IN THIS REPORT, MENTIONS OF ‘GREENPEACE’ SHOULD BE READ AS REFERENCES TO GREENPEACE INTERNATIONAL UNLESS OTHERWISE INDICATED.
‘The opportunity that we have, with media giving us a break on other issues, is to pass the reforms and deregulate, simplify. So we need to give this a push here, while we are in this moment of calmness in terms of media coverage, because it only talks about COVID, and “pass the cattle” [push things through all at once] changing all the rules, and simplifying regulations.’

Brazilian Minister of the Environment Ricardo Salles, April 2020
'The livestock industry is not a threat to the future of the planet despite Greenpeace and certain other NGO claims. Livestock can deliver biodiversity, socio-economic development, sustainable livelihoods and meet food security goals.'

Marcio Nappo, Director of Corporate Sustainability, JBS Brasil, February 2021

‘The need for rapid reduction in GHG emissions from fossil fuels to meet the 1.5°C or 2°C targets is widely acknowledged. We show that the same is true for food systems: Even if fossil fuel emissions were rapidly reduced, emissions from the global food system are on a trajectory that would prevent achievement of the 1.5°C and 2°C targets. … [M]eeting the 1.5°C and 2°C targets will likely require extensive and unprecedented changes to the global food system.’

Michael A Clark et al, Science, November 2020
In 2020, thanks to two consecutive years of severe drought, some 30% of the Brazilian Pantanal – the world’s largest contiguous wetland – burned, with official sources saying that the vast majority of the fires were started by human activity. In many cases ranchers are suspected of starting fires deliberately, in defiance of official bans on the use of fire introduced in July by regional governments and presidential decree.

Despite its value as a vital habitat for jaguars and other wildlife, about 90% of the Brazilian Pantanal is under self-declared land claims, where ownership is not verified by the state. As a consequence, these land claims often overlap with Indigenous lands or public conservation units (including federal, state and municipal reserves). In the Pantanal, these land claims overlap with about 28% of Indigenous lands and 58% of public conservation units. About 80% of the Pantanal is reportedly managed as cattle ranches.

Greenpeace International has identified 15 ranchers who are either current or recent (2018–2019) suppliers of Brazil’s leading meat processors, JBS, Marfrig and Minerva, and that are linked to the devastating 2020 fires in the Pantanal, environmental violations and/or property registration irregularities. The fires within the boundaries of the case study properties alone burned more than 73,000 ha – an area the size of Singapore, or about half the size of Greater London – between 1 July and 27 October 2020, and in many cases appear to have contributed to extensive burning far beyond the property limits.

These 15 ranchers were linked directly or indirectly in 2018–2019 to at least 14 meat processing facilities owned by JBS, Marfrig and Minerva which trade globally. Direct trade links have been identified from one or more of these 14 facilities to customers including Burger King and McDonald’s, Danish Crown Group, Nestlé, Brazil’s Pão de Açúcar supermarket chain (a member of the French Casino Group), Carrefour and Walmart-Chile. According
MAKING MINCEMEAT OF THE PANTANAL DRAFT

SUMMARISE REPORT IN PIX

to shipping data, between 1 January 2019 and 31 October 2020 these 14 facilities collectively exported over half a million tonnes of beef and beef products worth nearly US$3 billion to markets including Hong Kong (22%), China (21%), the EU-27 and the UK (8%) and the USA (1%). Exports from JBS’s Pantanal-linked facilities alone reportedly accounted for almost US$2 billion over the period, with the EU-27 and the UK representing around 9% of the export volume and over 13% of the value.

Exports are a primary source of revenue for the Brazilian operations of JBS, Marfrig and Minerva. Despite the chaos and economic upheaval caused by the global Covid-19 pandemic, Brazil’s beef exports set a new all-time high in 2020, with volumes reported to have reached 2 million tonnes and revenues some US$8.4 billion – up 11% over 2019. The main global revenue source for JBS SA (as for Marfrig22), however, lies in its North American business units, with the United States accounting for around half of the company’s global revenue in the third quarter of 2020. JBS has business interests in every continent except Antarctica; customers of the company and its subsidiaries internationally include Costco, KFC, Lidl, Mars, M&S, Nando’s, Nestlé, Pizza Hut, Princes, Sainsbury’s, Subway, Tesco, Walmart and YUM.

As a result of numerous damning exposés, including the 2009 Greenpeace report Slaughtering the Amazon, JBS, Marfrig and Minerva first promised to deliver ‘zero deforestation in the supply chain’ by 2011. But as this investigation into their Pantanal supply base exposes, the processors still do not have the fundamental procedures in place to guarantee that cattle from rogue ranchers linked to environmental destruction or legal violations are excluded.

Proper product due diligence procedures would mean JBS, Marfrig and Minerva proactively identify and prevent any other adverse human rights and environmental impacts resulting from their own activities, from the activities of the companies they control and from the activities of their subcontractors and suppliers with whom they have an established commercial relationship.

