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ABOUT EIA

We investigate and campaign against environmental crime and abuse. Our undercover investigations expose transnational wildlife crime, with a focus on elephants and tigers, and forest crimes such as illegal logging and deforestation for cash crops like palm oil. We work to safeguard global marine ecosystems by addressing the threats posed by plastic pollution, bycatch and commercial exploitation of whales, dolphins and porpoises. Finally, we reduce the impact of climate change by campaigning to eliminate powerful refrigerant greenhouse gases, exposing related illicit trade and improving energy efficiency in the cooling sector.

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Unless otherwise noted, the sources for the report are EIA's internal investigative reports, photos, audio and video evidence collected during the investigation.

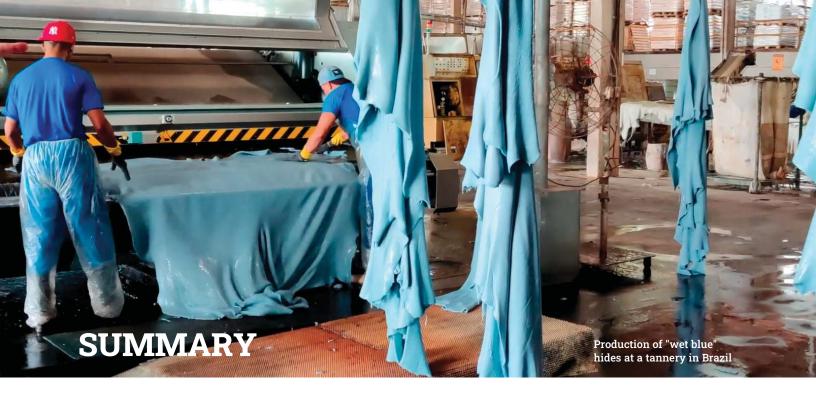
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KEY FINDINGS

- EIA's investigation details how hides from cattle raised on illegally deforested land in the Brazilian Amazon enter the supply chains of three of the country's largest leather companies, which supply global manufacturers of leather products ranging from car seats to sofas to handbags.
- The investigation used cattle transport permits to trace thousands of cattle raised illegally inside one of the most heavily deforested protected areas in the Brazilian Amazon, the Jaci-Paraná Extractive Reserve, and on a number of farms outside the protected area where ranching is occurring in areas embargoed for illegal deforestation, into the supply chains of major slaughterhouses in the state of Rondônia operated by JBS, Marfrig, Minerva, Irmãos Gonçalves and Distriboi.
- The analysis and cases presented in this report are indicative of the systemic illegal deforestation and invasions of protected areas and Indigenous Territories occurring across Rondônia and illustrate the high level of risk associated with beef and leather sourced from the state
- The vast majority of hides produced by Rondônia's slaughterhouses are processed at three large tanneries in the state, two operated by JBS, Brazil's largest exporter of beef and hides, and one the Bluamerica tannery operated jointly by leather companies Vancouros and Viposa. These tanneries represent significant risk of illegal deforestation in the companies' overall leather supply chains: their combined processing capacity of around 10,000 raw hides per day accounts for a significant proportion of each company's total production capacity in Brazil. Company representatives told EIA investigators that hides from Rondônia and elsewhere in the Amazon are commonly used in the manufacture of leather car seats.
- Brazil exported US\$1.4 billion in hides in 2021, with China, the EU and the U.S. the biggest destinations. The global automotive industry is one of the largest end users of hides from Brazil, accounting for roughly a third of the country's total production. Lear Corporation ("Lear"), the world's leading leather car seat maker, sources 70% of its hides from Brazil, where JBS and Vancouros are its largest suppliers. Roughly one in five leather car seats globally are made by Lear using leather sourced from Brazil, based on the company's own claims.
- EIA found that the Bluamerica tannery sources cattle from meat companies that directly purchased cattle raised illegally inside the Jaci-Paraná protected area, contradicting Lear's claim that "100%" of its suppliers use geo-referencing to ensure their direct suppliers do not source from protected areas. Thousands of additional cattle grazed inside Jaci-Paraná entered the supply chains of JBS, Vancouros and Viposa after being

- transferred to intermediary farms outside the protected area, showing the inadequacy of meat company monitoring policies limited to the farms directly supplying slaughterhouses.
- By sourcing from Lear Corporation and other car seat makers supplied by JBS, Vancouros, and Viposa using leather from Brazil, major automakers are selling products that have a significant risk of contributing to illegal deforestation in the Amazon. Lear Corporation names GM, Ford, Volkswagen, Stellantis, and Daimler as the top customers for its seats and also claims significant market share for luxury or performance brands produced by automakers such as Land Rover and BMW. While automakers are typically not transparent about their leather suppliers, in interviews with EIA investigators, a senior Vancouros employee named the Range Rover Evoque and Ford F-Series trucks as examples of models using leather from Vancouros, and a senior JBS employee said the company supplied the BMW 3, 4 and 5 Series, Ford F-Series trucks and Ram trucks, among others.
- The failure to enforce environmental laws and weak government oversight allow cattle raised on illegally deforested land to be laundered into supply chains through intermediaries, easily evading corporate supply chain monitoring systems limited to direct suppliers. This often involves the abuse of cattle transport permits (GTAs) and rural property registrations (CARs). These systems are intended to strengthen transparency, traceability and legal compliance, but lax government oversight of the self-declared information provided by ranchers and cattle traders leaves them open to fraud and manipulation.
- The case studies presented in this report show how ranchers and intermediaries can use GTAs and CARs to quickly adjust the paper trail of their cattle once a laundering scheme is exposed and continue to elude efforts by meat companies to exclude cattle raised on farms with illegal deforestation from their supply chains. EIA concludes that the current monitoring systems of Brazil's meat and leather companies are inadequate to exclude cattle raised on illegally deforested land from their supply chains, and recently proposed improvements are likely to be inadequate to address the problems uncovered by the investigation.
- Taken together, the findings of EIA's investigation show why full birth to slaughter traceability of individual animals must be a mandatory component of supply chain due diligence regulations in Brazil, and in international markets sourcing beef and leather from Brazil, to ensure cattle from high-risk regions like the Brazilian Amazon are free of deforestation and crime.



The Amazon rainforest in Brazil is being razed for cattle ranching, much of it illegal, with dire consequences for Indigenous peoples and traditional communities, biodiversity and the global climate.

The Amazon rainforest in Brazil is being razed for cattle ranching, much of it illegal, with dire consequences for indigenous peoples and traditional communities, biodiversity and the global climate. Deforestation rates reached their highest level in 15 years under the watch of President Jair Bolsonaro. More than 80% of all deforested land in the Amazon has been converted to cattle pasture. Scientists have raised alarms that deforestation is pushing the entire Amazon rainforest towards a tipping point that could lead to irreversible ecological collapse and the release of tens of billions of tons of carbon dioxide, making global targets for avoiding the worst impacts of climate change even more difficult to achieve.

The global market for leather products plays an important role in this destruction: Brazil exports around 80% of the leather it produces and the sales of cowhides is an important contributor to the profitability of the Brazilian cattle industry. China, Europe and the United States are the largest destinations for Brazil's exported hides, which were valued at US\$1.4 billion in 2021. EIA's investigation reveals the links between illegal deforestation in Brazil and leather destined for international markets, with a focus on one of the most significant end uses: automotive leather used by some of the world's most iconic car brands.

Using information from thousands of cattle transport permits (GTAs) issued by the government of the Amazon state of Rondônia since 2018, EIA followed the movements of around 147,000 cattle from over 700 illegal farms located inside the Jaci-Paraná Extractive Reserve, a protected area in the Amazon where vast areas of rainforest have been illegally cleared by ranchers to

make way for pasture. EIA also analyzed the movements of cattle from a number of farms outside the protected area where satellite imagery shows evidence of cattle ranching in areas embargoed for illegal deforestation by Brazil's federal environmental law enforcement agency (IBAMA). In addition, investigators used shipping data, corporate supply chain reporting and interviews with meat and leather company employees to piece together complex supply chains. The findings show how thousands of cattle from illegally deforested land enter the supply chains of three of Brazil's largest leather manufacturers: JBS, Vacouros and Viposa, major suppliers of leather to the global automotive industry.

All of the major meat companies operating in Rondônia were found to have cattle from illegal farms inside the Jaci-Paraná protected area in their direct or indirect supply chains. Just over 5% of the cattle leaving the protected area were sent directly to slaughterhouses. Most went to two companies – Irmãos Gonçalves and Distriboi – which have not made public commitments to monitor their supply chains or avoid sourcing from deforested land, although a small number went directly to JBS slaughterhouses. Around a third of the cattle leaving Jaci-Paraná went to intermediaries who sold cattle to the Rondônia slaughterhouses operated by JBS, Marfrig and Minerva. The largest portion of cattle leaving farms inside Jaci-Paraná passed to two or more farms outside the protected area before reaching a slaughterhouse.

EIA identified numerous instances of cattle "laundering" where ranchers transferred cattle raised illegally inside Jaci-Paraná, or on farms outside the protected area that received embargoes for illegal deforestation, to "clean"

intermediaries – cattle traders, ranchers, or even family members that have not been tied to illegal deforestation – who then sold the cattle to slaughterhouses in an apparent effort to hide their links to illegal ranching. Several examples of cattle laundering involving JBS slaughterhouses in Rondônia are detailed in the report.

The findings also show how lax government oversight of GTAs and rural property registrations (CARs) makes it possible for ranchers and intermediaries to quickly adjust the paper trail of their cattle once a laundering scheme is exposed and stay one step ahead of efforts by meat companies to exclude farms linked to illegal deforestation. Taken together, the results of the investigation indicate that the current monitoring systems of Brazil's meat and leather companies, as well as recently proposed improvements, are inadequate to exclude cattle raised on illegally deforested land from their full supply chains.

