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THE MURDER WEAPON

How construction
and agricultural equipment
are contributing to illegal
deforestation in the Amazon

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INTRODUCTION

The prediction that climate change will bring the Amazon to a point of no return, where degradation will prevent the forest from functioning as a climate regulator, has been confirmed by several studies. In March 2022, scientists from the University of Exeter, United Kingdom, demonstrated that the forest has lost resilience over the last two decades and can no longer recover in the same way after periods of extreme drought or fires¹ – indicative of a desertification process. The year before, another group of researchers had revealed that there are already parts of the Amazon emitting more carbon dioxide than it sequesters.² The warning is of global importance, as it is in the gas exchanges of the forest that a solution to the climate crisis caused by human activities since industrialization may lie.

The warming of the Earth, whose consequences are seen in several parts of the world, has led governments to assume commitments to keep the temperature of the globe below 2 °C in relation to pre-industrial levels³ and pressures companies from the most diverse segments to adopt socio-environmental policies that prioritise this objective.

Large agricultural machinery manufacturers, whose businesses could be jeopardized if the climate crisis is not controlled,⁴ have made public commitments that include the reduction of carbon dioxide emissions associated with their products.⁵ So did companies that produce and sell machines of the so-called yellow line, used in civil construction, mining and infrastructure.⁶ On another front, financial institutions have developed rules to prevent the financing of environmentally destructive activities.

All these commitments, however, have been insufficient to prevent this type of equipment from being used to deforest the Amazon, as revealed in this investigation by **Repórter Brasil**. Tractors, harvesters and other

machines are used in irregular plantations in areas where there should be a forest. Hydraulic excavators or wheel loaders accelerate devastation in illegal mines. Often there is public funding and connivance of brands and manufacturers who do not perform the required environmental checks before closing deals for the sale of machines.

The use of this machinery in activities that are harmful to the forest contradicts the environmental commitments made by the companies. Publicly, they declare their concern with the increase in global temperature. On a daily basis, they profit from an activity that is the main factor for greenhouse gas emissions in Brazil, deforestation.⁷

Through the Access to Information Act, **Repórter Brasil** found 157 occasions on which inspection teams seized or destroyed machinery of 19 brands⁸ in illegal mines opened in indigenous lands or conservation units in the last five years. This is a conservative figure, since the spreadsheets include hundreds of other records of machinery burning – for this report only those that explicitly state that the activity was taking place in protected areas were included. As most of the records kept by Ibama, the agency responsible for inspection, do not detail the brands, it is reasonable to suppose that other companies are involved.

The use of this equipment in mining accelerates the pace of destruction. The work of opening a crater to look for metal, previously done over a month with manual equipment or simple machinery, is now completed in a week, according to sources who work with this activity.

In the plantations, the lack of control over buyers of agricultural machinery leaves room for deforesting farmers to take out public loans to acquire this equipment. Although there are norms that forbid financing tractors, harvesters and other machinery for use in interdicted areas in the Amazon,⁹ **Repórter Brasil** found out that rural producers with interdictions in their properties bought equipment with resources from the National Bank for Economic and Social Development (BNDES) – funds intermediated by subsidiaries of international banks, such as Santander and Rabobank, or institutions linked to manufacturers, such as the John Deere Bank, the financial arm of the tractor brand.

In many cases, violators who receive public funds do not even pay environmental fines.

The BNDES does not offer full transparency to financing contracts to individuals,¹⁰ as it understands that they contain sensitive data and are protected by the General Law of Protection of Personal Data.¹¹ Thus, it is not possible to accurately measure the extent of the implication of banks in this type of relationship.

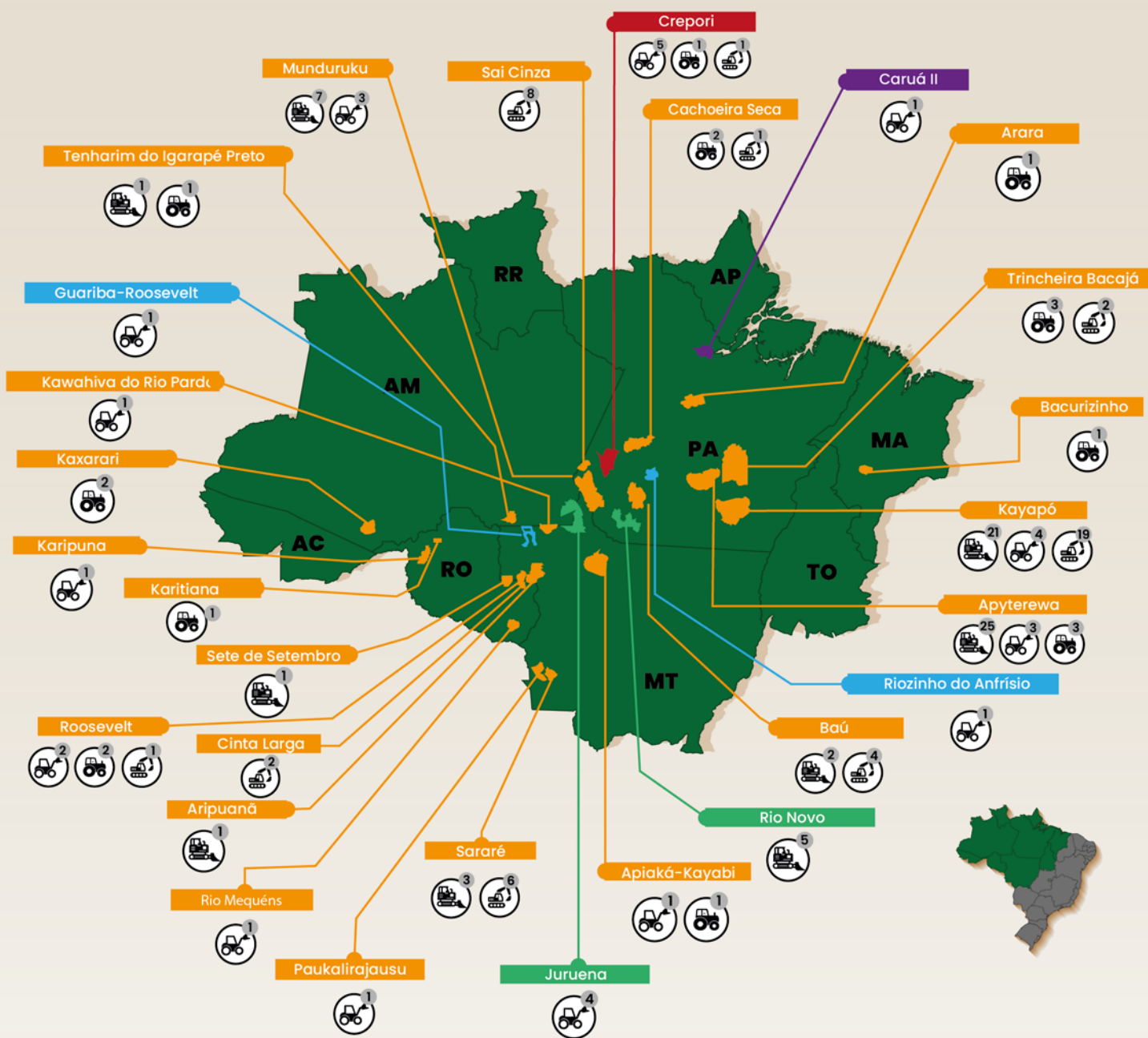
There are also cases of machinery being sold to deforesters without public financing. In 2020 and 2021, for example, CNH Industrial do Brasil sold machinery to one of the 25 largest deforesters in the Amazon,¹² a farmer who owes more than R\$ 60 million in environmental violations.

Manufacturers attribute the responsibility to buyers. Although the equipment can be fitted with devices capable of indicating its location, companies resist installing systems that could hinder or even prevent its use in protected areas. It is the case of the Code of Conscience,¹³ a free software capable of disconnecting equipment that crosses the perimeters of protected areas. There is no industry adhesion to the tool, which is free of charge.

While they resist taking steps to prevent criminal use of their products, manufacturers and machine shops are investigated for colluding with environmental crimes.¹⁴ In the field of financing, there is also pressure for new criteria to be adopted, restricting access to credit for deforesters. The Federal Court of Accounts (TCU), for example, decided to promote an audit on BNDES¹⁵ contracts after **Repórter Brasil** revealed cases of farmers with interdictions receiving financing.

DEADLY MACHINES

Tractors, excavators, loaders and backhoe loaders seized in protected areas in the Amazon between 2016 and 2021

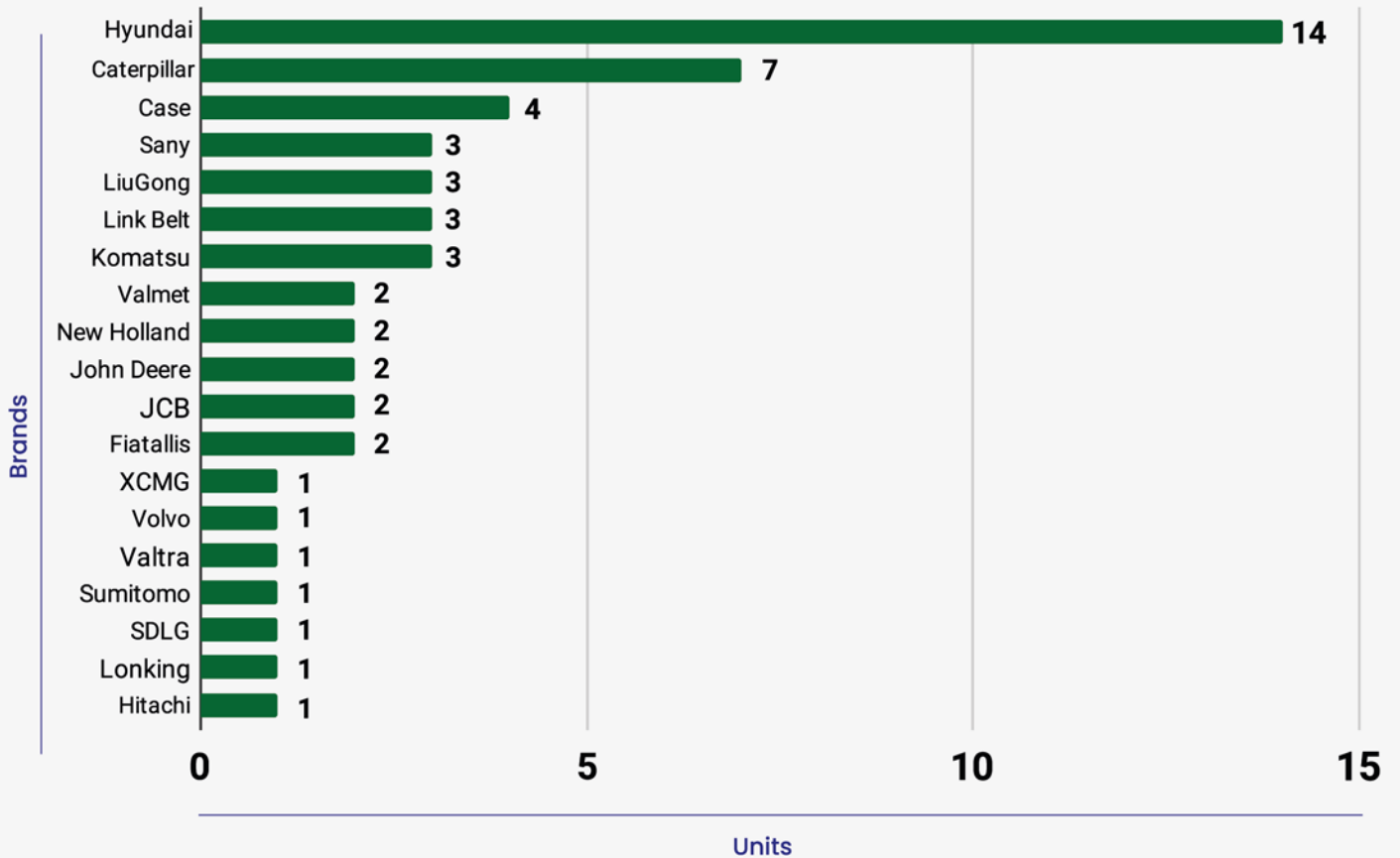


- Indigenous Land
- National Park
- Extractive Reserve
- Settlement Project
- National Forest