Against this background, the meat processors’ current approach to supply chain screening in the Pantanal focuses primarily on the supply ranch, without sufficiently considering practices in the rancher’s other operations. This blinkered view enables the most transparent form of cattle laundering – the potential for ranchers to supply cattle from operations that violate law or company policy by passing them through approved intermediary ranches they also own before sending them to slaughter.

Thirteen of the 15 ranchers identified by Greenpeace were ‘tier-one’ suppliers: they directly supplied one or more of the meat processors from an approved ranch in 2018 or 2019. In the majority of instances, the links between the case study properties themselves and the meat processors were indirect – cattle from those properties passed through one or more other ranches before the final sale. However, in most cases, the intermediary ranches were owned by the same individual.

Disturbingly, the processors provided no indication of having imposed meaningful requirements on their Pantanal suppliers in light of 2020’s bans on deliberate use of fire, or of any intention to do so despite the evidence provided of supply to approved ranches from problematic ones. In the case of JBS, three of its current tier-one approvals as well as one of its historic (2018–2019) trading relationships appear to violate its sourcing
policy, and its assessment of the suppliers’ compliance conflicts with that of Minerva in some instances.\textsuperscript{31} One of Marfrig’s historic trading relationships similarly appears to violate its sourcing policy,\textsuperscript{32} despite the company’s assertions about compliance. Marfrig has not indicated that it intends to review these trade relationships more closely.

As for JBS, presented with the summary findings of this report, the company confirmed to an industry journal that for the moment it has no intention to exclude suppliers – tier-one or third-party – that violate its policies. Instead, the emphasis is on getting Amazon suppliers onto a monitoring platform by 2025:

‘Right now, we’re not going to block them [noncompliant suppliers], we’re going to try to help them solve the issue. Sometimes it’s paperwork, sometimes they need to put together a conservation plan, sometimes they need to reforest part of their property. We are going to help them and we’re hiring people to help these suppliers.

‘We think excluding the property and the supplier is a negative approach. It won’t solve the problem because they’ll go to the next meat packer and try and sell it. We don’t want that because it won’t address the issue.’\textsuperscript{33}

Such an accommodating approach sits uneasily with JBS’s claimed ‘zero tolerance’ to deforestation and certainly fails to send a clear message to the sector that violations come with consequences – they seem to come with bonuses.

Beyond the Amazon, JBS reverts to a simple checklist of official legal findings\textsuperscript{34} in a country where the government is systematically dismantling environment agencies and undermining law enforcement.\textsuperscript{35}

The profound deficiencies in the meat processors’ policies and related enforcement procedures for their Pantanal supply base help explain the sector’s failure to end its links to environmental destruction or to close the market to dirty suppliers. These include:

- Failure to effectively and comprehensively ban and monitor for the deliberate use of fire, legal or otherwise.
- Failure to effectively and comprehensively ban and monitor for all new land clearance, not just illegal deforestation and not just within iconic regions such as the Amazon.\textsuperscript{36}
- Failure to require, as a condition of trade, that ranchers comply with the law and zero deforestation policies across their operations.\textsuperscript{37}
- Continued failure to proactively identify and monitor their entire supply base (including indirect supply and third-party suppliers), despite a 2009 agreement to achieve this in the Amazon by 2011.\textsuperscript{38}
- Failure to make supply chain transparency a condition of trade (ie requiring ranchers to disclose the suppliers and origins of their cattle) and a model for responsible business (ie ensuring the public availability of data on all ranchers in the company’s supply chain, including the locations of their operations, in order to enable independent scrutiny of their impact).

These failures, underpinned by lack of transparency and traceability, both expose and contribute to the industrial meat sector’s continued role as a leading global driver of land-use emissions, biodiversity loss and social injustice. Of particular concern is the potential for cattle linked to deliberate or illegal use of fire to find their way into the international market.

Given such structural failings, it is untenable for international consumer goods companies, supermarkets and fast food companies that claim to have zero deforestation policies to continue to trade with the meat processors named in this report. Further, if trade blocs such as the European Union\textsuperscript{39} and the United Kingdom\textsuperscript{40} are to end their consumption of products linked to environmental destruction then they must swiftly enact and enforce the necessary laws to ensure that products from these groups find no place in these markets.

The overproduction of meat and dairy is literally costing the earth. To halt and begin to reverse the current crisis, decisive action is needed from governments, finance and consumer companies to shift away from industrial meat and close markets to companies contributing to forest and ecosystem destruction. Without these vital steps our food system will continue to be a driving force of deforestation, climate change and future pandemic risk.
The map shows the point location of the Pantanal case study ranches (in red) linked to the 2020 fires, intermediary ranches (in black), and the JBS, Marfrig and Minerva slaughterhouses supplied by them. The connecting lines trace the historic (2018-2019) flow of cattle between operations. The numbers of the ranches correspond to those on the adjacent diagram.