The illegal ranching analyzed in EIA's investigation represents just the tip of the iceberg in Rondônia. State officials have for years acknowledged that hundreds of thousands of cattle are being raised illegally in protected areas and Indigenous Territories across the state.8 Soaring deforestation rates and a dramatic reduction in federal law enforcement actions in Rondônia corresponded with actions by the Bolsonaro government to weaken environmental law enforcement. The vast majority of the hides from Rondônia's cattle slaughter are processed by three large tanneries in the state, two run by JBS and a third, Bluamerica, operated jointly by Vancouros and Viposa. The JBS tanneries receive hides from JBS slaughterhouses in Rondônia and Acre and Minerva's slaughterhouse in Rondônia, while the Bluamerica tannery sources hides from the Rondônia slaughterhouses of Marfrig, Irmãos Gonçalves and Distriboi, among others.10

The findings in Rondônia offer but a glimpse into the three companies' broader exposure to illegal ranching and deforestation in Brazil. The majority of the companies' tanneries processing raw hides are located within the Amazon and Cerrado biomes where illegal deforestation is rampant."

JBS and Vancouros sales managers confirmed to EIA investigators that hides sourced from the Amazon and Cerrado regions are used for a range of leather products including automotive leather. 12 JBS, Vancouros and Viposa are major suppliers of processed hides to Lear Corporation ("Lear"), the world's largest leather car seat maker. Lear acknowledges sourcing 70% of the hides used for its leather from Brazil.¹³ The company claims to control nearly one third of global market share for leather seats, meaning roughly one in five leather car seats produced globally was made by Lear using leather from Brazil. 14 Lear names General Motors, Daimler, Stellantis, Volkswagen and Ford as its top five customers for seating, and identifies Alfa Romeo, Audi, BMW, Cadillac, Ferrari, Jaguar, Lamborghini, Land Rover, Lincoln, Maserati, Mercedes-Benz and Porsche as customers for luxury and performance seats, although

it does not specify which of these automakers purchase its leather seating. 15

Lear has made a commitment not to source from illegally deforested land and claims that all of its suppliers have monitoring systems in place to ensure this, at least with regards to their direct suppliers, but the evidence presented in this investigation shows how some of its largest suppliers' compliance systems are not consistent with these claims. ¹⁶

Most car companies do not reveal the identities of their leather suppliers, but a sales manager at JBS told EIA investigators that JBS's hides are used in Toyota, Ford, BMW, GM, Hyundai, Kia, Mitsubishi, and Honda vehicles, with models including the BMW 3, 4, and 5 Series, the Ford F-Series, and RAM trucks.¹⁷ A Vancouros sales manager named Ford F-Series trucks and the Range Rover Evoque as examples of models that use his company's hides.¹⁸

Roughly one in five leather car seats in the world is made by Lear Corporation using cowhides from Brazil.

EIA wrote to the companies and individuals implicated in the findings of its investigation to provide them with an opportunity to comment and explain what steps they are taking to keep deforestation out of any supply chains. Summaries of any substantive responses have been incorporated into the report.

Major consumer markets for cattle products such as leather and beef from Brazil have an important role to play in addressing the deforestation crisis in the Amazon. The findings of this investigation highlight the importance of including leather in demand-side regulations to tackle commodity-driven deforestation and ensuring that full traceability of individual animals from birth to slaughter is a cornerstone of mandatory due diligence requirements. The European Union is close to approving groundbreaking legislation to keep commodity-driven deforestation out of its markets.19 Proposed federal legislation in the United States would cover a range of cattle products including beef and leather and require full traceability of cattle throughout an animal's lifecycle for countries at high risk of illegal deforestation.²⁰ The UK must also include cattle products including beef and leather and farm-level traceability in the scope of its recently passed due diligence law.²¹ The enactment of these measures, and similar ones in other major markets such as China. would provide an important incentive for systemic reforms to improve governance and cattle sector traceability in Brazil.



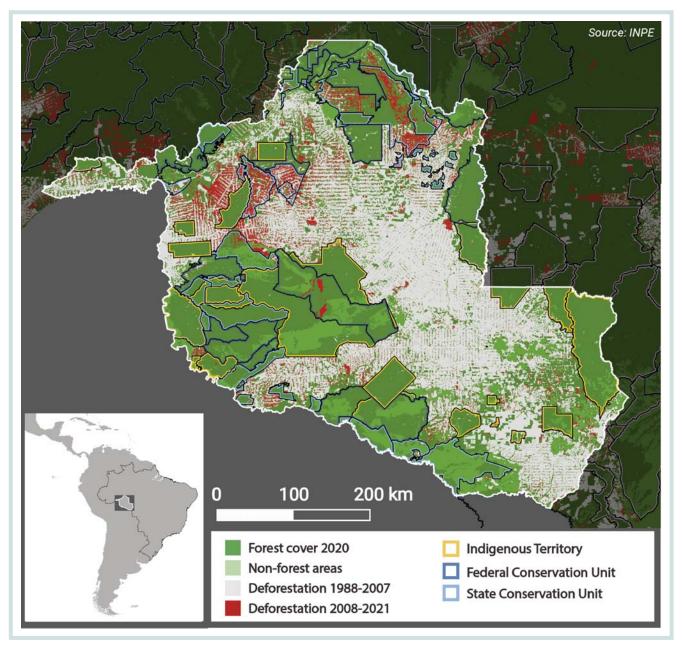
RONDÔNIA: FRONTIER OF CATTLE-DRIVEN DEFORESTATION AND CRIME

The sparsely populated but heavily deforested state of Rondônia is a microcosm of the processes of deforestation taking place across the Amazon frontier, led by land speculation, illegal logging and cattle ranching. Once covered in dense rainforest, the state has lost a third of its forests since 1988.²² Over the last decade, deforestation has accelerated, with illegal loggers stripping forests of their high value timber and land speculators and ranchers clearing the remains of the forest, often by setting it ablaze.

Nearly all deforested land in Rondônia – about 96% - is converted to cattle pasture. This reflects a trend seen across the Amazon region, where more than 80% of deforested land has been converted to pasture. 24

The Amazon biome now contains a third of Brazil's 230 million head cattle herd; in Rondônia cattle outnumber people by 9 to 1.25

As elsewhere in the Amazon, most of the deforestation in Rondônia is illegal. The entire state is within the Amazon biome, where the Forest Code, the federal law governing the management of Brazil's forests, prevents private landowners from clearing more than 20% of the native vegetation on their land. However, the state's ranchers have largely ignored this requirement. A 2012 amendment to the Forest Code forgave much of the illegal deforestation that occurred before July 2008, sending a powerful signal to ranchers that ignoring the law will eventually pay off. The Bolsonaro government



Map 1 The Amazon state of Rondônia has lost a third of its rainforest since 1988, as shown by government deforestation data (PRODES). Most of the remaining forest is in Indigenous Territories and state and federal conservation units that are increasingly under threat.

significantly weakened the enforcement of environmental laws, further emboldening illegal ranchers (see Box 1).

Much of what is left of Rondônia's forests are located inside a network of state and federal conservation units and Indigenous Territories, where commercial ranching is prohibited. But even these areas are now being invaded and deforested, a trend also seen across the Amazon.²⁸ Rondônia was second only to the state of Pará in total area deforested inside protected areas in the August 2020 to July 2021 period.²⁹ Traditional residents who have the legal rights to occupy these areas are being

forced to flee, in many cases under threat of violence from invading loggers and ranchers.³⁰

State lawmakers in Rondônia encourage illegal ranching and land speculation by regularly passing or attempting to pass amnesty laws that would hand land over to illegal invaders. In a 2020 investigation by the BBC, land speculators in Rondônia told an undercover investigator of their expectation that illegally occupied land would eventually be legitimized by future amnesty laws. The sense of impunity was so great that plots of land in protected areas were being openly sold using online platforms such as Facebook Marketplace.

5

DEFORESTATION IN THE DRIVER'S SEAT

BREAKDOWN OF LAW ENFORCEMENT IN RONDÔNIA

In 2021, deforestation in Brazil reached its highest levels in 15 years. Most has occurred outside of protected areas and Indigenous Territories, but even these areas are increasingly being targeted by illegal ranchers and land grabbers. Cattle census data from 2018 showed that over 300,000 cattle were being grazed illegally in protected areas, a number that has steadily increased since then.³³ As of January 2021 there were 2,339 illegal farms containing cattle inside state and federal conservation units and Indigenous Territories in the state, with most located in state conservation units.³⁴

In addition, IBAMA has issued thousands of fines and embargoes for illegal deforestation inside restricted areas or in violation of the Forest Code or other environmental laws. It is likely that many more violations are not being penalized at all. The number of embargoes issued by IBAMA in Rondônia dropped by more than 90% in recent years, even as deforestation soared (see Figure 1). The Bolsonaro government carried out a number of actions that drastically reduced IBAMA's capacity and effectiveness. ³⁶ A recent study found that only 2% of illegal deforestation events across Brazil since 2019 were subject to any penalty by federal law enforcement agencies. ³⁶

Even in the increasingly rare instances where IBAMA issues embargos for illegal deforestation, ranchers often ignore them with impunity. EIA analyzed high-resolution satellite imagery of 19 farms in Rondônia

that received embargoes for illegal deforestation and transferred cattle to intermediaries that supply major slaughterhouses in the state. The analysis found that none of the embargoes were being complied with, and evidence of recent cattle ranching could be observed in all but two of the areas (an example is provided in Case Study 2 in this report).