- Backhoe loader
- Wheel loader
- Tractor
- Excavator

SEIZURES ACCORDING TO BRAND NAME

In units



103

Unidentified brands



157

Total number of seized machines



THE GLOBAL INDUSTRY OF MACHINERY AND EQUIPMENT

The companies identified in this report are among the largest in the world in their segments and have revenues in the tens of billions of dollars.

According to the German consulting firm Statista, specialized in market and consumer data, the North American Deere and Company, owner of the John Deere brand, is the largest manufacturer of agricultural machinery in the world. In 2020, it sold almost US\$ 32 billion in equipment¹⁶ such as tractors, seeders, harvesters and other machines with embedded high technology.

Statista's projection for sales in this market is for growth of 4.4% per year for the 2018-2026 period. The technological advance, which makes new launches quickly surpass previous lines, is the springboard of the business: "the advent of artificial intelligence seems to bode well for an industry that is looking to add autonomous tractors and drones to its segments", assesses the consulting firm.

Although not among the largest markets, Brazil is a point of interest for the heavy machinery industry, especially agricultural machinery. This equipment measures and executes every step in the large, automated fields of the Centre-West region, where most of the soybean production is concentrated. Along with the United States, Brazil is the world's largest producer of the grain.¹⁷ In 2020, the agricultural and livestock sector accounted for 26.6% of the Gross Domestic Product (GDP).¹⁸

The market for the yellow line is also broad in a country of continental dimensions, which demands infrastructure works and has mining as a relevant activity.

Of the 15 largest global brands, according to Statista, nine have factories in Brazil.¹⁹ In November 2021, the governor of Pará, Helder Barbalho, received Chinese representatives of the XCMG brand interested in installing an assembly plant "of machinery for the mining

sector”.²⁰ “An important investment for our state, which will generate employment opportunities and income”, celebrated the politician on Twitter.

In fact, among the various subdivisions of the machinery sector in Brazil, represented by the Brazilian Machinery and Equipment Industry Association (Abimaq), the two segments that grew the most in 2021 were agriculture and yellow line, with results classified as “exceptional”.²¹

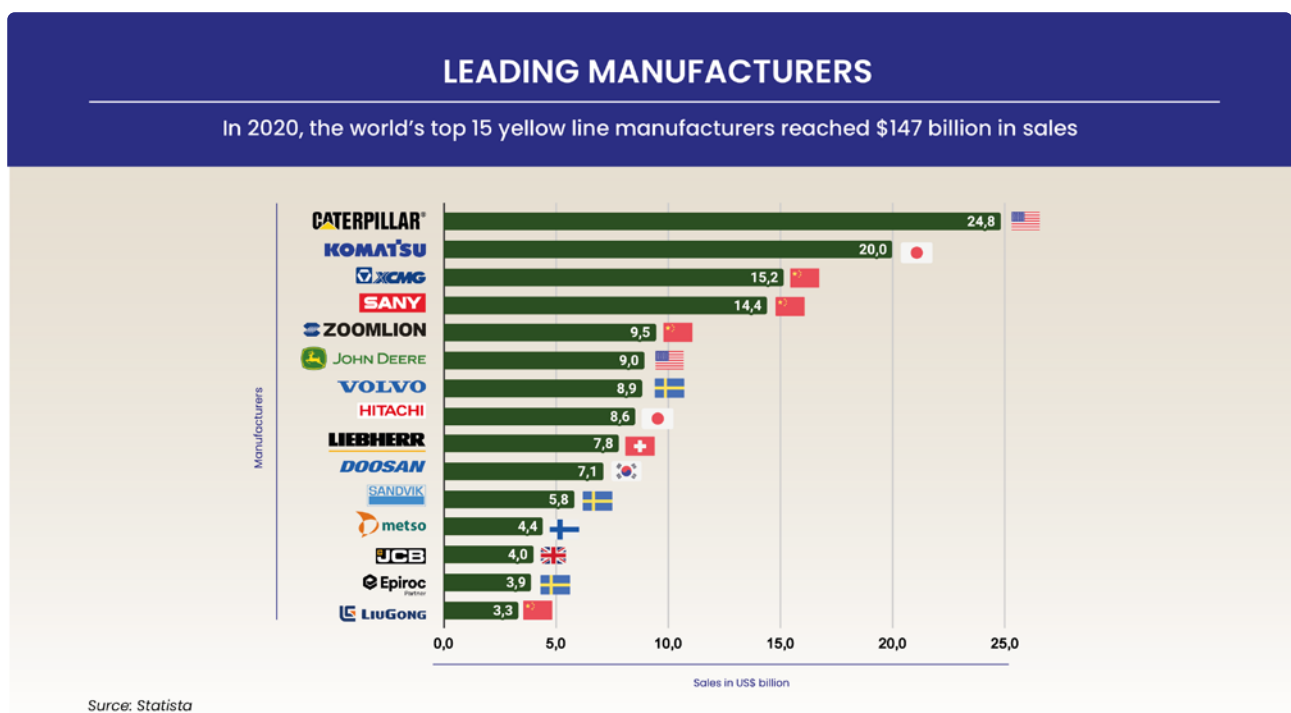
For the first time since the beginning of the 2000s, sales of agricultural machinery exceeded R\$ 40 billion, a leap of 43% in relation to the results of the previous year – which had already been the third best in the series.

The data released by Abimaq for the yellow line is even more impressive: sales volume grew 62% in 2021 – the year in which the country faced a recession,²² although the final GDP result

was positive.²³ There were 29,249 units sold, considering bulldozers, backhoe loaders, wheel loaders, hydraulic excavators, motor graders, road rollers, skid steer loaders and telehandlers.²⁴

In Brazil, mineral exploration is allowed in two modalities: corporate, in which companies apply for mining rights, operate on a large scale and for a long term, and *garimpo*, a type of small-scale mining which is, in theory, artisanal mining, with rudimentary tools, in reduced areas and volumes. These miners, also known as *garimpeiros*, may apply for authorisation to extract minerals individually or collectively, via cooperatives.

In 2020, *garimpo* corresponded to 54% of the mined area in Brazil.²⁵ As almost all activity is concentrated in the Amazon, the pressure on this territory is greater. And it has been advancing at a faster pace in the last decade, coinciding with the expansion of the use of machinery in mining.





CLANDESTINE MINING IN INDIGENOUS LANDS AND CONSERVATION UNITS

According to MapBiomias, between 1985 and 2009 the rate of expansion of wildcat mining in the forest area was 1.5 thousand hectares opened per year. As of 2010, it reached 6.5 thousand hectares/year. Statements collected by **Repórter Brasil** in the region of Itaituba (PA), known as “nugget city” due to its relationship with gold extraction (including illegally, in Munduruku lands²⁶), indicate that the popularization of equipment coincided with the increase in mining.

The growth of the illegal mining target area in the Amazon possibly accelerated even more from 2020, when the latest data was collected. The Covid-19 pandemic caused the price of gold to skyrocket on the international market, as the metal is considered a safe asset during crises.²⁷ The price went from R\$ 197, at the end of 2019, to R\$ 354 in August 2020. Since then, it has not fallen below the level of R\$ 300.²⁸

In the Amazon, wildcat mining grows mainly within protected areas, such as Indigenous Lands (according to MapBiomias, 495% growth between 2010 and 2020) and Conservation Units (301% increase in the period). The Constitution forbids mining inside Indigenous Lands and restricts it only to specific cases of national interest. But Congress is about to vote on a bill, formulated by Jair Bolsonaro’s government, that may end this restriction.²⁹

According to satellite images obtained by MapBiomias, the Indigenous Land most affected by illegal mining is the Kayapó in Pará, where 7,602 hectares have already been occupied by the activity. Between 2017 and 2021, Ibama seized and destroyed 44 pieces of equipment in that territory (backhoe loaders, wheel loaders and hydraulic excavators).

Most of the records do not inform the brands of the seized equipment. In the group of records

with identified machines are products from Case Construction, Caterpillar, Hyundai, JCB, Komatsu, LiuGong, Lonking, Sany, Volvo and XCMG. A photo of a 2017 operation also in the Indigenous Land shows New Holland³⁰ equipment in use in illegal mining – although the brand is not mentioned in the agency’s records. “We can see the tracks of people who have been there digging”, says an indigenous person of the ethnic group, who asked not to be identified.³¹

The Munduruku Indigenous Land, also in Pará, comes next with 1,592 hectares of its territory occupied by wildcat mining. In May 2020, Greenpeace flew over the region and showed that mining activity “occurs in a very intense way” in the northeast of the Indigenous Land.³² It also identified the opening of a mine within the limits of the neighbouring Sai Cinza Indigenous Land, of the same ethnic group. “Tractors and PCs (hydraulic excavators), in addition to recently opened access roads, were registered in these two territories”, says the report.

The two lands of the Munduruku people are located in the region of Jacareacanga, whose port is mainly operated by illegal mining and where **Repórter Brasil** was in December 2021. It is from there that boats depart to the Munduruku and Sai Cinza Indigenous Lands, the Crepori National Forest and the Rio Novo National Park – places where Ibama noted having destroyed ten hydraulic excavators, wheel loaders and bulldozers between 2018 and 2020.