FROM THE PANTANAL TO THE WORLD
The spider diagram shows how trade from the 15 ranchers named in the investigation entered the cattle supply of 14 JBS, Marfrig and Minerva slaughterhouses, often via ranches controlled by the same individual. These slaughterhouses export to markets around the world (shown in red on the world map). Apparent trade links from the slaughterhouses have been compiled through photographic evidence, company disclosures and a review of what reported in Panjiva shipping data. Global food companies reportedly supplied by these facilities include Burger King and McDonald’s in Brazil, Danish Crown in Hong Kong, and Nestlé. Global retailers reportedly supplied by these facilities include the French groups Carrefour and Casino (Pão de Açúcar) in Brazil and Walmart in Chile. Importers of beef from these facilities reportedly include Germany – Frost Meat and Meat 2000; Hong Kong – Kai Bo Frozen Meat Supermarket; Israel – Neto Malinda Trading Ltd and Shufersal; The Netherlands – FN Global Meat and Zandbergen Brothers Bv; Spain – Egatesa, Jucarne Sa, and Montesano.
What’s the Beef with JBS?

We live in a boom time for the meat industry. Worldwide meat consumption is predicted to rise 76% by 2050, with meat-heavy diets being energetically promoted, including in emerging economies and by fast food companies. Driven by its insatiable hunger for new markets and for land on which to rear livestock and grow soya for animal feed, the industrial meat sector poses a threat to the global climate, to the wildlife of some of the world’s most biodiverse regions, to the human rights of Indigenous peoples and other communities and to the long-term health of populations in the West and elsewhere.

Global meat giant JBS exemplifies and is a main contributor to this threat. Based in São Paulo, JBS claims to be the world’s largest animal protein company and the second-largest food company in the world by annual sales (after Nestlé). It has grown internationally through a series of acquisitions largely funded by the state-owned Brazilian National Bank for Economic and Social Development (BNDES), which owns more than a fifth of the company.

JBS’s impacts on the climate and on the ecosystems of South America are profound: its operations have been estimated to produce around half the annual carbon emissions of fossil fuel giants such as ExxonMobil, Shell or BP, largely as a result of forest clearance linked to its cattle supply chains and the production of soya for animal feed.

The scale of JBS’s environmental and social destruction became a global scandal in 2009, when Greenpeace published a report, Slaughtering the Amazon, exposing how JBS and other major players in the Brazilian beef industry were linked to hundreds of ranches in the Amazon, including some associated with illegal deforestation and other destructive practices, as well as modern-day slavery. In the wake of that report JBS and three of Brazil’s other big meat processors signed a voluntary commitment – the so-called ‘G4 Agreement’ – to end the purchase of cattle whose production is linked to Amazon deforestation, slave labour or the illegal occupation of Indigenous lands and protected areas. The agreement included a commitment to ensure fully transparent monitoring, verification and reporting of the companies’ entire supply chains (including third-party suppliers) within two years.

This pledge has not been honoured. For over a decade, investigations by Greenpeace and numerous others have repeatedly exposed JBS’s links to corruption, deforestation and human rights violations. But despite its failure to implement the terms of its 2009 commitment, as the company plans to seek listing of its international operations on the New York Stock Exchange (NYSE) in 2021 it appears to be attempting to bolster its environmental image and distance itself from its destructive legacy. In response to increasing pressure from its customers and shareholders, in late September 2020 JBS launched its new ‘Together for the Amazon’ initiative. As well as setting up a fund to support sustainable development and conservation projects in the region, the company has given itself until 2025 to implement a system for monitoring the supply of livestock to the ranches that directly supply it in the Amazon. This new supply chain commitment – which in real terms represents a step backward from the 2009 commitments – has numerous failings, chief among them:

- Failure to explicitly extend the whole of the supply chain policy, including ‘zero tolerance for deforestation’, beyond the Amazon
- Failure to explicitly exclude as suppliers ranchers that use fire deliberately
• Apparent abandoning of the transparency component of the 2009 agreement, notably to ensure fully transparent monitoring, verification and reporting of the company’s entire supply chain by 2011
• Failure to explicitly require legal and zero deforestation policy compliance across the operations of ranchers who supply the company as a condition of trade

JBS’s 2020 zero deforestation commitment applies solely to the Amazon, ignoring neighbouring regions such as the Cerrado, said to be the world’s most biodiverse savannah (from which, according to the Trase supply chain transparency platform, JBS sources the majority of the cattle it exports), and the Pantanal – both regions where the cattle industry is also driving ecosystem conversion. While in climate terms the preservation of the Amazon rainforests is a key objective in South America, as the Intergovernmental Panel on Climate Change’s 2019 land use report pointed out, the prevention of widespread land use change across all ecosystems is vital.

The incidence of fires in the Brazilian Amazon in the first nine months of 2020 was the highest in a decade, and more fires than ever before were recorded in the Pantanal over the same period. Still, the new JBS initiative makes no mention at all of excluding from the company’s supply chain ranchers who use fire deliberately for land management or clearance, despite the announcement of local and federal bans.

The 2020 commitment delays supply chain mapping in the Amazon beyond the ranches that directly supply it until 2025, 14 years after the original deadline. The proposed monitoring platform itself will be confidential – ie not publicly available for stakeholder review and scrutiny – which abandons the original commitment to a transparent monitoring system.