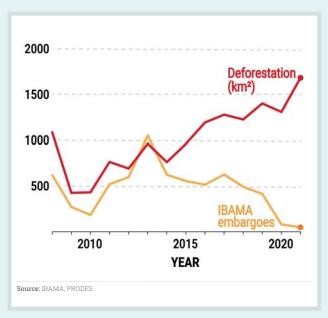


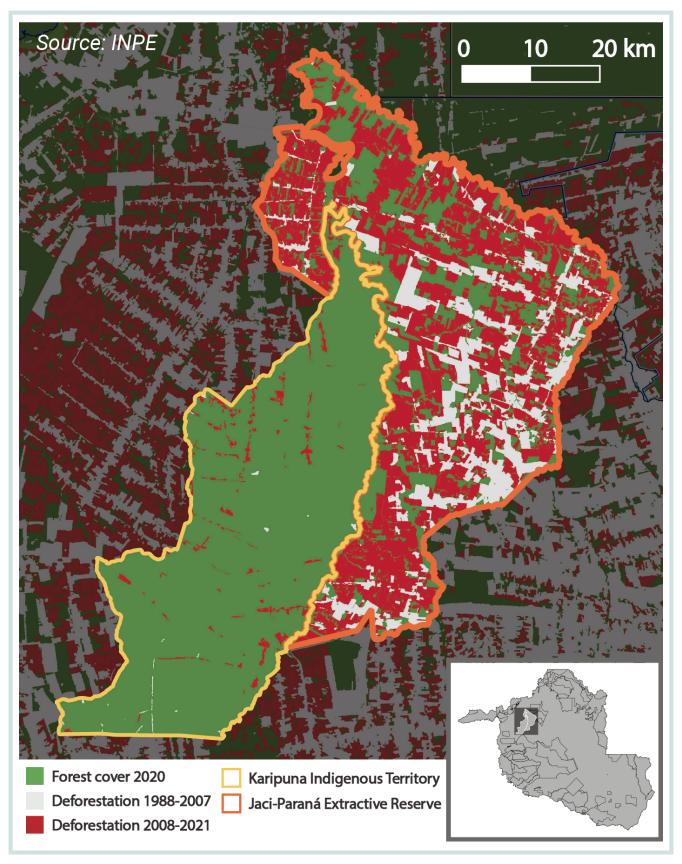
Figure 1
Deforestation has increased dramatically in Rondônia while IBAMA embargoes for illegal deforestation have dropped

Anatomy of a crime: Razing protected rainforest for pasture

EIA's investigation centered on the Jaci-Paraná Extractive Reserve, a state protected area covering 1,974 km² that has been overrun by illegal ranching over the last 15 years. The protected area was covered in dense rainforest when it was established in 1996 as an area where only traditional communities are allowed to carry out sustainable, subsistence-oriented activities. 37 But in the early 2000s, land speculators and ranchers began to arrive and illegally clear the forest. As the invasions expanded, all but a handful of the traditional residents living in the protected area were forced off their land, often under threat of violence.38 Nearly 60% of the original forest cover has been converted to cattle pasture, with roughly 100 km² of forest being cleared annually in recent years, making it the third most deforested protected area in the entire Amazon.³⁹

While IBAMA has issued hundreds of fines and embargoes in Jaci-Paraná over the years, these represent a small fraction of the area illegally deforested. As of September 2022, there were over 1,200 cattle farms containing more than 187,000 animals inside the protected area.⁴⁰

The state animal control agency, Agência de Defesa Sanitária Agrosilvopastoril (IDARON) has helped to enable the invasion of Jaci-Paraná and other protected areas by issuing cattle GTAs for moving cattle into and out of areas where commercial ranching is prohibited. The State Prosecutor's office filed a lawsuit against IDARON for this practice in 2019. A court decision in March of 2021 recognized the illegality of commercial ranching in the protected area and affirmed the legal obligation of the government to take action to stop it, but allowed IDARON to continue issuing GTAs for cattle movements inside the protected area.



Map 2
Nearly 60% of the forest in the Jaci-Paraná Extractive Reserve, a state protected area, has been illegally cleared and replaced with cattle pasture. The Reserve was a buffer for neighboring Karipuna Indigenous Territory, which is seeing increased invasions.

BRAZIL'S FOREST CODE AND RURAL ENVIRONMENTAL REGISTRY (CAR) – HOW WEAK GOVERNMENT OVERSIGHT OPENS THE DOOR TO FRAUD

Brazil's 2012 Forest Code requires rural landowners to self-declare boundaries and other geospatial information for their properties in an online federal registry (Sistema Nacional de Cadastro Ambiental Rural, or SICAR). The federal registry compiles information from state registries where states have established them, as is the case for Rondônia. However, less than 2% of the properties registered (CARs) in Rondônia have been validated by the state environmental agency (Secretaria de Estado do Desenvolvimento Ambiental, or SEDAM) to ensure the claimant has legal rights to the land and provided accurate geospatial information, leaving the system highly vulnerable to fraud.⁴¹

In recent years, emboldened ranchers and land grabbers have registered hundreds of properties within the boundaries of protected areas and Indigenous Territories, where they have no legal rights to the land. As of December 2021, the federal registry identified 712 CARs covering about 3,700 km² that overlap with Indigenous Territories and an additional 58 CARs covering about 1,200 km² overlapping federal conservation units.⁴² Data for state conservation units are not calculated, but EIA identified more than 200 CARs that partially or fully overlap the Jaci-Paraná

Extractive Reserve alone.⁴³ In September 2022, a federal court decision in response to a complaint filed by the federal prosecutor's office (MPF) obliged state and federal agencies to take measures to halt invasions by illegal loggers and land grabbers of the Karipuna Indigenous Territory bordering Jaci-Paraná.⁴⁴ MPF additionally called on the government to cancel CARs registered overlapping Karipuna land.⁴⁵

The lack of oversight of the rural property registry also allows ranchers to hide their connection to illegal deforestation by excluding embargoed or deforested areas from the boundaries of the CARs they register or even changing the boundaries of a registered property to remove these areas.

Despite the serious deficiencies of the registry, meat companies rely on it as part of their supply chain monitoring systems. According to agreed monitoring protocols, all direct suppliers are required to provide CAR information for their supplying farms. ⁴⁶ The cases in this report suggest this requirement has not been consistently applied and raise questions about what, if any, steps are taken by companies to verify the information in the absence of government oversight.

The number of embargoes issued by IBAMA in Rondônia dropped by more than 90% in recent years, even as deforestation soared.

The decision obliges IDARON to provide information to other agencies to enable enforcement of environmental laws.⁴⁹

In May 2021, state lawmakers, many with financial ties to the cattle sector, passed P.L. 80, an amnesty law that reduced Jaci-Paraná by nearly 90%, opening the possibility for ranchers to legitimize land they had illegally occupied. 50 In a 2019 statement endorsing the bill, the state's governor cited the severe environmental damage caused by illegal ranching as justification for shrinking the protected area, stating that law enforcement had been "insufficient to prevent the advance of the illegal occupation and deforestation, given the escalation of violence in the region, both among the social groups that occupy the place, motivated by territorial disputes, and in relation to public agents, which has significantly compromised the management of this Unit." ⁵¹ The law was challenged by the State Prosecutor's Office, and in November 2021 the Rondônia state court (Tribunal de Justica) ruled that the law violated the federal constitution. 52 In a strongly worded decision, the court ordered the government to develop an action plan and policies to enforce the protection of Jaci-Paraná from illegal ranching.

WHAT IS A GUIA DE TRÂNSITO ANIMAL (GTA)?

Any time animals are moved between two properties, a permit known as a Guia de Trânsito Animal, or GTA, is required to ensure the animals have the required vaccinations and their movements can be tracked in the case of disease outbreaks. While these permits were designed primarily for phytosanitary purposes, they provide information that can be used to follow the flow of cattle raised on illegally deforested land into supply chains when matched with geospatial datasets. The permits are issued by state agencies

with oversight of livestock health - IDARON in the case of Rondônia - and include the identity and address of the entities sending and receiving the animals, the number, age and gender of the animals, and the date and time the permit was issued (see sample below). In Rondônia, they are usually valid for one week. The permits are typically for the movement of groups of animals, so tracking individuals through supply chains is not possible where aggregation occurs on farms between transfers.

Informações da GTA							
UF: RO SÉRIE: H NÚMERO:			STATUS: Normal	STATUS: Normal			
BOVINA N BOVINA N BOVINA N BOVINA F BOVINA F BOVINA F BOVINA F BOVINA N	CAÇÃO - QTD A ate 12 meses - A de 13 a 24 mes A de 25 a 36 mes A mais de 36 mes de 13 a 24 mes de 25 a 36 mes mais de 36 mes M Total - 0	ses - 0 ses - 0 ses - 0 0 es - 0 es - 19		THEIRO			
PROCEDÊN CPF/CNF Nome: Estabele KM 40, GI	ICIA		i RO	DESTINO CPF/CNPJ: 38.538.960/0634-2 Nome: MARFRIG GLOBAL FOODS S.A. Estabelecimento: RODOVIA RO 135, KM 06, SUBDIVISAO DO LOTE 210-A DA GLEBA G Município: JI-PARANA UF: RO			
		$\overline{}$	Rodoviário Lacre nº:	Pullidpid: 31-AC			
/ACINAÇÕ	ES: —	E AFTOSA 018 E 07/11/2017		AREK			
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OBSERVAÇÃO Nota Fiscal A Emitir. T			UNIDADE EXPEDIDORA Unidade: EMITIDO ELE Municipio: Porto Velho Telefone: 1 E-mail:	TRONICAMENTE			
Data: 25/0 Hora: 11:0		MITIDO NICAMENTE 5/09/2018 1:04:36.4200000 e: 30/09/2018	IDENTIFICAÇÃO E ASSINATURA DO EMITENTE				

TRADERS AND TRICKSTERS: FROM PROTECTED AREA TO LEATHER SUPPLY CHAINS

EIA investigators followed the movements of 147,406 cattle (6,514 GTAs) from 712 illegal farms located inside Jaci-Paraná that received GTAs issued by the government of Rondônia between January 2018 and May 2022 (see Figure 2 and Methodology). The findings show how thousands of cattle raised illegally inside the protected area entered the supply chains of Rondônia's largest slaughterhouses and tanneries.