The Yanomami Indigenous Land, between the north of Amazonas and the west of Roraima, has 414 hectares of illegal mining, according to MapBiomias. However, calculations made by the Socio-environmental Institute (ISA)³³

show that 1,926 hectares of forest have already been degraded by illicit mineral extraction in the territory. In 2021, the Palimiu village, on the banks of the Uraricoera river, was the epicentre of a mining war against indigenous people, with rifle shots, gas bombs and threats.³⁴ The conflict culminated in the accusation that two children of the ethnic group were sucked to death by a mining dredge pump.³⁵

The Amazonian Network of Geo-referenced Socio-environmental Information (RAISG) has identified 2,576 illegal mines³⁶ in the Amazon. Not all *garimpos* are illegal in Brazil.

The National Mining Agency (ANM) authorises small mining ventures through Small-Scale Mining Permits (PLG). It is a simpler and cheaper license than corporate mining. There is no need for prior research or full environmental licensing. The fee to open the process is R\$ 204.13 per PLG, compared to R\$ 1,012.73 for a traditional application.³⁷

But, from the environmental point of view, the destruction may be even greater in legalized *garimpos*, since the inspection is prevented from acting on an activity authorised without a real assessment of the environmental impact. In April 2022, the Federal Justice of Pará ordered the cancellation of licenses issued by the municipal secretariat of Environment of Itaituba for a mine that operated in a preservation area in the basin of the Tapajós River,³⁸ whose “polluting potential was too great and of regional scope”.

In the assessment of the Federal Prosecution Service (MPF), while the legal activity is considered artisanal and small-scale, the damage caused is large-scale. The devastation, according to the agency, is amplified with the adoption

of heavy machinery. “The initial investment for the acquisition of this type of machinery – rafts, dredges, tractors, excavators – is in itself incompatible with the idea of rudimentary and simplicity that historically permeated the imaginary conception of *garimpo*. This equipment can cost anywhere from R\$ 60,000 to R\$ 2 million”, state members of the MPF who prepared the study “Illegal gold mining in the Amazon: legal frameworks and controversial issues”.³⁹

“It is not that there has been a change in the digger’s profile”, warns the public prosecutor in Amazonas, Ana Carolina Haliuc Bragança. “The small-scale miner must continue to be understood as a person who is disadvantaged, who uses rudimentary mechanisms for his practice, and who must be protected. But these other people who operate in the small-scale market should not even be called small-scale miners, because they are, in fact, businessmen who make use of large amounts of capital and an enormous structure to organise the extraction of mineral resources. This is totally incompatible with the idea of small-scale miners in the Constitution, it is something new and, therefore, should be given a new name and a different treatment from that which was thought of for the figure of the person who is disadvantaged”, she argues.

Last year, the National Mining Agency announced that it is studying a change in the legislation⁴⁰ to “meet the technical, environmental and social demands that have arisen” regarding legal small-scale mining. One of the proposals is to limit to one thousand hectares the maximum area that can be requested by PLG in the Legal Amazon – today it is possible to open up to 10 thousand hectares in the forest if the applicant is a cooperative.



Yellow line machine works in illegal mining inside Munduruku Indigenous Land



DEALERS OF ITAITUBA, THE “NUGGET CITY”

Although they are all used for digging and pushing earth, the equipment used in small-scale mining has different names and functions. A backhoe loader has a fixed cab and shovels in the front and back, while excavators are equipped with a long arm and a rotating cab. Smaller machines have wheels, but the ones most used in small-scale mining are the tracked ones, which are bigger.

As the gold is usually underground, the main job of the excavator is to remove the top layer of earth. The rest of the job is done with water jets, engines and mud suction pumps.

Besides the ease of movement in rough terrain, the machines with long arms may have accessories other than shovels on the end (like a kind of claw). They cut down the forest to open clearings for illegal activity and also transport supplies, fuel and other items needed for mining.

In the shops of Itaituba, the “nugget city”, a new excavator at the recently opened XCMG dealer costs between R\$ 800,000 and R\$ 1.05 million. In the BMG Hyundai shop, it can be paid in up to 20 instalments.

Illegal miners try to hide the machines in the forest⁴¹ when there are inspections. In December, a Federal Police operation found camouflaged backhoe loaders.⁴² Instead of the traditional yellow colour, they had a military-style paint job to make it difficult to spot them.

Although Itaituba has no relevant civil construction activity or legalized mining, there are Caterpillar and John Deere dealers in the municipality. There is a wide range of products on offer, but it is difficult to get them ready for delivery.

One of these dealers, Caterpillar’s Sotreq, helped Rio de Janeiro-based Sotreq Group to gross revenues of R\$ 5.4 million in 2019, reaching 138th

position in the ranking of Brazil's 200 largest companies according to Valor Econômico.⁴³

The companies claim that they perform legal and environmental compliance checks, but the controls do not prevent part of their equipment from being used for illegal activities. Local vendors report that in order to access credit lines from manufacturers, it is not necessary to submit an authorisation issued by the National Mining Agency for *garimpo* or commercial mining – the only document that ensures the legality of the activity.

“We organize the documents in the shop, give an opinion on the financing and send it to the head office”, explained a saleswoman. “Sometimes they ask for complementation, it depends a lot”, she warned, signalling that eventually the paper

may be demanded. In any case, all shops have “their own banks”, as employees refer to it: credit offered directly by the local entrepreneur.

Several small-scale mines owners with whom **Repórter Brasil** spoke assure that at least one shop in the city offers the possibility of obtaining credit without signing a contract. If the instalments are not paid, the shop sends a mechanic to the mine to turn off the equipment financed until the “bill” has been paid off.

An excavator partially destroyed during an inspection is also valuable. If the damage was not great, it can reach R\$ 250 thousand. In junkyards on the urban stretch of the Transamazônica highway in Itaituba, mechanics look for parts that have been saved from the authorities’ fire.



Yellow line machines being repaired in a workshop in Itaituba; the local economy revolves around deforestation and illegal mining

Businesses that revolve around the universe of these machines flourish in the municipality, such as mechanical repair shops. Numerous blacksmith places build steel plates to transport the machines over the mud of the road or rivers. Freighters, restaurants, bars, supermarkets, and petrol stations, all supply themselves with money from illegal mining, which has escalated to unprecedented volumes with the adoption of heavy machinery.

In the region, the machines are also objects of admiration. There are miniatures for sale at street vendors. Country music artists are given replicas when they perform in the municipality. Hand-painted panels depict the yellow giants opening mining “lanes” in disputed Saturday night venues along the Tapajós riverfront.

LOCAL DEALERS REPORT THAT, TO OBTAIN ACCESS TO CREDIT LINES FROM MANUFACTURERS, IT IS NOT NECESSARY TO PRESENT AN AUTHORISATION ISSUED BY THE NATIONAL MINING AGENCY FOR SMALL-SCALE MINING OR COMMERCIAL MINING – THE ONLY DOCUMENT WHICH ENSURES THE LEGALITY OF THE ACTIVITY



Excavator dealer in Itaituba, a municipality that has no legalised mining or relevant civil construction activity



The municipality of Itaituba, southwest Pará, the “nugget city” on the banks of the Tapajós River



DEFORESTING FARMERS

Deforestation in the Amazon sets consecutive records. In 2021, it was the highest in a decade, according to the Institute of Man and Environment of the Amazon (Imazon), which does satellite monitoring.⁴⁴ From January to December, 10,362 km² of the forest was destroyed.

The volume of felling in 2021 represented a 29% increase compared to 2020, which in turn was already the worst rate since 2012. In two years, almost an entire Sergipe⁴⁵ came down in the northern region of the country.

In January 2022, a rainy season when fires and deforestation are unfavoured, the Amazon registered a volume of deforestation alerts 400% higher⁴⁶ compared to the same period in 2021, according to monitoring by the National Institute for Space Research (Inpe).

The falling forest is replaced by economic activities in a familiar cycle. It begins with loggers,

who select and cut down the most valuable trunks for sale. When all the rest is cut down, the area may become pastureland for cattle. The animals prevent the natural recomposition of the vegetation, are resold and enter the supply chain of large slaughterhouses, as already shown by numerous complaints.⁴⁷

Cattle also help to evade inspection because they do not require much care in rearing. It is often impossible to register a fine or an interdiction in the name of a person, because those responsible are absent. After that comes the soy. It is normally introduced when enough time has passed so that satellites no longer show deforestation as a novelty. Then it becomes viable to grab the land⁴⁸ and put it into production.

Agricultural machines are present at more than one point in this cycle. One of the main methods for clearing large areas quickly is the so-called "correntão".⁴⁹ A very thick chain is stretched

between two bulldozers, which advance over the forest, knocking down everything in their path. It is not difficult to buy a used bulldozer of this type over the internet – often recommended for the specific job of deforestation. “It can push anything”, advertise the sellers.⁵⁰

Experts link the increase in deforestation with the positive results of sales of this type of machinery.⁵¹

The large Brazilian crops that feed the international appetite for commodities such as soy and corn are highly mechanised. Tractors with GPS, automated harvesters and pesticide spraying drones allow producers precision in planning and executing each stage of agricultural work. The Agricultural Census⁵² confirms the growth of mechanisation. In 2006, around 406,000 establishments used machinery; in 2017, 1.4 million.

But part of this equipment is being used by deforesters in the Amazon, a biome where sectorial

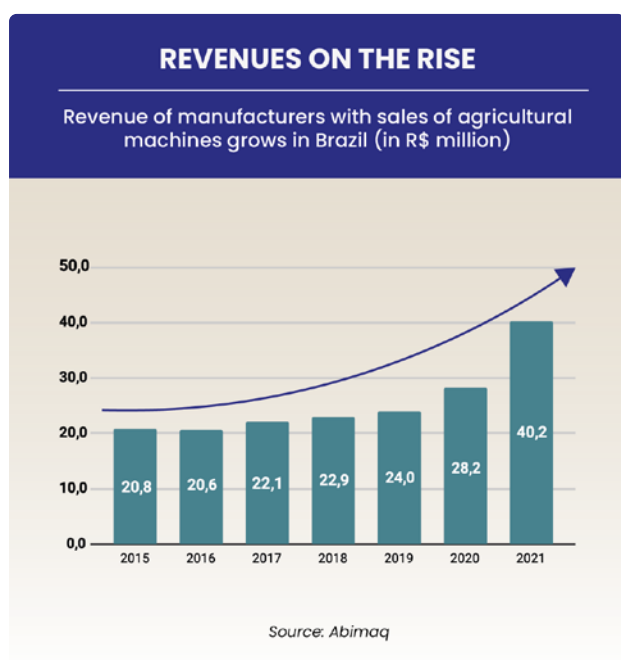
agreements, such as the Soy Moratorium and financial market regulations, should be preventing the production of grains in interdicted areas.

Inspection teams locate this type of equipment in actions to combat deforestation, as recorded by the Mato Grosso State Secretariat for the Environment (Sema-MT) in February 2022. At the time, two tractors were seized from a farm where the deforestation had been detected by satellites. The area was interdicted for agricultural production and the owner of the tractors tried to escape by driving one of the machines.⁵³

Repórter Brasil identified loans made through commercial banks or banks linked to agricultural machinery assemblers that were used to purchase equipment used on farms that are under interdictions. The information was obtained by cross-checking public data on the BNDES website with data on environmental interdictions and fines.