While the 2020 Amazon commitment reasserts the company’s ‘zero tolerance for deforestation’, which was at the heart of the original G4 Agreement, the company also asserts that the proposed monitoring platform will ‘ensure any cattle from producers involved in illegal deforestation cannot enter the JBS supply chain’ (emphasis added).

What is clear is that JBS has not immediately extended its ‘zero tolerance’ to include clearance of natural ecosystems beyond the Amazon. Brazil’s current Forest Code allows the clearance of up to 80% of any land claim in the Brazilian Pantanal and other biomes outside the Amazon. Across the country, that means some 88 million ha of native vegetation – more than 3.5 times the size of the UK – could be cleared legally within existing land claims, despite the huge climate and biodiversity costs.

JBS also fails to require comprehensive monitoring of the ranchers who supply it across their operations and across biomes. While this was not a requirement of the G4 Agreement either, in the years since that agreement was reached understanding of the adequacy of its approach to due diligence within the commodity trade has evolved. In the palm oil sector, for example, it is widely recognised today that if the sector is to be cleaned up, actors at all stages of the downstream supply chain must exclude any suppliers whose operations – including those of subsidiaries or associates – are illegal or environmentally destructive. This puts the appropriate emphasis on the exclusion of rogue suppliers, not just of tainted supplies.

In the case of Brazil’s agricultural commodity sectors, including beef and soya, this should mean monitoring the activities of traders, ranchers and farmers across all their operations (that is, beyond the purchaser’s immediate supply chain), not just in the Amazon and not just for deforestation but for other forms of ecosystem destruction, deliberate or illegal use of fire, unresolved land disputes and embargoes, outstanding fines and human rights abuses including the use of slave labour.

Considering the urgency of the global climate and nature emergency, initiatives such as JBS’s new Amazon supply chain pledge that are based on self-regulation of voluntary commitments are a decade out of date in delivery and scope. They do not represent a decisive contribution to the radical shake-up of the global food system that science demands and that companies, financial institutions and governments need to deliver.

Food industry corporations that continue to source from JBS and financial institutions that continue to resource it are exposing themselves to financial and reputational risk. Worse, they are contributing indirectly to the existential risks faced by South America’s iconic biomes and their inhabitants – and by all the inhabitants of an overheating planet – due in large part to the activities of the industrial meat sector. Governments are also stakeholders with exposure to JBS, and to the impacts of the industrial meat sector more broadly, through sovereign investments, trade and trade deals, and the choices they make regarding market and financial regulation.
WHO NEEDS TO DO WHAT

The steps that food industry, financial institutions and governments take in the immediate future in relation to JBS – and the global meat industry as a whole – will be a decisive test of their priorities. Governments and companies must align the economy with biodiversity and climate protection, along with social justice. They must ensure that private and public finance, trade policy and overseas cooperation do not drive further deforestation, but do support nature restoration and a transition to a green, just and resilient economy. This includes:

CLOSING THE MARKET TO ECOSYSTEM DESTRUCTION:

DROPPING FOREST AND ECOSYSTEM DESTROYERS: End finance for or trade with groups such as JBS whose direct or indirect suppliers are linked to deforestation and alleged human rights violations — this includes ending trade with subsidiaries such as JBS-owned Pilgrim’s Pride, which owns Moy Park and Tulip (recently renamed Pilgrim’s Pride Ltd).69

DROPPING COMMODITIES LINKED TO FOREST AND ECOSYSTEM DESTRUCTION: Including through the adoption of a law on forest and ecosystem risk commodities (FERCs) and derived products, to ensure that commodities and products linked to deforestation, ecosystem destruction and abuses of human rights are not placed on the market. The legislation should include measures to cover the financial sector, ensure full supply chain traceability and transparency and rules on due diligence.

ENSURING TRADE POLICY ALIGNS WITH CLIMATE, BIODIVERSITY AND SOCIAL JUSTICE GOALS: This includes refusing to ratify trade deals such as the EU–Mercosur agreement. Trade agreements of this kind are based on an extractive model that commodifies people and nature and is inherently incompatible with forest protection – governments should instead protect forests and other natural ecosystems by adopting policies to decrease meat production and consumption, and addressing their external forest and ecosystems footprint by means of product and supply chain regulations.

TRANSFORMING THE FOOD SYSTEM:

PHASING OUT INDUSTRIAL MEAT: Immediately begin the phase-out of all finance for or trade in industrial meat, with the aim of reducing overall meat and dairy production and sales by at least 50% by 2025 and 70% by 2030 in countries with high levels of meat consumption.70

MAKING FULL TRANSPARENCY A CONDITION OF TRADE: Make full transparency of group operations and the supply chain a condition of finance or trade, requiring open and comprehensive monitoring and reporting systems to be in place.