Just over 5% of the cattle leaving Jaci-Paraná were transferred directly to slaughterhouses. Nearly all of these were transferred to Irmãos Gonçalves and Distriboi slaughterhouses, although a small number (~0.2%) went to JBS. Around a third of the animals were transferred to intermediaries that sold cattle to Marfrig, JBS or Minerva. Irmãos Gonçalves and Distriboi sell beef mostly to the domestic market, but both sell hides to the

Bluamerica tannery operated by Vancouros and Viposa (see below). Neither meat company has made commitments to eliminate deforestation from its supply chain or signed a Terms of Adjusted Conduct (TAC) agreement with federal prosecutors, as many other large meat companies have done. 54

It is important to note that the majority of the cattle raised in Jaci-Paraná were transferred to two or more farms outside the protected area before being sold to a slaughterhouse (see Figure 2). The aggregate figures shown here highlight the overall risk of cattle raised illegally in Jaci-Paraná reaching slaughterhouses via intermediary farms. The case studies below present specific examples of how ranchers use intermediary farms to launder cattle from the protected area into the supply chains of major meat and leather companies.

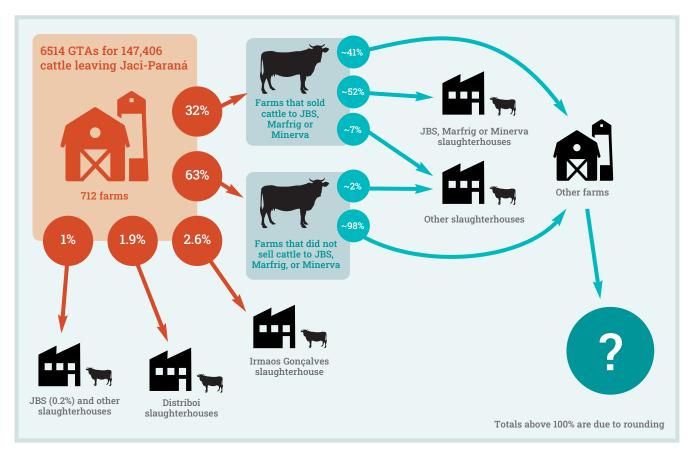
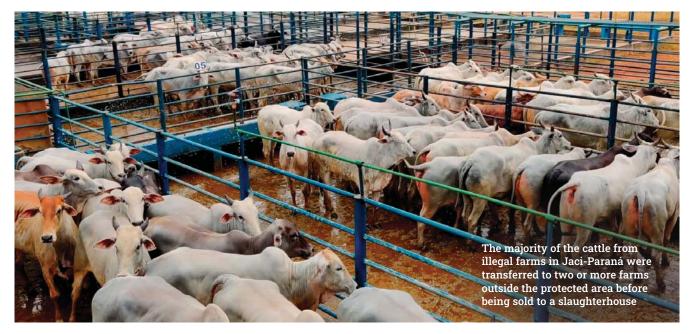


Figure 2
GTA analysis of cattle transferred from illegal farms inside the Jaci-Paraná Extractive Reserve to farms outside the protected area or directly to slaughterhouses in recent years (see Methodology). The majority of animals went to two or more farms before reaching a slaughterhouse.



Case Study 1: Tale of two cattle traders

EIA's analysis of GTA data revealed that the largest buyer of cattle from Jaci-Paraná between 2018 and 2021, a cattle trader ("originador de gado," as they are referred to locally) named Armando Castanheira Filho, was a major supplier to Marfrig, JBS and Minerva during this time period. Filho also regularly bought cattle from farms outside the protected area that had received embargoes from IBAMA for illegal deforestation, and where satellite imagery showed continued cattle ranching on the embargoed areas (see Case Study 2). In total, Filho bought more than 9,000 cattle from 47 farms inside Jaci-Paraná and more than 2,700 cattle from 7 farms with embargoes outside the protected area, accounting for around 20% of his total cattle purchases. Over the same time period, he sold more than 41,000 cattle to Marfrig (78%), JBS (~11%) and Minerva (~11%) slaughterhouses in Rondônia, accounting for the vast majority (~93%) of his cattle transfers. As explained below, Marfrig is a major supplier to the Bluamerica tannery in Rondônia.

Following an investigation by the New York Times, initiated after EIA shared with the Times the results of its analysis of GTAs showing how intermediary ranchers and traders, including Filho, were selling cattle raised inside Jaci-Paraná to major meat companies, JBS, Marfrig and Minerva stated that they had stopped sourcing cattle from Filho. However, this was not the end of the story.

GTA data shows that soon after Filho was dropped by the three companies, a number of his supplying farms located inside Jaci-Paraná or that had received embargoes began transferring cattle to another intermediary, Jaelson Pereira de Oliveira (see Figure 3). Cattle from 13 such farms were transferred to Pereira de Oliveira starting in September 2021, including from his two farms inside Jaci-Paraná, while transfers to Filho

from these farms halted or were significantly reduced. Pereira de Oliveira and Filho have had extensive business dealings: GTAs show that Pereira de Oliveira transferred more than 1,000 cattle per year to Filho between 2018 and 2020.

Pereira de Oliveira began selling large volumes of cattle to JBS in October of 2021 (see Figure 3). Prior to that he had not sold any cattle for slaughter since 2018. Between October 2021 and May 2022 (the last month for which GTA data was available for this analysis), he sold over 5,300 cattle from a farm named Fazenda Samambaia to JBS slaughterhouses, primarily to the facility in Pimenta Bueno.

Pereira de Oliveria registered Fazenda Samambaia in the state business registry in 2015 but there is no CAR registration for this property under his name. However, another rancher named Moacir Romlo, who also received GTAs for transferring cattle to and from a farm with the same name and address, does have a registered CAR corresponding to the address in the GTAs. The area of pasture available for grazing cattle on this property according to data in the CAR registry – about 485 hectares – could not plausibly support the number of cattle being sold to JBS from the farm by Oliveira. According to the Harmonised Monitoring Protocol for direct suppliers agreed by JBS and a number of other meatpackers, a farm supplying more than three cattle per hectare per year is considered a red flag for cattle laundering. The rate at which cattle were supplied to JBS from Fazenda Samambaia in the first five months of 2022 is nearly 8 times this amount. An analysis of satellite imagery shows that the property does not contain the concentrated feed facilities that would be required to accommodate this number of animals. When asked to comment about its receipt of cattle from Fazenda Samambaia, JBS stated that its purchases were in compliance with its policies and the Harmonized Monitoring Protocol.

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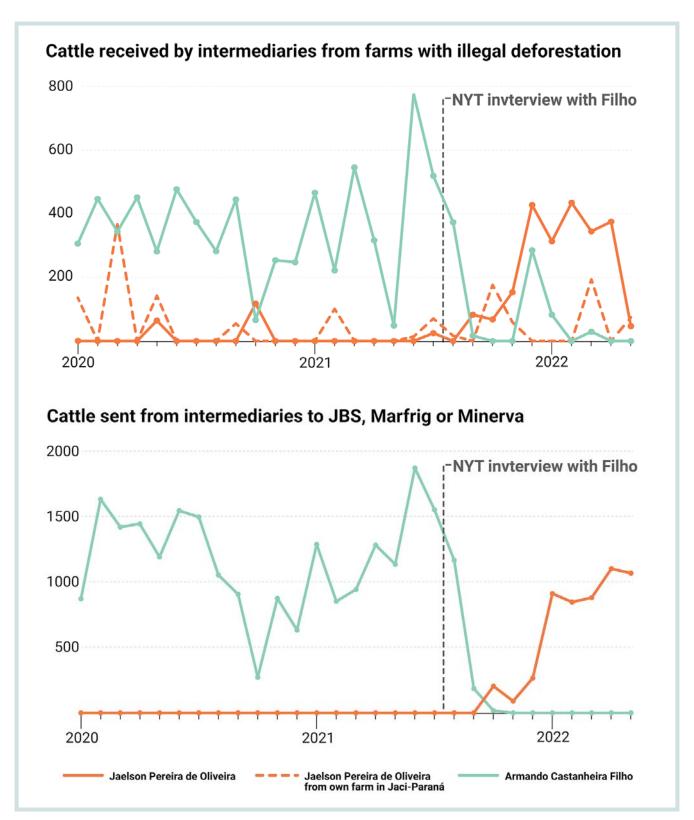


Figure 3
GTA data shows how supply chains rapidly adjusted after a major cattle laundering scheme was exposed by a New York
Times investigation (see Case Study 1). Top panel: Receipt of cattle from farms with embargoes or inside Jaci-Paraná by cattle
trader Armando Castanheira Filho and Jaelson Pereira de Oliveira since 2020. Many of the farms selling to Filho began selling
to Oliveira soon after the New York Times interviewed Filho about cattle laundering on the date indicated. The dotted line
shows transfers from Oliveira's two farms inside Jaci-Paraná to his own farms outside the Reserve (see Figure 4). Bottom
panel: Filho's sales to Marfrig (78%), JBS (11%), and Minerva (11%), and Oliveira's sales to JBS, since 2020.



In some cases, cattle from farms with embargoes and those inside Jaci-Paraná were transferred to Fazenda Samambaia directly, but the majority arrived via another of Oliveira's farms, Estancia Redençao. Between August 2021 and May 2022, this farm received over 1,400 cattle from farms inside Jaci-Paraná and more than 300 from embargoed ranches, accounting for about 60% the cattle received (see Figure 4). During the same time period, about 90% of the cattle leaving the farm were transferred to Fazenda Samambaia. Taken together, EIA estimates that more than one out of every three cattle arriving at Fazenda Samambaia originated from farms with embargoes or located inside Jaci-Paraná, while around 87% of the cattle leaving Fazenda Samambaia were destined for JBS slaughterhouses. This includes cattle from two farms in Pereira de Oliveira's name inside Jaci-Paraná, as shown in Figure 3.