Most of the cases were loans aimed at purchasing John Deere machinery and made possible by the brand's own bank, with resources from the BNDES. The financing was done in the automatic indirect modality, in which BNDES releases the credit, but the contract is carried out by another institution. It is a way for the public bank to reduce its exposure to risks and lack of payment.

In all, R\$ 28.6 million in financing was found for five producers with interdictions in their names issued by Ibama for deforestation in the Amazon, all via the financial arm of the machinery manufacturer. Three of these producers had only one property in the municipality for which the financing was made, indicating that the loan may not have complied with the rules



established by the Rural Credit Manual of the Central Bank (BC), which prohibits loans to interdicted properties in the biome.

Repórter Brasil also found a case of direct sale of Case machines, belonging to the CNH group, which also manufactures New Holland equipment, to one of the 25 largest deforesters in the Amazon.

Other companies involved in this chain are Santander and the De Lage Landen, of the Rabobank group, which intermediated loans with BNDES credit line dedicated to the acquisition of agricultural machinery (Moderfrota). These are contracts that may be in breach of the Central Bank's determinations because they were destined for deforesting farmers.

KNOW THE CASES

Alexandra Perinoto

Soy producer Alexandra Perinoto has only one active Rural Environmental Register (CAR, in its Portuguese acronym) in the municipality of Cláudia, in Mato Grosso, which belongs to the Amazon biome.⁵⁴ Between 2016 and 2019, she received R\$ 4.5 million from the BNDES to buy John Deere tractors and other equipment in that location. However, in 2021, her property was interdicted after Ibama found illegal deforestation of "1,188.618 hectares of native forest in the Amazon biome, in a Legal Reserve Area, without proper authorisation from the competent environmental agency".

The Rural Credit Manual of the Central Bank is explicit in determining that interdictions for

illegal deforestation after the loan should lead to suspension of the release of instalments until the environmental regularisation of the property. If this does not occur within one year, the contract is considered to have expired early. Even so, in April 2022 the loans to Perinoto were listed as "active" on the BNDES Transparency Portal.

A previous investigation by **Repórter Brasil**⁵⁵ had already shown that Perinoto planted soybean on interdicted lands in the municipality of Marcelândia (MT). Despite the irregular origin of the production, she supplied grains to companies that are signatories of the Soy Moratorium⁵⁶ – an industry pact that blocks the commercialisation of grains produced in deforested areas of the Amazon after 2008. Among the clients that bought soybean from Perinoto are suppliers of some of the world's largest grain traders, such as Cargill, Bunge, and Cofco. Perinoto is also answering a lawsuit⁵⁷ for deforestation in Sinop (MT), investigated within the scope of the Amazônia Protege operation, carried out by the Federal Prosecution Service.

Perinoto owes R\$ 18 million in environmental fines to Ibama. The amount is almost double all the loans she received from BNDES to buy John Deere machinery, R\$ 11 million.

The farmer did not respond to **Repórter Brasil's** requests for an interview.

Milton Casari

Another producer who has only one Rural Environmental Register in the municipality where he took the loan, but who also has an interdiction, is Milton Casari. Between 2018 and 2020, he spent nearly R\$ 1 million to buy John Deere machinery

and equipment in Paranaíta (MT), in the Amazon biome⁵⁸ – the same place where, since 2012, it has been interdicted by Ibama.

Although the violation is in his name, the interdiction is about 1.5 kilometres from his land, according to the limit declared by the producer to the National Rural Environmental Register System (Sicar). This may have facilitated the contracting, since the Central Bank prohibits the concession of rural credit for properties in the Amazon that are under interdictions, but does not impose restrictions for the owners of these areas to obtain loans.

In an interview with **Repórter Brasil**, Casari admitted that he was economically using the interdicted area when the inspection took place.

He rented the area from a neighbour for raising cattle. Thus, the illegal felling of the forest was not his responsibility, which is why he is questioning the fine. According to his defence in the administrative process, “the environmental agent concluded that destruction occurred based on false allegations”. Ibama maintained the fine and the interdiction, but the process had not yet been concluded at the beginning of 2022. The full explanations are in the appendix of this report.

Casari also received another R\$ 3.8 million in financing in Alta Floresta (MT). Although they are in different municipalities, their land is next to each other, in a border area – so there would be no difficulty in applying the machines to crops on either side and reaching the interdicted area.



Sany excavator in a deforested area between the municipalities of Jacareacanga and Itaituba

Paulo Vieira Gonçalves

Paulo Vieira Gonçalves took a loan from BNDES via Santander in August 2017. The R\$ 3 million obtained, with a payment term of seven years, was intended for the purchase of machinery for a soybean plantation in Bom Jesus do Araguaia (MT).

Two years later, 943 hectares of his Eldorado Farm, in the Amazon biome, were interdicted. In February 2018, he was also fined in an inspection promoted by Sema-MT, which led to a new interdiction.

As already explained, the Central Bank rules determine that interdictions for illegal deforestation subsequent to the loan must lead to the suspension of the release of instalments until the regularisation of the property.

Gonçalves has three other CARs in his name in the same municipality. It is possible that he used a CAR with no interdiction when applying for the loan. The registrations are contiguous, indicating the existence of a single farm.

Fractional registration of lots in the CAR goes against the Ministry of the Environment's (MMA) rules for completing the registration. According to the regulation, "owners or possessors of rural properties that have more than one property or possession in a continuous area must make a single registration for these properties".⁵⁹

The family contests the fines issued by Ibama and Sema-MT at the administrative level, but admits that they affect their property. "One interdiction was an area burnt on a neighbouring property, but the satellite image shifted and ended up catching a border within our area. The

larger area interdicted by Ibama was a fire that did not start on our property", the producer's son, Paulo Saturnino Gonçalves, told **Repórter Brasil**. The full explanations can be read in the appendix of this report.

Adenir Rodrigues Augusto

The producer was benefited in 2020 from the BNDES Moderfrota program, which makes loans to buy machinery, although he had three Ibama interdictions between 2013 and 2016. The crimes caught include the illegal deforestation of a 119-hectare area in Pirâmide Farm, in Tabaporã (MG), in the Amazon biome.⁶⁰ The interdictions cover the entire area of the property. Thus, the credit released through Santander may not be in compliance with the Rural Credit Manual.

Even with the full interdiction, soybean planting on the farm continued. Satellite images consulted by **Repórter Brasil** and analysed by a specialist show that he cultivated the land after the interdictions, between 2014 and 2022.

Besides the Pirâmide Farm, Adenir owned, at the time of the loan, in 2020, another farm registered in the CAR: Lot 396, 40 hectares, also in Tabaporã. It was registered in the system one month before the contract was signed.

Adenir was also the target of a lawsuit over alleged fraud involving Sema-MT to enable illegal logging.⁶¹ He was even arrested in Operation Jurupari, in 2010.⁶²

Adenir did not answer the messages sent by **Repórter Brasil**. By telephone, he said he "had nothing to explain" and then hung up.



Forest area destroyed by illegal mining in the Munduruku Indigenous Land

Juliano Augusto Zambonato

A cattle raiser in Rondônia (RO), Zambonato obtained a BNDES loan to purchase machinery (Moderfrota line) in March 2020. The intermediation was done by De Lage Landen (DLL) Brasil, a subsidiary of the Dutch group Rabobank.

A year earlier he had been fined by Ibama for the destruction of forest on the Dois Irmãos Farm, in the capital Porto Velho. The area was interdicted, although the interdiction was not issued in the name of Zambonato or any other person. In 2010 he had been fined in the same municipality for illegal use of fire in an area of 237 hectares of pasture.

In addition to the federal fines, he was fined in June 2020 by the Rondônia state environmental inspection, again due to illegal deforestation at Dois Irmãos Farm. The inspection resulted in a state interdiction of 94 hectares and R\$ 405,000 in fines.⁶³

Zambonato owns four contiguous areas registered in CAR in Rondônia, separated only by the BR 364 highway. They all form a single property. Of the four registrations, only one does not overlap with interdicted areas.

The office responsible for the farmer's accounts refused to provide his telephone number. A request for a call back was ignored.

Plinio Roque Pressi

In 2008, Plinio Roque Pressi was fined for illegally deforesting 95 hectares on the Querência do Araguaia Farm, in Querência (MT), in the Amazon biome. The area was interdicted. In 2011, he was fined for not complying with the interdiction.

The producer obtained a suspension of the interdiction in 2009, but Ibama reinstated the impediment four years later. In 2020 he obtained two Moderfrota/Finame loans, one of them granted by De Lage Landen (DLL), in May, and another by Cresol, in April. Both before the courts decided once again to halt the interdiction of the area, in July 2020.

In January 2021, the farm again had areas interdicted because its activities were preventing the regeneration of the vegetation. The interdiction was issued by Sema-MT.⁶⁴

Pressi has CAR registrations for two other properties in the municipality. **Repórter Brasil** called and sent messages to Pressi's son, Nei Pressi, but there was no reply.

Adão Ferreira Sobrinho

Despite examples of loans with evidence of non-compliance with the Central Bank's rules vetoing financing on interdicted lands in the Amazon, the Climate Policy Initiative estimates that this regulation prevented the devastation of 2,700 km² of forest between 2008 and 2011.⁶⁵

The rule, however, failed to stop BNDES loans to Adão Ferreira Sobrinho for the purchase of machinery, despite his debt of R\$ 7 million with Ibama and the six interdictions he has in his name.

Sobrinho is responsible for cutting down 2,000 hectares of native vegetation in the Cerrado, including a 192-hectare portion of the Parque das Nascentes do Rio Parnaíba Conservation Unit, on the border of the four states that form Matopiba (Maranhão, Tocantins, Piauí and Bahia), the new Brazilian agricultural frontier.

Even after being sentenced to two years in prison⁶⁶ (replaced by a fine and community service), in 2020 the offender obtained new loans from the BNDES. He then relapsed into the crime and was fined four more times, adding a new debt of R\$ 1.7 million for cutting down another 457 hectares of Cerrado.

When contacted, Sobrinho explained that “the property benefited with the financing is located in Marianópolis do Tocantins, 1,000 kilometres away from those charged. This property has never suffered any constriction, especially of an environmental nature”. The full text can be read in the appendix of this report.

Carlos Alberto Mafra Terra

With at least 15 fines in 17 years and R\$ 60 million in debts with Ibama, Mafra Terra is considered one of the 25 largest deforesters in the Amazon.⁶⁷ Since 2005, the farmer has had 7.8 thousand hectares interdicted in Cumaru do Norte (PA), due to illegal deforestation in São Joaquim Farm. The area blends in with the perimeter of other farms registered by the same producer in the CAR – contiguous areas and, in some cases, overlapping.

In 2013, 2017 and 2018, he was fined repeatedly for preventing the regeneration of the forest targeted for illegal deforestation, as well as continuing to raise and sell cattle on interdicted land.