PRIORITISING HUMAN AND ENVIRONMENTAL HEALTH: Introduce targets, legislation and fiscal measures to decrease production and consumption of meat and dairy products in countries with high levels of consumption and support a fundamental shift towards ecological farming and healthy plant-rich diets in order to reduce pressure on natural ecosystems.
CONTENTS
### Annex 1: Reported Exports from Linked Facilities

<table>
<thead>
<tr>
<th>Processor SIF Location</th>
<th>Export Volume (Tonnes)</th>
<th>Export Value (US$)</th>
<th>Key Export Destination by Country and Key Region</th>
<th>Rancher / Case Study Supply Links</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JBS Barra do Garças</strong> (SIF 42)</td>
<td>82,909 442,125,000</td>
<td>China 71,807 383,635,900 86.61%</td>
<td>Hong Kong 8,138 45,005,600 9.02%</td>
<td>João Felix Pereira Neto / Atoledal</td>
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<td>Philippines 845 4,519,600 1.02%</td>
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<td>Netherlands 983 2,981,700 0.61%</td>
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<td>Spain 131 767,700 0.16%</td>
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<td>Sweden 25 162,000 0.03%</td>
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<td>Total 82,909 442,125,000</td>
<td>Total 82,909 442,125,000</td>
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<td><strong>JBS Pontes e Lacerda</strong> (SIF 51)</td>
<td>40,814 231,320,540</td>
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<td>Total 40,814 231,320,540</td>
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<td><strong>JBS Anastácio</strong> (SIF 615)</td>
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<td>Netherlands 28 156,000 0.13%</td>
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<td>Total 21,997 137,276,171</td>
<td>Total 21,997 137,276,171</td>
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<td><strong>JBS Campo Grande</strong> (SIF 1662)</td>
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<td>Chile 197 998,000 0.13%</td>
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<td>United States 39 210,000 0.09%</td>
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<td>United Kingdom 13 61,300 0.03%</td>
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<td>EU27+UK</td>
<td>4,409</td>
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### KEY EXPORT DESTINATION BY COUNTRY AND KEY REGION

<table>
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<tr>
<th>PROCESSOR SIF LOCATION</th>
<th>EXPORT VOLUME (TONNES)</th>
<th>EXPORT VALUE (US$)</th>
<th>RANCHER / CASE STUDY SUPPLY LINKS</th>
</tr>
</thead>
</table>
| **MARFRIG**<br>CAMPO GRANDE (SIF 1900) | 16,323 85,480,200 | China 8,529 41,978,000 52.25% FRANCISCA EVANGELISTA TEODORO DA SILVA / SÃO BENTO<br>Hong Kong 4,768 26,220,600 20.21% JOÃO FELIX PEREIRA NETO / ATOLEDAL<br>Turkey 113 635,000 0.69% EDUARDO MARIANI BITTENCOURT / VÁRZEA FUNDA<br>MIDDLE EAST 2,631 15,525,600 16.12% JOSE DALBEM / SANTA CATARINA<br>REGION 1,300 7,575,000 6.19% LUIZ CARLOS ZILIANI / SANTA TEREZA | **KEY REGIONS**
| **MARFRIG**<br>VÁRZEA GRANDE (SIF 292 AND 2015) | 62,839 325,085,200 | China 53,464 172,623,000 53.97% EDUARDO MARIANI BITTENCOURT / VÁRZEA FUNDA<br>Hong Kong 9,755 58,576,900 18.72% JOSE DALBEM / SANTA CATARINA<br>Netherlands 1,217 7,927,800 1.96% Raul Amaral Campos / Esperança<br>Italy 1,210 6,547,000 1.95% CELSO MIURÁ / MESTIÇA<br>Lebanon 727 4,519,900 1.37% LUIZ CARLOS ZILIANI / SANTA TEREZA<br>UNITED KINGDOM 1,157 7,775,000 2.22% **KEY REGIONS**
| **MARFRIG**<br>BATAGUASSU (SIF 4238) | 4,257 26,224,300 | Hong Kong 1,152 6,233,200 27.07% RAUL AMARAL CAMPOS / ESPERANÇA<br>Netherlands 362 2,486,700 8.04% **KEY REGIONS**
| **MINERVA**<br>VÁRZEA GRANDE (SIF 2015) | 9,394 54,532,650 | Turkey 1,163 6,561,000 12.38% FRANCISCA EVANGELISTA TEODORO DA SILVA / SÃO BENTO<br>Hong Kong 991 5,289,000 10.54% FABIO DE OLIVEIRA LUCHESI / SANTA HELENA I<br>Italy 461 2,684,150 4.91% CELSO MIURÁ / MESTIÇA<br>Argentina 440 2,684,150 4.68% RAUL AMARAL CAMPOS / ESPERANÇA<br>Netherlands 280 1,763,300 2.98% ADEVA DE OLIVEIRA / RECREIO<br>Germany 280 1,397,700 2.13% **KEY REGIONS**
| **MINERVA**<br>VÁRZEA GRANDE (SIF 2015) | 9,394 54,532,650 | Turkey 1,163 6,561,000 12.38% FRANCISCA EVANGELISTA TEODORO DA SILVA / SÃO BENTO<br>Hong Kong 991 5,289,000 10.54% FABIO DE OLIVEIRA LUCHESI / SANTA HELENA I<br>Italy 461 2,684,150 4.91% CELSO MIURÁ / MESTIÇA<br>Argentina 440 2,684,150 4.68% RAUL AMARAL CAMPOS / ESPERANÇA<br>Netherlands 280 1,763,300 2.98% ADEVA DE OLIVEIRA / RECREIO<br>Germany 280 1,397,700 2.13% **KEY REGIONS**
| **MINERVA**<br>VÁRZEA GRANDE (SIF 2015) | 9,394 54,532,650 | Turkey 1,163 6,561,000 12.38% FRANCISCA EVANGELISTA TEODORO DA SILVA / SÃO BENTO<br>Hong Kong 991 5,289,000 10.54% FABIO DE OLIVEIRA LUCHESI / SANTA HELENA I<br>Italy 461 2,684,150 4.91% CELSO MIURÁ / MESTIÇA<br>Argentina 440 2,684,150 4.68% RAUL AMARAL CAMPOS / ESPERANÇA<br>Netherlands 280 1,763,300 2.98% ADEVA DE OLIVEIRA / RECREIO<br>Germany 280 1,397,700 2.13% **KEY REGIONS**

