equivalent to 120.29, to reach an average of almost 11 cow heads per hectare for 2020, which is almost triple the above amount stipulated in the official monitoring protocol of federal prosecutors.

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The total of both cattle transport permits to JBS from the ranch for the fiscal year of 2021 add up to 828 cattle, which we divided by the “Area consolidada” of the ranch as declared on the CAR (the area without forest and used for pasture and which the protocol stipulates as the area needed to be used to do the calculation,) equivalent to 120.29, to reach an average of almost 7 cow heads per hectare for 2021, which is more than double the above amount stipulated in the official monitoring protocol of federal prosecutors.

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The total of both cattle transport permits from the ranch for the fiscal year of 2020 add up to 1695 cattle, which we divided by the “Area consolidada” of the ranch as declared on the CAR (the area without forest and used for pasture and which the protocol stipulates as the area needed to be used to do the calculation,) equivalent to 120.29, to reach an average of 14 cow heads per hectare for 2020, which is way over the above amount stipulated in the official monitoring protocol of federal prosecutors.

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