Even with this record, CNH Industrial Brasil sold machines to the producer in Cumaru do Norte between 2020 and 2021, including wheel loaders and backhoe loaders. The sales were made in cash, without financing.

After the sales identified by **Repórter Brasil**, he was fined again – February 2021 – for continuing to produce in interdicted areas.

In a note, the producer says that “he exercises rural activity in several rural properties without any interdictions or restrictions” and that “an interdiction does not cover the entire property, but rather a portion of a specific area, having originated from facts practised by third parties, including squatters and previous owners, and it is certain that no rural activity is carried out in these specific locations”. The full text can be read in the appendix of this report.



THE ROLE OF THE INDUSTRIES IN THE DEVASTATION

Over the months, **Repórter Brasil** has tried to contact all the machinery companies cited to hear about their policies to prevent and combat the use of their equipment in areas of illegal deforestation and clandestine mining. Most manufacturers declined to respond.

Of the 19 brands of machinery found in illegal mining operations inside Indigenous Lands or Conservation Units, only six responded.⁶⁸ CNH Industrial Brasil, the owner of the brands Case Construction and New Holland, said it would not comment. Caterpillar, Hitachi, Hyundai, JCB, LiuGong, Lonking, Sany and XCMG never answered. Fiatallis and Valmet no longer manufacture this type of equipment.

All the companies that responded attributed responsibility for the use of the machines to the buyer. They mention clauses in the purchase and sale agreement that prohibit their use for illegal activities, which suggests weaknesses in controls.

“Despite the existence of robust contractual clauses and other compliance standards in place at AGCO, monitoring of the product throughout its lifetime is still not possible, as the owner who has undergone the compliance check can resell it to a third party”, said AGCO, which owns the Valtra brand.

“By purchasing the excavator, the customer becomes primarily responsible for the operation in which it will be allocated”, Link-Belt said.

The companies also say that they request documentation that proves the legality of the activity where the excavator will be applied. But they either do not detail what this is or list mechanisms that are not included among those required of legal miners, such as the Operation License from the National Environment Council.

The Small-Scale Mining Permit (PLG) is a simplified procedure. The only licence required is

the environmental licence,⁶⁹ which can be issued even by a municipal body, often without proper inspection or care.⁷⁰

The companies have a technology called telemetry, which informs the precise location of the equipment, but it can be deactivated by the operator, preventing tracking. The companies also argue that, with the General Law of Personal Data Protection (LGPD), they need to ask for the client's authorisation to access information about the use of the machines.

"When available, our monitoring only includes the technical operation of the equipment. Because of data privacy legislation, activation of the service depends on express authorisation from the customer. Therefore, it is not possible to have access to information about improper use of the machines from a legal and juridical point of view", clarifies Volvo.

Among the companies that did not respond is the largest construction machinery company in the world, Caterpillar, and the most apprehended by Ibama in illegal activities, Hyundai. Both list broad socio-environmental commitments on their websites, but the policies regarding illegal mining in Caterpillar's Sustainability reports and Hyundai's Annual reports only mention initiatives to ban the use of "conflict minerals" from their supply chains.

"Trade in minerals or raw materials that may cause environmental or human rights issues in conflict (high-risk) countries, such as Indonesia and Africa, is strictly prohibited. As we respect the recommendations made by

international organisations to prevent social and environmental problems caused by mining, we also actively participate in responsible mineral sourcing activities", says Hyundai.⁷¹

"Caterpillar supports the Responsible Minerals Initiative (RMI) for supply chain transparency and industry collaboration for greater business intelligence. Year after year, we strive to increase supplier response rates, with an emphasis on priority 3TG (acronym for the set of conflict minerals: tin, tungsten, tantalum and gold) suppliers", notes the world's number one company in its sustainability report.⁷²

There is no mention of how mining in Indigenous Lands in Brazil puts indigenous peoples and the environment at risk and generates violent conflicts, such as those that recently occurred in the Yanomami Indigenous Land.

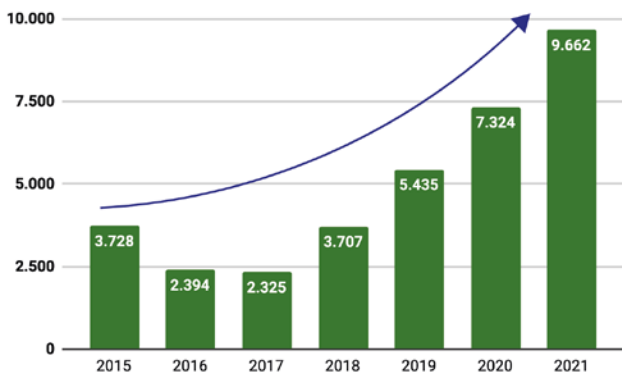
AMONG THE COMPANIES THAT DID NOT RESPOND IS THE WORLD'S LARGEST CIVIL CONSTRUCTION MACHINERY COMPANY, CATERPILLAR, AND THE MOST SEIZED BY IBAMA IN ILLEGAL ACTIVITIES, HYUNDAI

MORE MACHINES

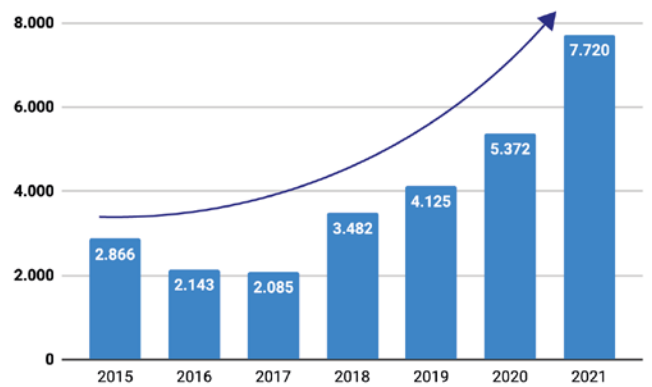
Evolution of sales in Brazil of the most frequently seized machines in protected areas (in units)



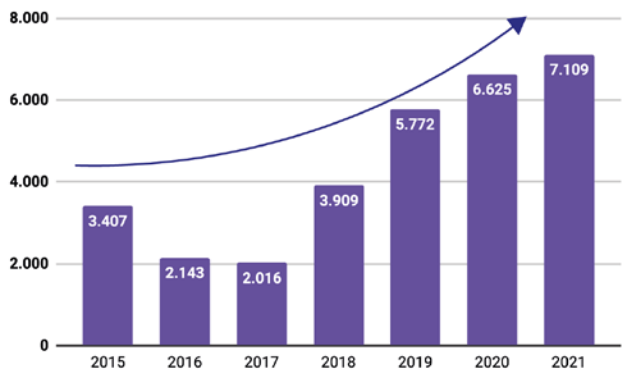
Excavator



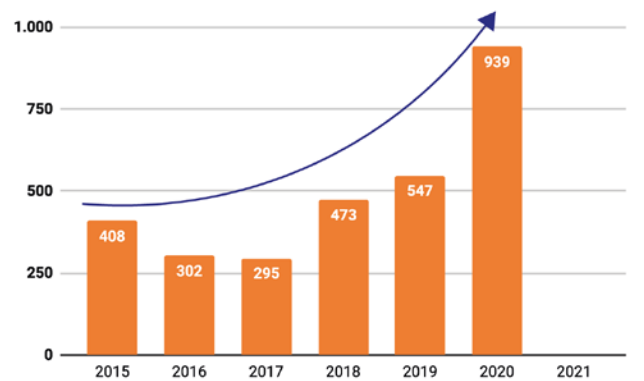
Wheel loader




Backhoe loader



Tractor



Source: Abimaq

A photograph of a Hitachi excavator, primarily orange and grey, positioned in a clearing within a dense forest. The excavator's arm is raised, and it appears to be working on a pile of rocks or debris. The background is filled with lush green trees and foliage, creating a natural setting for the heavy machinery.

THE ROLE OF THE FINANCIAL SECTOR

The machines cited in this report are sold in the R\$ 1 million range. As these are not trivial operations, manufacturers operate with their own banks, as in the case of John Deere Bank, the financial arm of the North American brand. Commercial banks also offer credit lines in this market.

In all cases raised in this investigation, the resources came from the BNDES. But the loans were made in the automatic indirect modality, with contracts managed by partner banks, such as John Deere, Santander, De Lage Landen (DLL), a subsidiary of Rabobank, and Cresol. This is a BNDES strategy to reduce its exposure to credit defaults, since it is the partner bank that guarantees payment, not the final recipient.

The John Deere Bank was the third institution that operated the most financing in the last decade in the Safra Plan, according to the BNDES ranking.⁷³ The Brazilian agricultural credit policy

favours the company, for which Brazil is the second-largest market⁷⁴ in the world.

In fourth place in the ranking appears Santander. CNH Bank, the financial arm of the Case Construction and New Holland brands, is listed in sixth place. And DLL and Cresol are, respectively, the eighth and ninth largest operators of the Safra Plan.

Part of the loans were made via the BNDES' Moderfrota line – intended for the purchase of tractors, harvesters, cutting platforms, sprayers, planters, seeders and coffee processing equipment.⁷⁵

In any case, the sale of machinery with agricultural credit must comply with the Central Bank's Rural Credit Manual.⁷⁶ The section on monitoring and inspection⁷⁷ lists techniques that should be applied to check the regularity of the loan, including remote sensing and even on-site visits to farms.

The “Social, Environmental and Climatic Impediments” section,⁷⁸ on the other hand, prohibits loans to “properties where there is an interdiction in effect due to the economic use of illegally deforested areas” in the Amazon. If the interdiction is imposed after the concession of the credit, the guideline is to suspend “the release of instalments until the environmental regularization of the property”. And if this does not occur within 12 months, the loan should be considered overdue.⁷⁹

For all the cases mentioned, we asked the banks what criteria were adopted to ensure that the machines would not be used on interdicted properties. We also requested the CAR registration number used by the farmer in the contract, as a way to find out if the norms of the Rural Credit Manual were being blatantly disrespected or if the producers might be taking advantage of loopholes to obtain financing. Banks state that they do not analyse specific cases under the allegation that the contracts are protected by commercial confidentiality.

In automatic indirect loans, the request is received and analysed by the partner institution, which approves the credit and then requests BNDES to approve and release the resources.⁸⁰ It is the commercial bank that checks the environmental compliance of the properties to which the machines are destined.

In practice, the buyer chooses a machine and requests financing from the company’s bank in the shop itself, which gathers the documents and sends them to headquarters. With the opinion of the partner bank in hand, BNDES authorises the operation.

There is no evidence that the banks involved adopt effective measures to curb relatively simple schemes to circumvent environmental rules. Practices such as, for example, requesting a loan documentally linked to a property without environmental liabilities to purchase machinery that is then moved to other farms belonging to the same producer.

Among the banks mentioned, only Cresol did not respond. Santander, DLL and John Deere guarantee that they comply with all Central Bank requirements, and that sustainability is a core value of their operations.