Pereira de Oliveira registered a ~293-hectare CAR corresponding to the GTA address of Estancia Redençao in August 2021. Satellite imagery shows that in the preceding months, about 75 hectares of forest was cleared within the eventual boundaries of the CAR. Pereira de Oliveira excluded this newly deforested land from the area classified as native vegetation when registering the property, identifying ~152 hectares as exploitable land. While JBS does not monitor the farms supplying its direct suppliers (even when both belong to the same person), the volume of cattle being transferred from Estancia Redençao to Fazenda Samambaia in the

Thousands of cattle raised illegally inside the protected area entered the supply chains of Rondônia's largest slaughterhouses and tanneries.

first five months of 2022 (about 400 head/month on average) is roughly 10 times the threshold for cattle laundering under the Harmonized Monitoring Protocol agreed by major meat companies. Thus, Pereira de Oliveira appears to be carrying out a two-step laundering scheme where cattle raised on farms with embargoes or inside Jaci-Paraná are transferred to Estancia Redençao and then to Fazenda Samambaia, at least on paper, before being sent to a JBS slaughterhouse. The highly improbable volume of cattle being transferred through the two farms, as indicated by GTAs, raises serious questions about whether the majority of the animals are in fact being physically moved to one or both farms on their way to a JBS slaughterhouse.

DEFORESTATION IN THE DRIVER'S SEAT

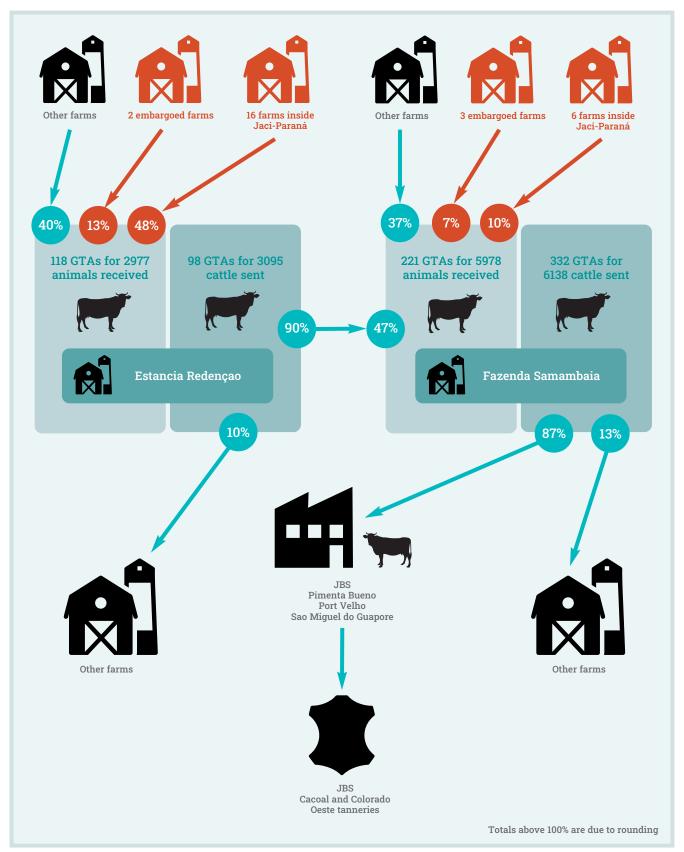
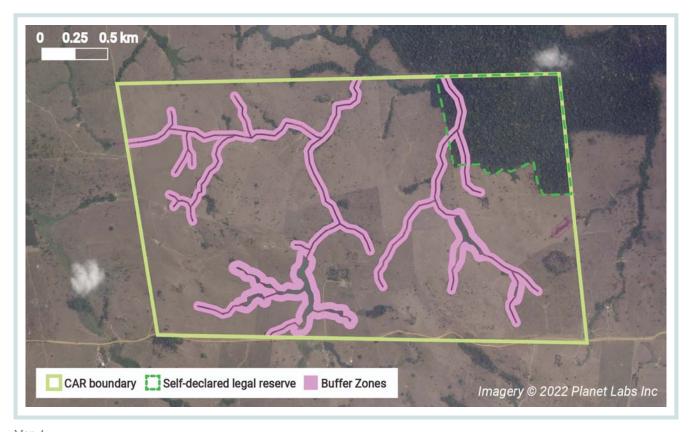


Figure 4
Schematic diagram showing the "double laundering" scheme used by Jaelson Pereira de Oliveira to move cattle from farms with embargoes or inside Jaci-Paraná into the supply chain of JBS (see Case Study 1), based on analysis of GTAs issued between August 2021 and May 2022



Map 3
Satellite imagery (Planet monthly mosaic) showing ~75 hectares of deforestation in the months prior to the area being included in a CAR registered by Jaelson Pereira de Oliveira corresponding to his farm Estancia Redenção



The apparent size of Jaelson Pereira de Oliveira's Fazenda Samambaia, as indicated by a CAR corresponding to the farm, is far too small to accommodate the number of cattle being transferred to JBS from it (see Case Study 1). CAR boundary (yellow) and non-exploitable legal reserve (green) and buffer areas (purple), as declared in the CAR, are shown.

Cast Study 2: A family affair

Rancher Onofre Adami received three embargoes from IBAMA in 2017-18 for illegally clearing a total of 177 hectares (about 250 soccer fields) of Amazon rainforest on three farms, one inside Jaci-Paraná and two outside the protected area. The farms outside the protected area received embargoes for deforesting beyond the legal limits allowed under the Forest Code. GTA data indicates that since 2018 more than 2,800 cattle from Adami's embargoed farms were transferred to major slaughterhouses, primarily those of JBS and Marfrig, using family members and other ranchers or cattle traders as intermediaries

From 2018 to August 2020, Adami transferred over 850 cattle from his three embargoed farms to his daughter, Naiara Araujo Adami, who then transferred them to JBS slaughterhouses. The address of the farm in the GTAs issued to the daughter, called Sitio Boa Esperança, is the same as one of Onofre Adami's embargoed farms, Vista Bonita, for which he received an embargo and fine in 2017 for illegally clearing 65.6 hectares of forest. A CAR registered to Naiara Araujo Adami in 2016 completely overlaps the embargoed area, and satellite imagery shows the embargoed area continued to be used for cattle ranching (See Map 5). All animals transferred from Sitio Boa Esperança went to JBS slaughterhouses in Pimenta Bueno, Vilhena or São Miguel do Guaporé, and the hides were processed at JBS's Colorado do Oeste and Cacoal tanneries. The transfers to JBS from Naiara Araujo Adami stopped in August 2020, but not long after, another of Onofre Adami's daughters began transferring cattle to JBS.

According to GTA data, in April 2021 Onofre Adami's daughter Amanda Araujo Adami received 299 animals

from one of her father's embargoed farms, Fazenda Nova Vida, and transferred the animals to JBS. In March 2022, another 102 animals from this farm were transferred to JBS via Amanda Araujo Adami's farm, which is also called Fazenda Nova Vida. A CAR registered in Amanda Araujo Adami's name in July 2020 is adjacent to the CAR registered by her father that overlaps the area embargoed for illegal deforestation, and satellite imagery from 2020 shows cattle grazing inside the embargoed area (See Map 5). All animals transferred from Amanda Araujo Adami's Fazenda Nova Vida went to JBS's São Miguel do Guaporé or Pimenta Bueno facilities, and the hides were processed at its Cacoal and Colorado do Oeste tanneries. ⁵⁶

Between 2018 and 2021, Onofre Adami also transferred over 1,100 animals from his three farms with embargoes to cattle trader Armando Castanheira Filho (see Case Study 1), a second pathway by which his cattle were laundered into the supply chains of major meat companies. Filho sold the majority of his animals to Marfrig's two slaughterhouses in Rondônia, with the hides likely processed at the Bluamerica tannery (see below), creating a particular risk for this tannery.

After the major meat companies blocked Filho in late 2021, Adami began transferring animals from two of his farms with embargoes, Vista Bonita and Fazenda Nova Vida, to another intermediary, Jaelson Pereira de Oliveira. Pereira de Oliveira sold most of the cattle from the farms that received Adami's cattle to JBS (see Case Study 1), with the hides processed at JBS's Cacoal and Colorado do Oeste tanneries.⁵⁷

The links between Onofre Adami's embargoed ranches and slaughterhouses described above can be determined with a high degree of certainty because GTA data shows

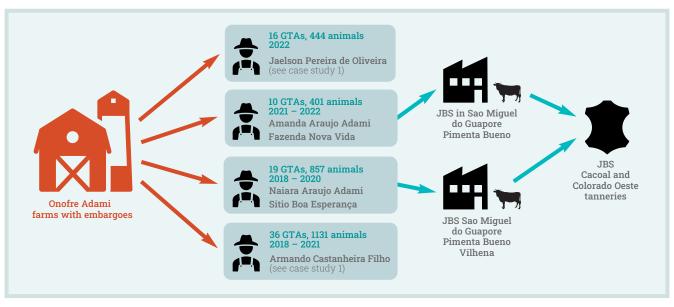
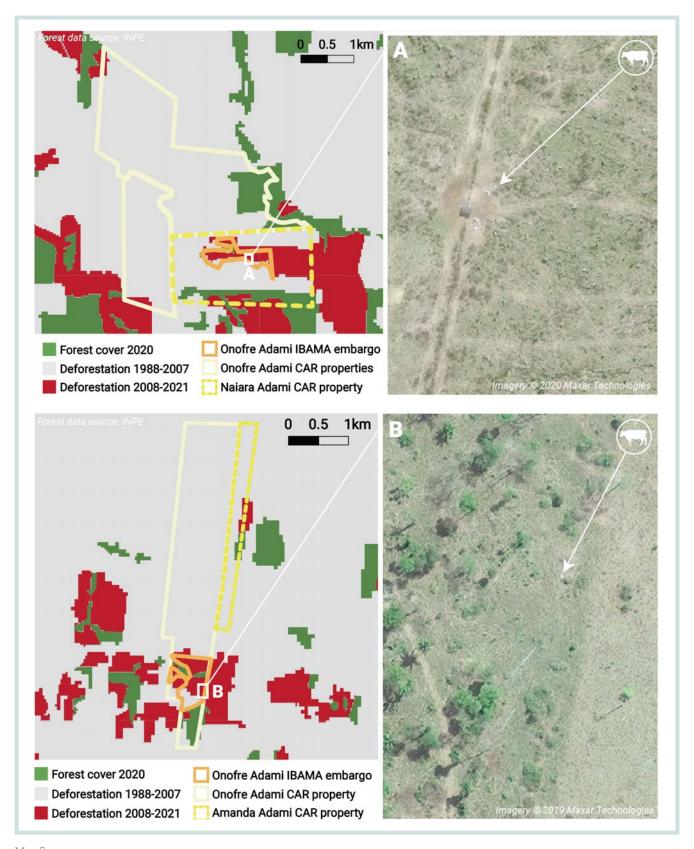


Figure 5
Schematic diagram showing how Onofre Adami laundered cattle from his farms with embargoes into the supply chains of major meat companies using farms registered to two of his daughters in addition to other intermediaries described in this report.