### MINERVA MIRASSOL D’OSTE (SIF 2911)

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<tr>
<th>PROCESSOR LOCATION</th>
<th>EXPORT VOLUME (TONNES)</th>
<th>EXPORT VALUE (US$)</th>
<th>EXPORT VALUE (%</th>
<th>VOLUME (%)</th>
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<td>5,060</td>
<td>38,918,700</td>
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<tr>
<td>Italy</td>
<td>2,474</td>
<td>15,350,000</td>
<td>5.91%</td>
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<td>Indonesia</td>
<td>1,239</td>
<td>6,853,000</td>
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<tr>
<td>Turkey</td>
<td>1,223</td>
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<td>Lebanon</td>
<td>660</td>
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<td>1.58%</td>
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<td>Germany</td>
<td>473</td>
<td>3,360,000</td>
<td>1.33%</td>
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<td>240</td>
<td>1,371,100</td>
<td>0.57%</td>
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<tr>
<td>United Kingdom</td>
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<td>989,600</td>
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<tr>
<td>Greece</td>
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<td>158,000</td>
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<td>25</td>
<td>115,000</td>
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<td>Denmark</td>
<td>7</td>
<td>40,200</td>
<td>0.02%</td>
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#### Key Regions

- EU27+UK: 4,472 TONNES (18.68%)
- Middle East: 13,348 TONNES (31.89%)
- Asia: 9,574 TONNES (22.87%)

### Reported Live Animal Exports January 2019–October 2020

<table>
<thead>
<tr>
<th>PROCESSOR LOCATION</th>
<th>KEY EXPORT DESTINATIONS</th>
<th>EXPORT VOLUME (TONNES)</th>
<th>TONNES</th>
<th>VOLUME (%)</th>
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<td>Minerva</td>
<td>Tucany</td>
<td>59,988</td>
<td>21,165</td>
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<td>Abaetubá</td>
<td>Saudi Arabia</td>
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<td>Jordan</td>
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### Reported Exports by Tanneries January 2019–October 2020

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<th>VOLUME (%)</th>
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<td>23,543</td>
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<td>Portugal</td>
<td>382</td>
<td>0.76%</td>
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<td>South Africa</td>
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<td>Japan</td>
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<td></td>
<td>Netherlands</td>
<td>18</td>
<td>0.05%</td>
<td></td>
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<td>Key Regions</td>
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<td>7,543</td>
<td>19.06%</td>
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<td>29,222</td>
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<td>168</td>
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- **RANCHER / CASE STUDY SUPPLY LINKS**
  - Raymundo Victor da Costa Ramos Sharp – SÃO CARLOS E SANTA MONICA
  - Eduardo Mariani Bittencourt – VÁRZEA FUNDA
  - Adeuair da Oliveira – RECREIO
  - José Dallem – SANTA CATARINA
  - Celso Miuara – MESTIÇA
  - Fabio de Oliveira Luchesi – SANTA HELENA
  - Luiz Carlos Ziliani – SANTA TEREZA
  - Francisca Evangelista Teodoro da Silva
ANNEX 2:
OPPORTUNITY TO
COMMENT GLOSSARY
REFERENCES
MAKING MINCEMEAT OF THE PANTANAL DRAFT

Trade from processing facilities to the global market
Meat processor traceability websites
Environmental sanctions linked to ranches and their owners
The locations, boundaries, ownership and CAR registration status of cattle ranches
Land cover and land cover change