However, in all these cases, including BNDES, part of the information was denied on the grounds of commercial confidentiality. Thus, it is impossible to prove whether there was negligence in environmental verification in cases where loans were granted to farmers with only one interdicted property in the municipality. It is also not possible to know what might have failed in the cases of properties with fractional CARs.



AN AGENDA FOR THE SECTOR

Although banks and manufacturers guarantee to carry out socio-environmental checks on buyers of agricultural machinery, the evidence indicates shortcomings in such verification. “Conducting due diligence on borrowers before lending to them is an obvious solution”, notes Chris Moye of Global Witness’ Amazon team.

Brazil has public lists, easily accessible, in which it is possible to consult fines, interdictions, use of labour under conditions analogous to slavery and legalised small-scale mining permits.

The problem is that, in the case of machinery for crops, all verification is done based on the CAR presented by the borrower. This is a self-declaratory document whose verification by the states moves slowly – at the end of 2021, only 1% of the farms registered in the national system had had their data validated after analysis by technicians.⁸¹

In addition, the Rural Credit Manual imposes a check only on the farm declared by the owner as the destination of the credit. But it is common for deforesters to divide their properties into more than one CAR in order to have clean documents. Therefore, specialists analyse, it would be advisable to also check the names of the borrowers.

“It is contrary to Brazilian law to register false information in the CAR. The problem is that no one is ever held accountable for any false declaration. Therefore, the federal government should be helping states to hold accountable farmers who falsely declare information on the CAR”, adds Moye.

In addition to satellite images, which can determine whether interdicted areas are out of use for environmental recovery, consultation with other properties in the name of the loan beneficiary could reduce the risk.



Caterpillar excavator on the banks of the Tapajós River

In the case of *garimpos*, in addition to consulting the document that shows whether the area in question has a Small-Scale Mining Permit (PLG), WWF Conservation specialist Deborah Goldemberg points out that satellite checking makes it possible to verify whether there is, in fact, extractive activity in the region in question, which would rule out attempted fraud. “A minimum transparency package is necessary. Consultations like these take less than ten minutes, it’s a very easy check”, she says.

Another positive change would be to incorporate in the Rural Credit Manual the prohibition of credit associated with illegally deforested areas in other

biomes, not only in the Amazon. Scientists have already warned that the Cerrado may collapse in less than 30 years if agribusiness continues advancing at the current pace.⁸²

To BNDES, the main recommendation is to increase audits and risk assessment on indirect automatic loans. “Given what **Repórter Brasil** has exposed in this report, the outsourcing of responsibility to partner banks seems to have failed”, says Moye.

“Banks like Santander are also failing in other areas, such as investing in companies like JBS, despite the beef giant’s well-reported failures in its non-deforestation commitments. That’s why we want laws passed in Europe and the US to require these banks to conduct due diligence before investing in companies or before providing financial services”, says Global Witness Director of Forest Advocacy, Veronica Oakeshott.

Analysts are also suspicious of the possibility of banks linked to the manufacturers operating the loans and being in charge of environmental checking of borrowers.

A more incisive stance by the Central Bank and the BNDES on the commercial banks that operate these loans is also desirable. Or even an attitude

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IF THE BANK WERE TO SUFFER CRIMINAL OR CIVIL LIABILITY FOR ANY FAILURE IN THE SOCIO-ENVIRONMENTAL CONTROL OF LOANS, THE INCENTIVE TO REDUCE NEGLIGENCE, INTENTIONAL OR OTHERWISE, WOULD BE STRONG.

CHRIS MOYE,
Global Witness researcher

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from the Federal Court of Accounts to demand greater responsibility from these agents. “If the bank were to suffer criminal or civil liability for any failure they make in the socio-environmental control of loans granted, then the incentive to reduce negligence, intentional or otherwise, would be strong, because they know they would be held accountable in case of failure”, says Moye.

Activating technologies that report the location of machinery in real time, cross-referencing this data with the perimeters of protected areas – an easily accessible data – or interdicted areas, would be a solution to prevent this equipment from operating in prohibited places.

Projects that use technology as an ally in the fight against illegal mining already exist. In a report on smuggled gold in Brazil,⁸³ the Igarapé Institute listed alert systems that detect, through sound, human activity in the forest caused, for example, by chainsaws, excavators and boat motors.

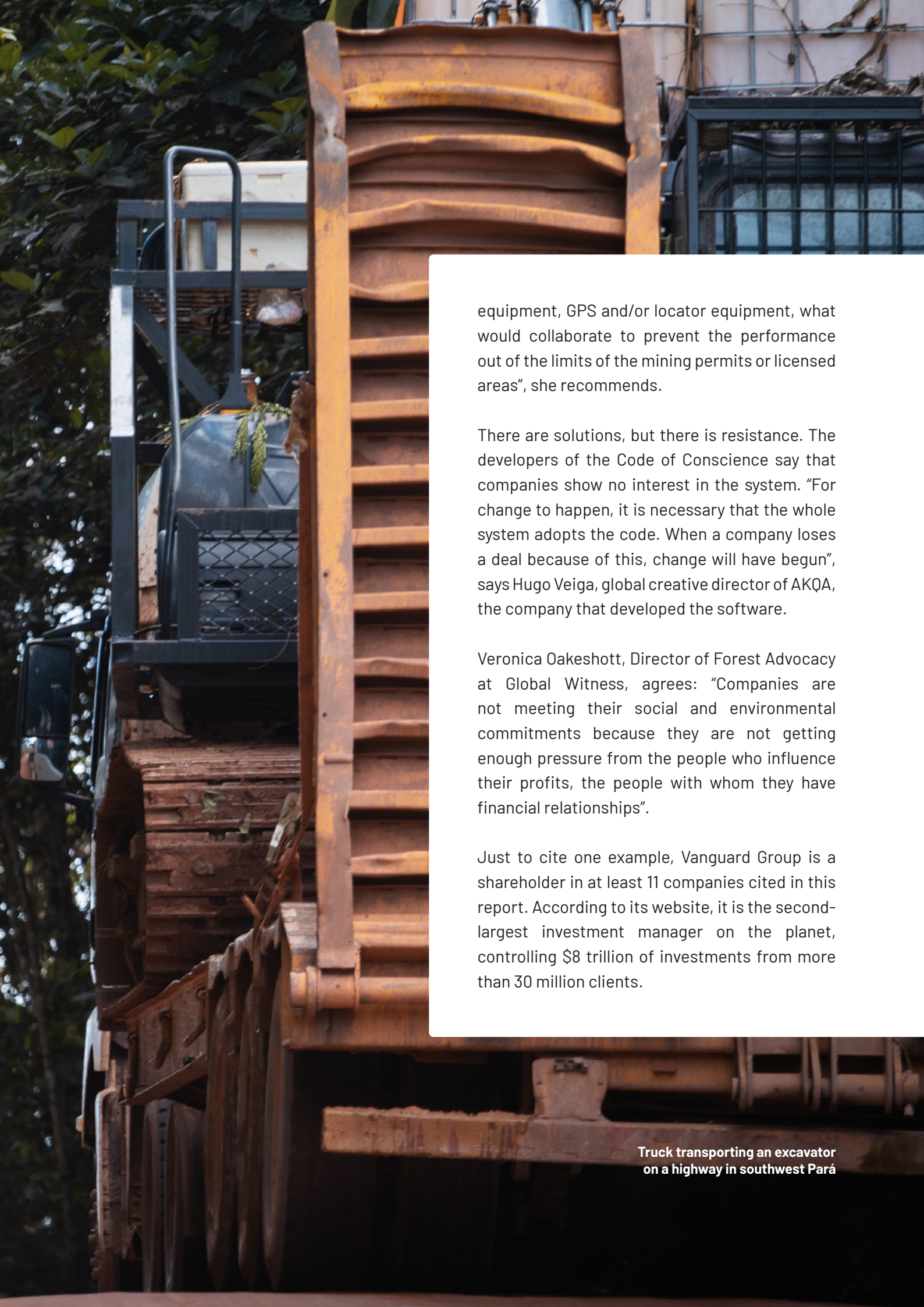
Another innovative solution is the Code of Conscience: a program that, inserted in the onboard computer of a machine, issues an alert or even turns off the vehicle’s engine when it approaches a protected area. Because it is stored in the machine’s memory, it is not possible for the operator to switch it off, as happens with the telemetry provided by the manufacturers.

This technology can also be installed in old equipment. “It is a free and attractive solution because it is preventive: it would act before deforestation happens, turning off the machine and preventing destruction”, says Goldemberg.

The Federal Prosecution Service suggests the creation of a federal technical registry that accredits and monitors the individual use of mining equipment. The measure would allow to assess the damage potential of the machines based on the size and amount of equipment planned for use in each mining operation. “Besides that, it is necessary to require, in the



Excavator parked in Jacareacanga, southwest Pará, a region where this type of machine seems to be part of the landscape



equipment, GPS and/or locator equipment, what would collaborate to prevent the performance out of the limits of the mining permits or licensed areas”, she recommends.

There are solutions, but there is resistance. The developers of the Code of Conscience say that companies show no interest in the system. “For change to happen, it is necessary that the whole system adopts the code. When a company loses a deal because of this, change will have begun”, says Hugo Veiga, global creative director of AKQA, the company that developed the software.

Veronica Oakeshott, Director of Forest Advocacy at Global Witness, agrees: “Companies are not meeting their social and environmental commitments because they are not getting enough pressure from the people who influence their profits, the people with whom they have financial relationships”.

Just to cite one example, Vanguard Group is a shareholder in at least 11 companies cited in this report. According to its website, it is the second-largest investment manager on the planet, controlling \$8 trillion of investments from more than 30 million clients.

**Truck transporting an excavator
on a highway in southwest Pará**

APPENDIX

Full explanations

The prediction that climate change will bring the Amazon to a point of no return, where degradation will prevent the forest from functioning as a climate regulator, has been confirmed by several studies. In March 2022, scientists from the University of Exeter, United Kingdom, demonstrated that the forest has lost resilience over the last two decades and can no longer recover in the same way after periods of extreme drought or fires⁸⁴ – indicative of a desertification process. The year before, another group of researchers had revealed that there are already parts of the Amazon emitting more carbon dioxide than it sequesters.⁸⁵ The warning is of global importance, as it is in the gas exchanges of the forest that a solution to the climate crisis caused by human activities since industrialization may lie.

The warming of the Earth, whose consequences are seen in several parts of the world, has led governments to assume commitments to keep the temperature of the globe below 2 °C in relation to pre-industrial levels⁸⁶ and pressures companies from the most diverse segments to adopt socio-environmental policies that prioritise this objective.

Large agricultural machinery manufacturers, whose businesses could be jeopardized if the climate crisis is not controlled,⁸⁷ have made public commitments that include the reduction of carbon dioxide emissions associated with their products.⁸⁸ So did companies that produce and sell machines of the so-called yellow line, used in civil construction, mining and infrastructure.⁸⁹ On another front, financial institutions have developed rules to prevent the financing of environmentally destructive activities.