Map 5
The locations of CARs corresponding to two of Onofre Adami's embargoed farms, Vista Bonita (top map) and Fazenda Nova Vida (bottom map), the areas embargoed for illegal deforestation, and the locations of CARs corresponding to his daughter's farms used to launder cattle from Adami's embargoed farms to JBS (see Case Study 2). High-resolution satellite imagery shows evidence of cattle ranching in the embargoed areas (top right, July 2020 Worldview-3 image; bottom right, September 2019 Geoeye-1 image)

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that the intermediaries sold most or all of their cattle to the meat companies indicated. In addition, groups of GTAs were often issued on the same day or within one or two days of each other for moving the same number, age and gender of animals to an intermediary farm and then from the intermediary farm to a slaughterhouse. This practice, described further in Box 4, strongly suggests the cattle were in some cases moved directly from Adami's embargoed farms to slaughterhouses, with GTAs being used to create a paper trail to hide their origins.

Case study 3: Two routes from protected area to slaughterhouse

One of the largest suppliers of hides to the Bluamerica tannery, the Irmãos Gonçalves slaughterhouse in Jaru, regularly bought cattle directly from illegal farms inside Jaci-Paraná. The largest such supplier was Andreia Correa de Paiva, who transferred over 1,000 cattle to Irmãos Gonçalves from a farm called Fazenda Sao

Mateus located inside the protected area between 2018 and early 2022. The farm appears to correspond to one embargoed for 170 hectares of illegal deforestation inside Jaci-Paraná in 2007. The rancher who received the embargo, Daniel de Oliveira, also received GTAs involving a farm named Sao Mateus with the same address, including for cattle transactions with Paiva. Both Paiva and Oliveira appear on the list of ranchers operating inside Jaci-Paraná compiled by IDARON (see Methodology) with the same address used for Fazenda Sao Mateus in their GTAs

In 2021, Paiva began receiving GTAs for moving cattle from another farm inside Jaci-Paraná called Fazenda Medianeira. Beginning in April 2022, Paivi began moving cattle from this farm and Fazenda San Mateus to an intermediary farm named Fazenda Renascer, registered in her name in a state tax registry in February 2022, from which the cattle were transferred to JBS slaughterhouses in Vilhena and Pimenta Bueno. Paiva had no registered CARs at the time of writing.

BOX 4.

GTAs AS A TOOL FOR CATTLE LAUNDERING

In many instances, GTAs were issued for moving animals from farms with embargoes or located inside Jaci-Paraná to intermediary ranches followed soon after (sometimes within minutes) by the issuance of GTAs for transferring the same or similar number of cattle of the same age and gender from the intermediary farm to a slaughterhouse. This calls into question whether the animals where physically transported to the intermediary farm, as stated in the GTAs, or rather transported directly from Jaci-Paraná

or an embargoed farm to the slaughterhouse, a practice observed in a recent New York Times investigation. ⁵⁸ EIA identified numerous examples of this pattern of GTA issuance, suggesting such practices may be widespread. The example below shows how a series of GTAs appear to be used to transfer a group of 72 animals from two illegal farms inside Jaci-Paraná to a slaughterhouse via an intermediary farm outside the protected area. The identity of the farms and slaughterhouses have been redacted.

Date issued	Time issued	Origin	Destination	Cattle (number, gender, age)
3-May-22	8:57	Farm A in Jaci-Paraná	Intermediary farm C	5 Male, 24-36 months; 13 Male, 36+ months
3-May-22	8:58	Farm A in Jaci-Paraná	Intermediary farm C	18 Male, 36+ months
3-May-22	8:59	Farm B in Jaci-Paraná	Intermediary farm C	18 Male, 36+ months
3-May-22	8:59	Farm B in Jaci-Paraná	Intermediary farm C	18 Male, 36+ months
			TOTAL	59 Male, 24-36 months; 13 Male, 36+ months
3-May-22	9:04	Intermediary farm C	Slaughterhouse	18 Male, 36+ months
3-May-22	9:04	Intermediary farm C	Slaughterhouse	18 Male, 36+ months
3-May-22	9:05	Intermediary farm C	Slaughterhouse	18 Male, 36+ months
3-May-22	9:05	Intermediary farm C	Slaughterhouse	5 Male, 24-36 months; 13 Male, 36+ months
			TOTAL	59 Male, 24-36 months; 13 Male, 36+ months

Table 1

How GTAs are abused to hide the origins of cattle from illegal farms going to slaughterhouses

FROM THE AMAZON TO CAR SEATS

EIA's analysis of GTAs shows how cattle from farms inside the Jaci-Paraná protected area or embargoed for illegal deforestation reached major slaughterhouses in Rondônia. To understand the links between these slaughterhouses and leather entering global supply chains, EIA analyzed information from meetings with company representatives, supply chain data made available by companies, and international shipping data.

The first step in the process of converting a cowhide into a finished leather product is the tanning of raw hides into a more stable form of leather referred to as "wet blue" for the bluish sheen caused by the chromecontaining tanning chemical used in the processing. This step needs to occur soon after the hide is removed from the slaughtered animal to prevent degradation, so tanneries tend to be located relatively close to the slaughterhouses they source from – typically within 500 km, and often closer. As slaughterhouses have sprung up across the Amazon, so too have nearby tanneries to process the hides.

Production estimates indicate that the vast majority of all hides from cattle slaughtered in Rondônia are processed by three large tanneries in the state – the Bluamerica tannery in the municipality of Presidente Medici, jointly operated by Viposa and Vancouros, and two JBS tanneries located in the municipalities of Cacoal and Colorado do Oeste. Due to the prevalence of illegal deforestation driven by cattle ranching in Rondônia, these tanneries are at very high risk of sourcing hides from illegally raised cattle, as highlighted in Box 1 and the case studies in this report.

The findings below show how these risks are passed on to international leather supply chains, focusing particularly on those for automotive leather.

Vancouros and Viposa (Bluamerica tannery)

The Bluamerica tannery jointly operated by Vancouros and Viposa has a production capacity of around 5,000 hides per day, making it the largest in Rondônia. 60 A senior Vancouros employee told EIA investigators that Vancouros and Viposa often place joint orders for hides from Marfrig and together buy the majority of the hides the company produces in Brazil. This indicates that one of the largest sources of hides to Bluamerica were Marfrig's two Rondônia slaughterhouses until the company closed its Ji-Paraná facility in October 2021. Between 2018 and 2021, Marfrig's slaugherhouses in Ji-Paraná and Chupinguiai together received around 70% of the cattle transferred by Armando Castanheira Filho (see Case Study 1), who during the same period was the single largest buyer of cattle raised illegally inside Jaci-Paraná. In total, Filho bought more than 12,000 cattle from farms

inside the protected area and or that received embargoes for illegal deforestation during this time period.

Bluamerica also sources hides from other meat companies operating in Rondônia, the two largest suppliers being Irmãos Gonçalves and Distriboi. 62 As previously referenced, these companies have made no public commitments to trace their supply chains or eliminate deforestation from them, leaving Bluamerica and its customers particularly exposed to illegal ranching. The GTA analysis presented in this report shows how the two meat companies purchased nearly 7,000 cattle directly from illegal farms inside the Jaci-Paraná protected area in recent years.

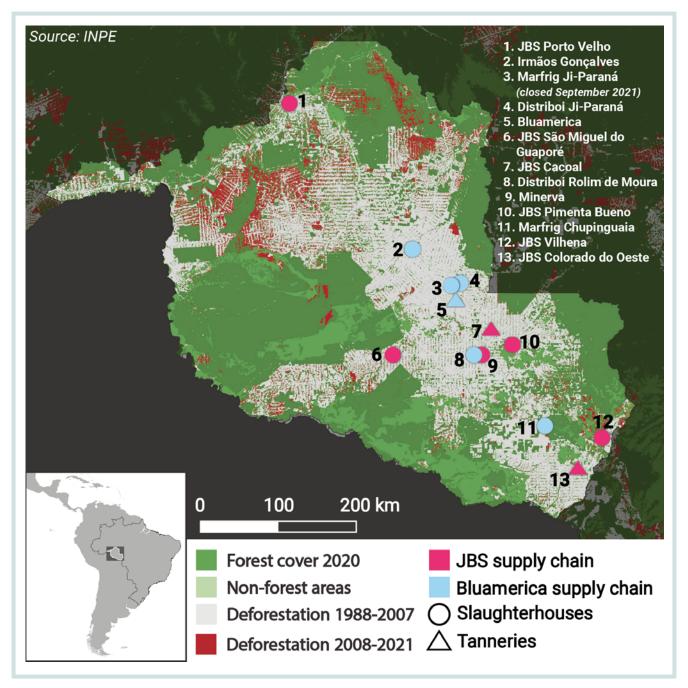
The wet blue hides produced at Bluamerica are transported to finishing facilities in the south of Brazil where most are exported as wet blue or processed into semi-finished leather before export. Vancouros and Viposa each have one such finishing facility that receives all hides from the company's wet blue tanneries; the Vancouros facility is located in Rolandia, Parana, and the Viposa facility in Cacador, Santa Catarina. The Bluamerica tannery accounts for roughly 5-10% of each company's total wet blue production capacity, and hides from Rondônia and elsewhere in the Amazon are used for a range of leather products including automotive leather. Most of the companies' wet blue production occurs at tanneries in the Amazon and Cerrado biomes.