ENDNOTES

1. MacCison D (2021)
2. Clack MA et al. (2020)
5. As of 27 October 2020 (the period covered by the analysis in this report), 28% of the biome had been consumed by fire; by 22 November 2020, 38% - 4.49 million ha - had burned.
Source: LASA website ‘Burned area – Pantanal 2020’.
12. Greenpeace Brazil mapping analysis of CAR data shows cucaul properties cover 434,481 ha in public conservation units – principally one national and three state parks – within the Pantanal biome, with two of the three state parks 80% covered and one almost entirely covered (source: Greenpeace Brazil mapping analysis of CAR data). This figure excludes private reserves, which generally fall entirely within registered cucaul properties.
14. In this report, mentions of ‘Greenpeace’ should be read as references to Greenpeace International, unless otherwise indicated.
15. 2018-2019 supply chain links between ranchers and meat processing facilities and other analyses were established through Greenpeace investigations, based on the integration of a number of sources of public data and information including: Land cover and land cover change
- The locations of fire hotspots and burned areas (burn scar)
- The location and boundaries of the Pantanal biome, Indigenous lands, conservation units and other public lands
- The locations, boundaries, ownership and CAR registration status of cattle ranches
Environmental sanctions linked to ranches and their owners
Meat processor traceability websites
- Trade from processing facilities to the global market and/or consumer goods and fast food companies.
- Documentation is held by Greenpeace. The sources used for each of these types of data and information are listed in the references section at the end of the report.
Greenpeace provided the meat processors named in this report with the opportunity to comment prior to publication on the historic trade links it had established between ranches with operations in the Pantanal and specific slaughtehouses, as well as any legal/policy irregularities (eg embargoes, izceregular CAR status) it had identified in those ranchers’ operations. The comments have been collected at all relevant points. The full text of the replies received from each of the meat processors in response to Greenpeace’s opportunity to comment letters can be found in Annex 2.

17. The total area of Singapore is 71,980 ha (CIA World Factbook website ‘Country comparisons - area’). The Scatetec London area covers approximately 159,500 ha (LG Inform website ‘Size of the geographical area - Extent of the real measurements in hectares in England’).
18. Sources include Greenpeace Brazil field investigations conducted in October 2020 and February 2021, Nestlé (2019) p5 and Panjiva Brazil trade data https://panjiva.com/data/brazil-trade-data
21. Reuters (2021), the expected results were in line with end-of-year predictions from the Brazilian Beef Exporters Association (ABIEC, 2020).
23. JBS (2018a) p2
24. JBS (2018a) pp16-20-21
25. JBS’sFelbo brand supplies big names including Bob’s, Burger King, McDonald’s, and Pão de Açúcar (JBS (2020a) p19). Its Sears subsidiary has global accounts with Burger King, KFC, McDonald’s and Subway, among others, and holds certifications for customers including Carrefour, Walmart and MUS (JBS (2020a) pp19-193). JBS reportedly also supplies canned beef products to UK and European supermarkets including Asda, Cazeceou, Lidl, and Sainsbury’s (see Earthsight (2019) and Holmes H (2020)).
26. British subsidiary Moy Park (which JBS sold to another of its subsidiaries, Pilgrim’s Pride, in 2017; see Casey S & Feicka T (2017)) supplies Nando’s and several supermarkets, including Tesco Ireland and Lidl; see Nando’s website ‘FAQs: Our Food’, Moy Park website ‘Moy Park chicken’ and Moy Park website ‘Moy Park’. Moy Park reportedly also supplies several other fast food chains, including KFC and Pizza Hut, and supermarkets such as Marks & Spencer and Sainsbury’s; see eg Belfast Telegraph (2018) and Mulligan J (2017).
27. The G4 Agreement’s signatories pledged to exclude from their supply chains any ‘rural property which directly supplies cattle for slaughteering (fattening farms) and is engaged in deforestation in the Amazon biome’ within six months of signing the commitment. This condition was to be extended to all supplies, including third-party supplies and supplies from ceasing and nursery farms, within two years. See JBS-Felbo, Bertin, Mineva & MacFigg (2009) p1.
28. These ranches and the companies they supplied were: Adevaic de Oliveira – JBS / MacFigg / Mineva
Ário Banabé Neto – JBS
Celso Miura – JBS
Daniel Martins Filho – JBS / MacFigg
Eduardo Macián Bittencourt – JBS / MacFigg / Mineva
Eliana Maria Lemos Monteiro Conceição – JBS
Fabio de Oliveira Luchesi – Mineva
Franciska Evangelista Teodoro da Silva – JBS / MacFigg / Mineva
João Felix Pereira Neto – JBS / MacFigg
Jose Dalbem – JBS / MacFigg / Mineva
Luiz Carlos Ziliani – JBS / MacFigg / Mineva
Raul Amaro Campos – JBS / MacFigg / Mineva
Sergio Jacinto Costa – JBS
29. Greenpeace identified 37 supply chain links between the case study properties and the big three meat processors, plus a further three rancher supply chain links not involving the case study properties. Of these 37 links, 23 were indirect. Of these 23, 17 of the links were through ranches owned by the same individual.
30. Based on responses to Greenpeace’s opportunity to comment letters; see Annex 2.
MacFigg did not indicate current compliance. Also, JBS failed to comment on the current status of ranches linked to Celso Miura, Franciska Evangelista Teodoro da Silva or João Felix Pezeira Neto, who were identified by Greenpeace as tier-one suppliers during the period studied. The following ranchers all had at least one property that was described as either ‘compliant with [JBS’s] Responsible Procurement Policy’, ‘able to commercialize raw materials with [JBS]’ or ‘listed in Mineva’s database and eligible for commercialization’:
Adevaic de Oliveira – JBS / Mineva
In 2016, JBS’s Scope 1+3 GHG emissions from processing and production of beef, pork and chicken totalled 280 MtCO₂e, with the vast majority being accounted for by beef production. Scope 1 emissions are direct emissions from company-owned facilities, processing plants and machinery. Scope 2 emissions are indirect emissions related to energy consumption. Scope 3 emissions include all other indirect emissions resulting from the production of a commodity, both upstream and downstream (farming emissions from livestock, food production for livestock, land-use change etc). For fossil fuel producers this includes all emissions related to the burning of the products they sell. Source: BRAZIN & ITAP (2018).