All these commitments, however, have been insufficient to prevent this type of equipment from being used to deforest the Amazon, as revealed in this investigation by **Repórter Brasil**. Tractors, harvesters and other machines are used in irregular plantations in areas where there should be a forest. Hydraulic excavators or wheel loaders accelerate devastation in illegal mines. Often there is public funding and connivance of brands and manufacturers who do not perform the required environmental checks before closing deals for the sale of machines.

The use of this machinery in activities that are harmful to the forest contradicts the environmental commitments made by the companies. Publicly, they declare their concern with the increase in global temperature. On a daily basis, they profit from an activity that is the main factor for greenhouse gas emissions in Brazil, deforestation.⁹⁰

Through the Access to Information Act, **Repórter Brasil** found 157 occasions on which inspection teams seized or destroyed machinery of 19 brands⁹¹ in illegal mines opened in indigenous lands or conservation units in the last five years. This is a conservative figure, since the spreadsheets include hundreds of other records of machinery burning – for this report only those that explicitly state that the activity was taking place in protected areas were included. As most of the records kept by Ibama, the agency responsible for inspection, do not detail the brands, it is reasonable to suppose that other companies are involved.

The use of this equipment in mining accelerates the pace of destruction. The work of opening a crater to look for metal, previously done over a month with manual equipment or simple machinery, is now completed in a week, according to sources who work with this activity.

In the plantations, the lack of control over buyers of agricultural machinery leaves room for deforesting farmers to take out public loans to acquire this equipment. Although there are norms that forbid financing tractors, harvesters and other machinery for use in interdicted areas in the Amazon,⁹² **Repórter Brasil** found out that rural producers with interdictions in their properties bought equipment with resources from the National Bank for Economic and Social Development (BNDES) – funds intermediated by subsidiaries of international banks, such as Santander and Rabobank, or institutions linked to manufacturers, such as the John Deere Bank, the financial arm of the tractor brand.

In many cases, violators who receive public funds do not even pay environmental fines.

The BNDES does not offer full transparency to financing contracts to individuals,⁹³ as it understands that they contain sensitive data and are protected by the General Law of Protection of Personal Data.⁹⁴ Thus, it is not possible to accurately measure the extent of the implication of banks in this type of relationship.

There are also cases of machinery being sold to deforesters without public financing. In 2020 and 2021, for example, CNH Industrial do Brasil sold machinery to one of the 25 largest deforesters in the Amazon,⁹⁵ a farmer who owes more than R\$ 60 million in environmental violations.

Manufacturers attribute the responsibility to buyers. Although the equipment can be fitted with devices capable of indicating its location, companies resist installing systems that could hinder or even prevent its use in protected areas. It is the case of the Code of Conscience,⁹⁶ a free software capable of disconnecting equipment that crosses the perimeters of protected areas. There is no industry adhesion to the tool, which is free of charge.

While they resist taking steps to prevent criminal use of their products, manufacturers and machine shops are investigated for colluding with environmental crimes.⁹⁷

Link-Belt

1) In the case of machines for which we have serial numbers, is it possible to verify under what conditions they were acquired (city, year, buyer) as well as what documents were presented at the time of purchase to guarantee that the use would not be in an irregular area?

Answer: Link-Belt excavators can be purchased through the company's subsidiary in Brazil or its network of authorised distributors. When acquiring the excavator, the customer becomes the main responsible for the operation in which it will be allocated. We monitor the equipment in the field,

through our distribution network, when parts or some type of maintenance service are required. Some customers choose to hire third-party parts and services, even losing the equipment's warranty.

2) Are there clauses inserted in Link-Belt's contracts blocking the sale of equipment for illegal activities? Can you list such clauses here?

Answer: Yes. In the case of mining activities, the factory, when analysing the credit concession for the purchase of the equipment, requests a series of documents, including the operation licence for the land that will be exploited. In the purchase and sale agreement, there is mention that the equipment must only be used in legal activities.

3) What are the criteria and documents required by Link-Belt to the buyer of machinery to ensure that the equipment is not used in illegal activities?

Answer: At the time of the sale, we request the Operation License, which is required by the National Environment Council (CONAMA), in the Plan for the Control of Environmental Impacts in Mining. Thus, we verify the legality of the operation of the land, where the equipment will initially operate. It is important to remember that this information is provided by the buyer, at the time the excavator is purchased. We are talking about wheeled equipment with a useful life of at least 10 years. During the excavators' life cycle, they move throughout the national territory and can be sold to third parties without notice to the manufacturer.

4) Does Link-Belt operate financing for its machines? In the affirmative case, do the resources come from any credit line from public or development banks in Brazil? Which ones?

Answer: Link-Belt operates its own credit lines. All negotiation and payment conditions are negotiated with the company's subsidiary in Brazil and with the distributors' network. There is no public investment in favour of our company.

5) Does Link-Belt intend to review the current measures taken as a precaution against illegal use of its equipment in face of evidence of machines operating in illegal mines in the Amazon?

Answer: The X3E line is equipped with the telemetry system, which allows the location of the equipment, as long as the operator does not deactivate this feature. Through telemetry, it is possible to collect operating data to facilitate the development of new solutions and monitor the progress of the excavator in the field, in addition to enabling maintenance planning, as well as the location of the equipment. In compliance with the General Law of Personal Data Protection (LGPD), the manufacturer will have access to the data upon prior authorisation from the excavator's owner.

AGCO (Valtra)

AGCO is a company committed to providing the best solutions for its customers through a wide portfolio of innovative products that help our farmer customers to produce more with less impact on the environment. As a farmer-focused organisation, AGCO promotes its activities and contracts based on high standards of compliance and corporate governance, following rules and regulations wherever we do business.

In Brazil, AGCO operates its sales activities in accordance with a specific regulation applied to all automotive and agricultural equipment manufacturers, called the "Ferrari Law". Under this law, our dealers are responsible for selling our products to end customers, with a few exceptions applied to direct sales (allowed in specific scenarios). In operations where farmers apply for bank financing, such institutions are responsible for all compliance checks and all necessary documents in accordance with the standards issued by the Central Bank of Brazil and their own ethics and compliance rules (in addition to an exhaustive check on purchasers' documents and environmental licenses).

Despite the existence of robust contractual clauses and other compliance standards at AGCO, applied and observed by our dealers and also those in banking institutions, monitoring the product throughout its useful life is still not possible, since the original owner (and which has undergone compliance verification) can resell it to third parties without the Manufacturer's knowledge, i.e. the customer is responsible for operating and maintaining the machine, besides being its owner.

Volvo and SDLG

As one of the brands of the Volvo Group, through a joint venture, SDLG meets exactly the same compliance requirements and is also incorporated in the Responsible Selling process. Our code of conduct applies to both brands.

1) Does the company include in its contracts for the sale of machinery compliance clauses that block the sale and use of equipment for illegal activities? Can you list these clauses here?

Answer: As signatories of the United Nations (UN) Global Compact and supporters of the 2030 Agenda for Sustainable Development, we have a strong commitment to sustainability, including the Responsible Selling process. Every sale of new machinery takes into consideration a careful assessment of the buyer's profile. We look at their commercial and legal history and the applications to which the machines will be subjected, also looking at any situation of irregular use in the past or potential misuse. If any irregularity or inadequacy is detected, the sale will not go ahead. We understand the seriousness of this issue and we are committed to combating the sale of machines for use in illegal operations, through joint action, supported by legislation and also by government action. Unfortunately, as manufacturers, we cannot have control over the sale process of used equipment and its entire life cycle, when the machine is resold consecutively.

2) What are the criteria and documents required by the manufacturer from the buyer to ensure that the equipment would not be used for illegal activities?

Answer: Various customer information, their profile, the entire nature of the operations of their machines in the country are checked and possible past inadequacies or even the potential for some irregularities are verified. If any non-compliance situation is identified, the deal is not made. Volvo's commitment to respecting the environment is non-negotiable. As we said before, unfortunately, it is not possible to monitor the machine after the sale by the first owner without the interest and request of the new buyer.

3) Does the company have ways of tracking its equipment such as tractors and hydraulic excavators to know if they operate in prohibited areas?

Answer: Our telemetry technology is designed, through the consent of the purchaser, to monitor general machine operating data, such as engine technical information and operating cycle, which can ensure machine productivity and prevent accidents. This is a solution in force in recent years and contemplates only the latest generations of equipment. The machine park in operation in Brazil is in the tens of thousands of units and has a high average age. Only a part of this contingent is equipped with monitoring technologies. We emphasize that, when available, our monitoring contemplates only the technical operation of the equipment. Due to data privacy legislation, the activation of the service depends on the express authorisation of the customer. Therefore, it is not possible to have access to information on the inadequate use of the machines from a legal and juridical point of view.

4) Does the company intend to review the current measures taken as a precaution against the illegal use of its equipment in the face of evidence that there are machines operating in illegal mining operations in the Amazon?

Answer: We remain strongly committed through our Responsible Selling process to ensure that new machine will not be sold to a potentially illegal operation that does not reflect our publicly and globally held values and commitments. We have a very strict code of conduct. Our rules and principles strictly prohibit participation in businesses that violate the laws and regulations in the countries where we operate.

Komatsu

Komatsu has very strict guidelines for the sale of its products; the contract with its distributors has strict compliance clauses that do not allow the sale of its equipment for any and all illegal activities. Before starting any sale, Komatsu conducts a study of each client to learn about its environmental and business practices, and thus tries to ensure that the equipment will be used legally.

Furthermore, Komatsu bank, which is responsible for a large part of the financed sales, also has strict compliance clauses and conducts a careful analysis of its clients before any deal is made.

However, it is not possible to track the entire life cycle of a machine – which can last decades – when it is resold by third parties.

John Deere

John Deere, as well as its dealer network, believes that any illegality must be dealt with by the courts. The Company's objective is to guarantee and promote Social and Environmental Responsibility, both internally and externally, in accordance with its Code of Business Conduct and the Dealer Code of Conduct. With 185 years of history and a legacy of integrity, quality, commitment and innovation, the company reaffirms its strict controls on ethics and how it conducts its business, thus guaranteeing the brand's values and the trust of employees, dealers and customers.

John Deere Bank

The John Deere Bank strictly complies with all relevant regulations and standards for granting credit to its customers, with careful evaluation of the area that will benefit from a particular product. Whenever necessary, satellite image reports of the areas benefited by the credit operation are issued by a specialised service provider, to certify that there are no restrictions due to environmental infractions.

In the cases mentioned, as in any other case, John Deere Bank points out that, in accordance with the Rural Credit Manual (MCR), as well as with the guidelines of the Brazilian Central Bank (BC) and other regulatory and inspection bodies, rural credit concessions are only issued after validation of the Rural Environmental Register (CAR).

In cases of risk, the Institution has a Social and Environmental Responsibility Committee, controlled by Compliance, which evaluates the operations that are not in conformity with the control organs, immediately preventing the continuation of the operations.