Lear Corporation is a major buyer of semi-finished leather from both Vancouros and Viposa, based on information provided to EIA investigators in interviews with company employees and analysis of trade data. A senior Vancouros employee told EIA investigators the company supplies all of Lear's car seat manufacturing facilities globally, in Mexico, Hungary, Thailand and China, which is consistent with shipping data reviewed by EIA. The employee identified the Ford F-150 and Land Rover Evoque as car models that used leather supplied by Vancouros. The global picture is more difficult to ascertain for Viposa because the company often does not appear in Brazilian shipping records, likely due to the use of logistics or shipping companies.

JBS tanneries

JBS tanneries source most of their hides from the company's own slaughterhouses, with a few exceptions, according to supply chain data made available by the company. In Rondônia, the Cacoal tannery has a production capacity of roughly 3,000 hides per day and receives hides from JBS slaughterhouses in the states of Rondônia and Acre, and from Minerva's slaughterhouse in Rolim de Moura. The Colorado do Oeste tannery, with

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Map 6
The locations of slaughterhouses and tanneries in Rondônia discussed in this report. Tanneries and their supplying slaughterhouses have the same color.

a processing capacity of around 1,800 hides per day, receives hides mainly from JBS slaughterhouses in Rondônia. As described in this report, between 2018 and 2022 the Cacoal and Colorado do Oeste tanneries processed thousands of hides from cattle supplied by farms that sourced animals from inside Jaci-Paraná or on farms that received embargoes for illegal deforestation. ⁶⁶

Based on production estimates provided to EIA investigators, the production capacity of these two tanneries together accounts for roughly 15% of JBS's

wet blue production capacity in Brazil. The wet blue hides are transported from Rondônia to one of the company's five semi-finishing facilities, in some cases via a distribution center in Campo Grande, Mato Grosso do Sul, where they are further processed or destined for export as wet blue. Brazilian shipping data indicates that globally Lear is the biggest buyer of semi-finished hides from JBS, with hides exported by JBS to Lear's seat manufacturing facilities in North America, Europe and Asia. Europe

While the proportion of wet blue from Rondônia or elsewhere in the Amazon used to make semi-finished hides sold to Lear is not known, EIA's interviews with industry representatives confirmed that hides from cattle raised in the Amazon are used in the manufacture of car seats. A senior JBS employee told EIA investigators that Toyota, Ford, BMW, GM, Kia, Mitsubishi and Honda use their leather, including the Ford F-250, Dodge Ram, BMW 3-, 4- and 5-Series, and Toyota Corolla models, but did not say which models used seats manufactured specifically by Lear.

The risks associated with JBS's leather supply chains in Rondônia are indicative of the broader deforestation risks in the company's supply chains in Brazil. The exposure of JBS's slaughterhouses to deforestation in the Amazon, Cerrado and other biomes has been well documented in recent years. All but one of its ten tanneries processing raw hides are located within the Amazon or Cerrado biomes, where deforestation driven by cattle ranching is widespread.

Lear Corporation: key link between the automotive sector and deforestation in Brazil

Lear Corporation (Lear) is the world's second largest manufacturer of car seats and electrical systems, with a market value of US\$10.9 billion and over 170,000 employees worldwide.⁷¹ It lists its top five customers for seating as General Motors, Daimler, Stellantis, Volkswagen and Ford. 72 With the 2015 purchase of Eagle Ottawa, the world's top leather car seat maker, it became the preeminent manufacturer of leather seats with a global market share of roughly 30%. 73 The company states on its website that 70% of the hides used for its leather come from Brazil.⁷⁴ Based on these numbers, it can be estimated that about one out of every five leather car seats in the world is produced by Lear using Brazilian hides. The company claims to be the global leader in luxury seating for brands including Alfa Romeo, Audi, BMW, Cadillac, Ferrari, Jaguar, Lamborghini, Land Rover, Lincoln, Maserati, Mercedes-Benz and Porsche, although it doesn't specify what proportion of its luxury segment involves leather seating.75

Lear has major leather seat manufacturing facilities in Mexico, Hungary, Thailand and China. Trade and shipping data indicate that JBS and Vancouros are major suppliers. 76 Lear itself appears to import a very small amount of wet blue from Brazil, but it is not possible based on publicly available data to estimate the number of hides that are exported from Brazil as wet blue and processed into semi-finished leather in other countries, such as Italy or China, before being sold to Lear. In the U.S., nearly all of the semi-finished leather Lear imported for use in its North American manufacturing facilities came directly from JBS, Vancouros and Viposa in Brazil." Much of this is transported overland to manufacturing facilities in Mexico that make leather seat covers used by Lear's North American seat manufacturing facilities. Figure 6 shows a schematic of the potential supply chain links between hides processed in Rondônia and Lear's supply chain in Brazil.

Company policies: All hat, no cattle?

The role of cattle in driving deforestation and crime in Brazil and the importance of supply chain traceability has long been known. Following public pressure generated by a Greenpeace exposé in 2009, JBS, Marfrig and Minerva signed a voluntary agreement to eliminate deforestation from their full supply chains by 2011. Since then, the companies have entered into legally binding TACs with federal prosecutors to monitor their supply chains and not purchase cattle raised on farms involved in illegal deforestation or slave labor. However, the scope of implementation has so far been limited to direct suppliers despite a large body of evidence showing that much of the deforestation is found in indirect supply chains.

Under increasing pressure as deforestation driven by cattle ranching in the Amazon has soared, JBS, Marfrig and Minerva have recently made new commitments to remove deforestation from their supply chains. While they contain significant improvements, these commitments would continue to allow cattle raised on illegally deforested land to enter the companies' indirect supply chains for many years to come. JBS has committed to trace its supply chain and eliminate deforestation as far as the suppliers of its direct suppliers by 2025 in the Amazon, 2030 in other biomes in Brazil, and by 2035 globally.80 Marfrig has committed to full traceability, including indirect suppliers, and deforestation-free supply chains in the Amazon biome by 2025 and the Cerrado and other biomes by 2030.81 Minerva has committed to zero illegal deforestation and traceability of its indirect supply chains by 2030 for all its operations in South America.82

When contacted by EIA for comment, none of the three companies commented specifically on the cases of exposure to illegal deforestation in their indirect supply chains presented in this report. JBS reaffirmed its existing commitments to partial traceability of its indirect supply chains by 2025. Marfrig stated that it is making "every effort" to monitor its direct and indirect suppliers and is currently monitoring 100% of its direct suppliers and 71% of its indirect suppliers in the Amazon biome. Minerva described monitoring indirect suppliers as the "greatest challenge in this sector" and stated that the company is in the early stages of monitoring indirect suppliers with assistance from third party initiatives.

The findings from EIA's analysis show why full traceability of indirect supply chains is needed urgently, combined with greatly improved verification procedures for GTAs and CARs. The weak government oversight of self-declared information in GTAs and CAR registrations make it easy for ranchers to adjust their supply chains to evade company monitoring systems. The extended implementation timelines for company commitments on traceability will give illegal ranchers ample opportunity to develop new laundering schemes to escape future detection.

Other major meat companies in Rondônia, such as Irmãos Gonçalves and Distriboi, have made no public commitments to exclude deforestation from their supply chains, nor have they signed legally binding agreements (TACs) with federal prosecutors. Neither company responded to EIA's request for comment

When contacted for comment, Viposa referred EIA to its purchasing and auditing policy for suppliers, which includes a requirement that suppliers not source from protected areas, Indigenous lands or embargoed farms, and acknowledged challenges in its supply chain, particularly with indirect suppliers, stating a commitment to "continuously working to be part of the solution." Vancouros said the slaughterhouses that supply it have signed commitments not to source from deforested land, and it has implemented a system to trace and audit the farms in its supply chain that already covers direct suppliers and some indirect suppliers, with a target "to achieve 100% coverage as soon as possible."

The Lear Corporation has published a "No Deforestation" *Policy*" committing not to source from "illegally deforested areas or areas of indigenous or other protected lands." 84 The company's 2020 Sustainability Report claimed that "100% of Lear's Brazilian leather" suppliers use geofencing to ensure they don't buy animals from farms involved in deforestation, invasion of indigenous and protected areas, or human rights *violations.*" 85 A version of this statement appears in the company's 2021 annual 10-K filing with the U.S. Securities and Exchange Commission, but with a key clarification. The report states that Lear's suppliers' monitoring systems are limited to "the farms from which they directly buy cattle or hides" (emphasis added).86 This indicates that Lear's policy goes no further than those of the major meat companies in Brazil and does not exclude cattle raised on illegally deforested land in the indirect supply chains of slaughterhouses, as in the cases presented in this report. Moreover, as this report also shows, two of Lear's biggest leather suppliers. Vancouros and Viposa, source hides from meat companies that regularly bought cattle directly from illegal farms inside a protected area and have made no

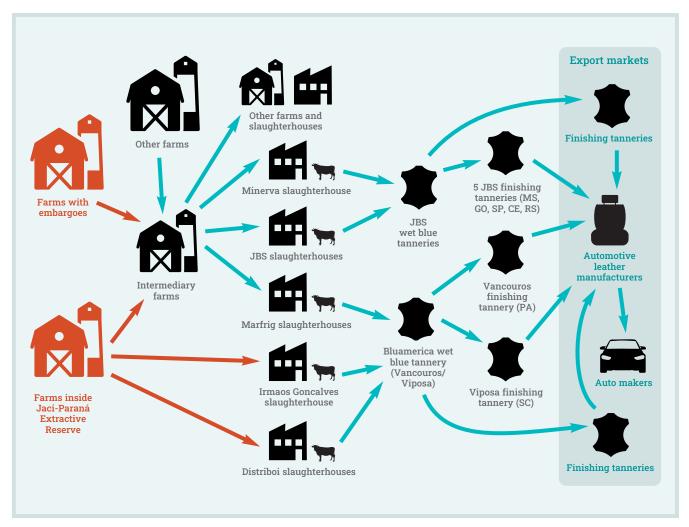


Figure 6 **Full supply chain diagram showing auto industry exposure to illegal deforestation**

public commitments to eliminating deforestation, whether legal or illegal, from their supply chains. When contacted by EIA for comment, Lear stated that its direct suppliers in Brazil use georeferencing and blockchain-based technologies to enhance supply chain ransparency, and the company is working with third parties to enhance traceability "deeper in the supply chain." Lear stated its commitment to investigate non-compliance with its policy and take appropriate action including termination of contracts and legal action against suppliers.