John Deere Bank, as well as the entire Deere & Co, aims to ensure and promote Social and Environmental Responsibility, both internally and externally. Thus, the social and environmental risk analysis of customers is conducted in an integrated manner with the credit assessment of operations, in compliance with applicable environmental legislation, as well as the presentation of the required environmental licenses.

It is worth reinforcing that the sustainability guidelines are one of John Deere's main pillars. In addition, when purchasing John Deere machinery, the beneficiary assumes legal responsibility for the equipment.

Santander

For reasons of banking secrecy, Santander does not comment on specific situations of customers. The Bank has procedures and policies that establish socio-environmental risk assessment criteria for agribusiness operations, and invests in the constant improvement of its practices.

In the analyses, the official public databases on slave labour, Ibama and ICMBio interdictions, indigenous lands, Conservation Units, archaeological sites and quilombola communities are considered. The process includes the verification of the benefited/production area and its surroundings, as well as the guarantee rural properties involved. The entire analysis is based on the Rural Environmental Register and, if necessary, additional documents may be requested.

The institution adds that, besides its own socio-environmental risk policy, it observes all the rules in force for granting loans to rural producers.

De Lage Landen

Bank De Lage Landen Brasil SA (“DLL”) is a national financial institution ultimately controlled by De Lage Landen International BV, a credit institution located in the Netherlands, having no direct relationship with Banco Rabobank Brasil SA with respect to its credit operations in Brazil. DLL International B.V is, in turn, controlled by Coöperatieve Rabobank U.A.

DLL has internal controls with the objective of verifying the compliance of its customers with respect to socio-environmental requirements required by current regulations and in its internal policies, including the Rural Credit Manual (“MCR”), when applicable. In addition, for the concession of financing, clients are required to commit to comply with environmental legislation and to immediately inform DLL in case of any irregularity.

Any situation that may characterise a non-compliance with the rules and practices adopted by DLL will be investigated with due depth and seriousness and addressed in accordance with the applicable legislation.

In response to your questions about specific operations, we inform you that DLL is unable to provide any information or make any additional comments, in respect of bank secrecy and applicable legislation.

BNDES

It is important to clarify that operations entered into by the BNDES in the automatic indirect modality are determined by instructions issued by the BNDES System and communicated through Bulletins to the Accredited Financial Institutions (IFCs), which follow them during the entire process of analysis, classification, contracting and monitoring of financing.

Such type of financing contemplates two distinct legal relations, namely, (i) one entered into between the BNDES System and the Accredited Financial Institution; and (ii) another agreed upon between the IFC and the Final Beneficiary.

The BNDES System requires that the final beneficiaries of these indirect financings keep their situation regularized with the environmental and social bodies, by signing Declarations in which the non-existence of infractions of this nature is attested prior to entering into any contract. The IFC, in the contracting and during the validity of the contract, must verify the fulfilment of such requirements by the Final Beneficiary.

In the event of non-compliance with non-financial obligations, the BNDES imposes penalties on IFCs based on the pertinent regulations and, in cases of evidence of criminal wrongdoing, the facts are reported to the competent authorities for investigation.

That said, the clarifications follow:

1) Our report found out that BNDES financed R\$ 28.6 million through the John Deere Bank for five producers with interdictions in their name issued by the federal environmental agency for deforestation. A resolution of the Central Bank of Brazil prohibits the concession of rural credit for properties in the Amazon under interdictions, but does not impose restrictions on the owners of these areas obtaining loans for other farms. Despite this, many farmers have farms divided into several CARs, so that they could take out a loan with a CAR without an interdiction but apply the machinery on the property, which is only one. How does the BNDES see this situation?

Answer: First of all, we thank you for sending us the information and we would like to note that any and all interaction that helps the BNDES to better perform its activities is welcome. In this sense, although the question at hand indicates the alleged occurrence of the use of financed machinery on interdicted properties, any accusation of irregularity in the contractual scope requires the formal investigation of concrete evidence or indications that support a specific accusation. In line with the duality of legal relationships already indicated at the beginning of this document, we inform you that the BNDES will begin to interact with the aforementioned financial institution in order to investigate the facts reported. If possible, we request the sharing of any documental elements that may allow a better analysis and instruction of eventual measures by the BNDES.

2) We found out that a rural producer from Mato Grosso obtained R\$ 4.5 million from BNDES between 2016 and 2019 to buy John Deere tractors for her only rural property registered in the city of Cláudia. In 2021, this property was interdicted after Ibama found the deforestation of "1,188.618 hectares of native forest in the Amazon biome, in a Legal Reserve Area, without proper authorisation from the competent environmental agency". This loan appears as active on the bank's website, although according to the Central Bank's rule,

“in case of interdiction after the contracting of the operation, the release of instalments will be suspended until the environmental regularisation of the property”. How can this be explained?

Answer: First, it is important to clarify that the fact that a loan agreement is active (in force) does not prevent the releases linked to it from being suspended as soon as an irregularity is proven. In this sense, as already mentioned in the response to the previous item, even if the question at hand indicated the alleged occurrence of an irregularity, any accusation of irregularity in the contractual scope requires the formal investigation of concrete evidence or indications that support a specific accusation. We inform you that the BNDES will also begin to interact with the financial institution cited in order to investigate the facts reported.

3) We also located loans to 11 farmers totalling R\$ 39.7 million, whose unpaid environmental fines amount to R\$ 31.4 million. Does the bank see any contradiction between financing deforesters who do not pay for their infractions and its sustainability policy?

Answer: As already stated in the preamble of this document, the BNDES does not finance clients who are in an irregular situation before environmental bodies. In this specific case, we were not fully informed about the list of 11 farmers with alleged environmental violations. If possible, we request that this information be shared.

Central Bank of Brazil

Firstly, it is important to stress that the normative commands of CMN Resolution No. 3,545, of 02/29/2008, have not been revoked. They were consolidated in CMN Resolution 4,883, of 12/23/2020, by determination of Decree No. 10,139, of 2019, and are codified in the Rural Credit Manual (MCR) 2-1-11.

It is the banks' responsibility, in accordance with Section 2-7 of the MCR, the monitoring and inspection of rural credit operations, observing not only the regulations pertaining to rural credit, but also the laws and any infra-legal regulations applicable to the use of the soil and the exercise of economic activities. It is incumbent on the Central Bank of Brazil (BCB), in the role of supervisor of the National Financial System, to evaluate whether the internal controls of the financial institutions are adequate to mitigate the risk of non-compliance with the regulatory provisions applicable to the credit policy in general, including those established for rural credit.

The granting of rural credit for financing agricultural and livestock activities in municipalities that comprise the Amazon biome is conditioned, among other requirements, by the financial institution verifying that there are no interdictions on the economic use of illegally deforested areas on the property. Thus, it should be noted that the prohibition on financing rural activities applies only to properties that have interdictions, and does not extend to any financing for exploration of other properties of the rural credit beneficiary.

The inspection of financial institutions regarding rural credit operations located in the Amazon biome must verify compliance with the special requirements applicable to this biome, as provided for in MCR 2-1-11. It is also important to highlight that financial institutions must comply with the situations that prevent rural credit from being granted, as consolidated in Resolution BCB 140, of 09/15/2021.

Adão Ferreira Sobrinho

The information that I was CONVICTED is not correct. There are the fines issued by IBAMA, but they are unfounded and, for this reason, I presented administrative and judicial defence.

The lawsuits are in progress in the Federal Court and there has not even been a verdict in the first instance. Therefore, there is no need to talk about CONVICTION.

The financing carried out by Bank John Deere S. A. followed exactly the rules established by the Brazilian monetary authorities and is in strict compliance with the determinations recommended by the MCR – Rural Credit Manual edited by BACEN.

Furthermore, it is imperative to emphasize that the property benefited by the financing is located in Marianópolis do Tocantins (TO) and is more than 1,000 km away from those fined. This property has never been subject to any constraints, especially of an environmental nature.

Believing to have re-established the truth of the facts, I remain at your disposal for any further clarification that may be deemed necessary.

Milton Casari

In reality, the land is not mine, it's a settlement next to it, and an interdiction was placed on my name. In reality, there were two interdictions, one in an area of one hectare and the other in an area of 20 hectares. The judge has already ordered the interdiction to be removed from one of the areas, and the other has not been removed because of the pandemic. But I have all the proceedings, I can send them.

I was a neighbour of the area, when the inspection came, they mistook me as the owner of the area, but I was not. I have no interdicted area, I, Milton Casari, have zero interdicted areas. That is why I have financing.

The interdiction is in my name but the area is not mine. The area is next to mine. This area is a settlement, it was never mine, it is not part of my assets, this area that was interdicted. There were cattle that belonged to me in this area. It is not a settlement, it belonged to a neighbour, and Ibama was there and someone said that I was the owner. At one time I rented the area.

I don't have an interdicted area. There is a judge's decision saying that Ibama is wrong. Ibama was wrong and I can prove it. I, Milton Casari, do not have any interdicted area, so no financing was done irregularly. I can get financing at any time because I can prove that the area is not mine.

Paulo Vieira Gonçalves

The producer's son, Paulo Saturnino Gonçalves, talked to **Repórter Brasil** by telephone and made the following clarifications:

We have two interdictions on the property, but we are contesting both. One, a smaller one, determined by the State Secretariat for the Environment, was an area burned in the neighbouring property, but the satellite image shifted and ended up catching a border within our area. We presented our defence and are awaiting the resolution.

The larger area, of 943 hectares, interdicted by Ibama, was burned down in an indigenous area. This was even tracked. We have the police report, we have photos, reports, we even lost a tractor that was burnt. The fire did not start on our property, on the contrary, we even did the retention, but the area ended up burnt. It's stopped now, nothing was ever planted there, it's a preservation area: if you look at the satellite image, you'll see that there is nothing planted there. So, we also presented our defence in the administrative process.

Regarding the status of the Rural Environmental Register, each of the four registrations, which together give the property its name, are under analysis.

Carlos Alberto Mafra Terra

Carlos Alberto Mafra Terra's legal counsel informs that all his business activities are carried out in accordance with the rules and laws in force, including environmental, tax, labour and any other rules, generating jobs and social welfare, with schools for the children of employees and social activities.

In relation to the alleged accusation of purchasing machinery for use in allegedly interdicted rural areas, the company ratifies that this information is unfounded, given that it carries out rural activities on various rural properties without any interdictions or restrictions, in addition to other industrial and commercial activities.

It is important to note that, as a rule, an interdiction does not cover the entire property, but rather a portion of a specific area, having originated from acts practised by third parties, including squatters and previous owners, and it is certain that no rural activity is carried out in these specific locations.

The legal counsel also clarifies that any existing environmental proceedings are being challenged before the competent administrative and judicial bodies, with no final and unappealable decision having been made.

Finally, it reiterates its commitment to conduct its activities and business with integrity and in strict compliance with the legislation in force.

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