At the consumer-facing end of the supply chain are the auto manufacturers. At present, few major car companies have made concrete commitments to eliminate deforestation from their leather supply chains. The most recent sustainability reports published by Ford, GM, Stellantis, Volkswagen, Daimler and BMW contain no mention of deforestation risks associated with leather. On its website, Daimler states that its leather does not come from the Amazon, Cerrado, Pantanal, Gran Chaco, and Mata Atlantica biomes and that it is "reviewing the possibility of completely excluding Brazil

as a source of leather in the future" and "working intensively to identify further alternatives for genuine leather." GM acknowledges the potential deforestation risks associated with its use of leather in its 2020 submission to the Carbon Disclosure Project and states that it is in the "early stages of working with suppliers at the country of origin for sustainability and traceability."

When contacted by EIA for comment on the findings of this report, those car companies that did respond all issued strong statements against illegal deforestation in their supply chains and referred to their company policies. While all emphasized that they were monitoring their suppliers, they did not provide further details and did not confirm nor deny that they are sourcing leather from Brazil supplied by the leather companies in this report. Mercedes-Benz stated that only a small percentage of the leather in their supply chains comes from Brazil. BMW declared that from 2024, they will no longer have any leather from Brazil in their supply chain.

CONCLUSIONS

EIA's investigation shows how cattle raised on farms involved in illegal deforestation in the Amazon enter the supply chains of major meat and leather companies in Brazil, and the exposure this presents to the major car manufacturers sourcing automotive leather from companies like Lear Corporation that depend on Brazil for raw materials.

Despite operating in areas of extremely high risk for illegal deforestation such as Rondônia, Brazil's meat and leather companies have failed to adopt supply chain monitoring systems sufficient to ensure the cattle they purchase were not raised on illegally deforested land at some point in their life cycle. Further, in the absence of much more robust government oversight, GTA and CARs will continue to be vulnerable to fraud and abuse, forming a flimsy foundation for monitoring systems. The government and companies should immediately take steps to enhance their verification processes.

Contrary to claims made by some companies, leather is anything but just a by-product of meat production. Leather forms a significant part of the Brazilian cattle economy, one that is highly dependent on international markets. The sale of hides is an important contributor to slaughterhouse profitability in an industry where margins can be narrow. Brazil exports over 80% of the hides it produces, worth US\$ 1.4 billion in 2021. Importing countries and companies have a critical role to play in reducing deforestation and tackling crime in the Amazon and other critical biomes in Brazil. China is

particularly exposed as the largest importer of beef and leather from Brazil by value. Europe, led by Italy, is the second largest importer of hides by value, followed by the U.S. These markets need to lead the way in regulating their trade in commodities such as cattle that are driving deforestation.

EIA concludes that systems for tracking individual animals from birth to slaughter are necessary to keep cattle raised on illegally deforested land out of supply chains. The Brazilian government should develop and mandate such a system with the full support and cooperation of meat companies. New demand-side regulation in importing countries must also include birth to slaughter traceability as part of due diligence requirements.

The sale of hides is an important contributor to slaughterhouse profitability in an industry where margins can be narrow.

RECOMMENDATIONS

FEDERAL AND STATE GOVERNMENT

- The Rondônia state government should immediately cease issuing transport permits for cattle from illegal farms and provide comprehensive information about illegal cattle ranching to federal and state law enforcement agencies.
- The federal government should mandate full traceability of individual cattle from birth to slaughter and make available resources and technical support to rapidly phase in requirements, prioritizing areas where illegal ranching and ecosystem conversion are most prevalent.
- Relevant federal and state agencies need to be adequately resourced and staffed to fully implement and enforce existing laws, particularly those protecting the rights of Indigenous peoples and traditional communities and preventing the conversion of natural ecosystems.
- MPF and State prosecutors should investigate direct and indirect purchases of cattle raised illegally on protected areas, Indigenous lands, and farms where deforestation in violation of the Forest Code has occurred, and prosecute companies and individuals who violate the law.
- MPF and State prosecutors should investigate fraud and abuse in GTA and CAR systems and prosecute companies and individuals where violations are found. Both systems should be subject to regular, independent audits.
- The government should put in place and quickly implement a robust verification process for validating all CARs that includes field verification and deterrent penalties for the provision of false or inaccurate information by registrants.

MEAT AND LEATHER COMPANIES

- Adopt immediate zero tolerance policies and practices for sourcing, whether directly or indirectly, cattle raised in protected areas and/or on illegally deforested land.
- Support adoption by the Brazilian government of a mandatory system for tracing individual animals from birth to slaughter.
- Immediately adopt a policy to cease treating cattle traders as direct suppliers for the purposes of supply chain monitoring. Direct suppliers should be defined as those where cattle spent at least one stage in the process of breeding, rearing or fattening the animal.
- Carry out independent verification of CARs that have not been validated by the government.
- Commit to and support the broad adoption of a moratorium on the expansion of cattle ranching into native ecosystems in the Amazon, Cerrado, and other biomes.

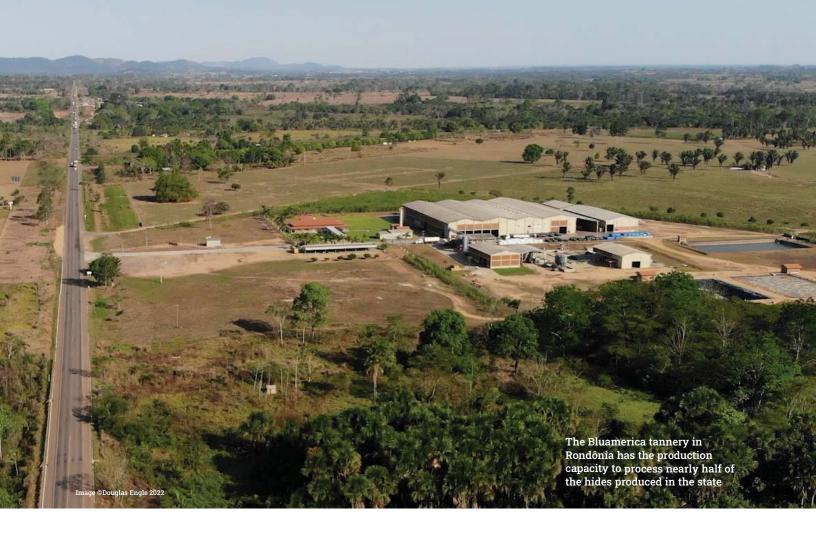
INTERNATIONAL COMPANIES AND INVESTORS

- Support a moratorium on the expansion of cattle ranching into native ecosystems in the Amazon, Cerrado, and other biomes.
- Support adoption by the Brazilian government of a mandatory system for tracing individual animals from birth to slaughter.
- Buyers should immediately cease purchasing cattle products with exposure to ecosystem conversion and illegal ranching unless full traceability from birth to slaughter and zero conversion can be demonstrated.
- Investors should divest from companies that are not able to guarantee their full cattle supply chains are free of deforestation and crime.

DEMAND-SIDE REGULATORS

- Adopt strong laws to effectively regulate against deforestation and human rights abuses in supply chains.
- Mandatory supply chain due diligence requirements should include all significant cattle products, in particular beef and leather, in their scope and require full traceability from birth to slaughter for cattle sourced from high-risk areas. In particular:
 - The United States should pass the FOREST Act;
 - The EU should pass and robustly implement its recently negotiated deforestation regulation;
 - The UK should include cattle products, particularly beef and leather, in its regulation and ensure due diligence requirements include full traceability from birth to slaughter;
 - China and other major markets should also show leadership in developing demand-side regulations to exclude deforestation and human rights abuses from supply chains.

Only a governmentmandated system for tracking individual animals from birth to slaughter will be sufficient to keep cattle raised on illegally deforested land out of supply chains.



METHODOLOGY

For its analysis, EIA used a large sample of information from Animal Transit Guides (GTAs), permits issued in Rondônia by the state animal control agency, Agência de Defesa Sanitária Agrosilvopastoril (IDARON), for the movement of cattle between registered locations. The sample includes about 1.1 million GTAs issued between January 2018 and September 2019. The sample includes nearly all GTAs issued in 2018 and roughly half of those issued in 2019. The sample for the period of January 2020 to May 2022 is understood to contain all the GTAs issued during this period. In total, the combined dataset included about 7 million GTAs. All analyses of GTAs discussed in this report were carried out using this dataset.

The name, personal identification number (Cadastro de Pessoas Físicas, or CPF) and address of individuals with farms registered inside Jaci-Paraná Extractive Reserve were obtained from a list compiled by IDARON as of January 2022. GTAs from our sample issued for moving cattle to and from farms inside Jaci-Paraná were identified by matching the name, CPF (where available) and address from the IDARON list with information in the GTAs. Of the 967 individuals and 730 unique addresses on the list, EIA identified 683 individuals with 712 farms receiving GTAs to move cattle to locations

outside Jaci-Paraná. Address formats listed on GTAs were found to vary for a farm over time. In cases with such discrepancies, the street and kilometer marker information were extracted from each address and matched to similar farm addresses with the same rancher name or CPF. These matches were manually reviewed for accuracy.

Since the GTA dataset used for the above analysis did not contain data beyond May 2022, EIA also used data made available by JBS, Marfrig and Minerva about their direct supplying farms to assess more recent transfers from the intermediary farms in the case studies presented in this report to the companies' slaughterhouses. In the case of JBS, additional leather traceability data made available by the company online was used to make further connections between direct suppliers, slaughterhouses and tanneries.⁸⁹

EIA obtained additional information through field research and conversations with company employees, including undercover methods

Shipment-level trade data from Brazil and the U.S. was purchased through Panjiva and used to analyze hide exports from JBS, Vancouros and Viposa.

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