59 Greenpeace (2009)

60 See JBS-Friboi, Bectin, Minerva & Macfizig (2009).

61 See reporting in Greenpeace (2009) and Greenpeace (2020a).


64 JBS (2020c) pp3-4 and JBS (2020d).

65 Ministry of the Environment (2017) p65

66 The historic trading relationship that appears to have been in violation of JBS’s policy at the time was with Raul Amacal Campos / Fazenda Esperança. JBS failed to confirm the current status of this ranch as a supplier. Minerva drew different conclusions on the compliance of two of these suppliers (Luiz Carlos Ziliani / Fazenda Santa Teceza and Raul Amacal Campos / Fazenda Esperança).

67 Source: Ministries of Agriculture and Environment.


69 IPCC (2019), Chapter 4

70 According to data from the Brazilian National Institute of Space Research (Instituto Nacional de Pesquisas Espaciais, INPE). See Sprig J (2020b).

71 A federal moratorium was imposed on the use of burning for agricultural purposes in the Amazon and Pantanal in mid-July, extending for 120 days (see Cavalcão D (2020) and Ionova A (2020)). Regional prohibitions on dry-season burning were also put in place in Mato Grosso, from 1 July to 30 September, and Mato Grosso do Sul, extending for 180 days, from late July; see Instituto Centro de Vida (2020) p1 and Ionova A (2020).

72 The G4 Agreement promised ‘zero deforestation in the supply chain’. Its signatories pledged to exclude from their supply chains any ‘rural property which directly supplies cattle for slaughtering (fattening fazendas) and is engaged in deforestation in the Amazon biome’ within six months of signing the commitment. This condition was to be extended to all supplies, including third-party suppliers and supplies using ceasing and nucleyce fazendas, within two years.


74 JBS (2020c) pp3-4 and JBS (2020d).

75 JBS (2020c) p3

76 With the exception of Areas of Permanent Protection (Áreas de Preservação Permanente, APPs) and restrictions on the exploitation of wetlands. APPs are areas that have been identified as critical to essential ecosystem functions, such as preserving hydrological resources or biodiversity, ensuring geological stability, facilitating the movement of fauna and flora and protecting the soil. The remaining 28% is classed as Legal Reserve. In areas classified as pantanal wetlands (pantanais) or flood plains (pampas pantaneiras) – which covers about 16% of the Brazilian Pantanal – permits for clearance may only be issued for activities deemed ‘sustainable and ecological’, which includes traditional cattle raising. PEC Articles 3, 18 and 12 – the full text of the law is available at "http://www.planalto.gov.br/ccivil_03/2011/2012/lei/12651.htm. See also WWF-Brazil (2016) p18.

77 The area of the UK is 24.4 million ha. Source: CIA World Factbook website ‘Country comparisons – area’.

78 Soares-Filho B et al (2014)


80 For details on Greenpeace’s vision ‘for a healthier life and planet’, see Greenpeace (2018).

81 Libonati R et al (2020)

82 Estimates of the size of the Pantanal vary widely, depending on the source cited. It is variously described as covering between 14 million ha (Keddy PA et al (2009) p43) and 22 million ha (Fundação Amigos de la Naturaleza 2008) p46.

83 Estimates of the percentages of the Pantanal located in each of these countries similarly vary, the largest percentage (78-88% of the biome) is in Brazil and the smallest (5-18%) in Paraguay, with the remainder located in Bolivia. See eg Ecosystem Alliance (2014) p7 and New World Encyclopedia ‘Pantanal’.

84 Banks V (1991)

85 Courto E & Oliveira VA (2018) pp72-73


87 IPES (2018) p225

88 See Schesé-Neto P, Guedes NMR & Toledo MCB (2019)
According to MapBiomas, as of 2019 roughly 36.7% of the Brazilian Pantanal was covered by grassland, 19.6% by forest, 15.7% by wetland, 15.4% by pasture, 9.2% by savannah, 3.1% by water and 0.2% by wetland. Based on the Pantanal biome maps from IBGE (https://rsis.ramsar.org/ris/1089), the SESC Pantanal Private Reserve of Natural Heritage (https://rsis.ramsar.org/ris/1270), and the Taiamã Ecological Station (https://rsis.ramsar.org/ris/2363), the federal ban covered the Amazon and the Pantanal; this ban has been extended several times as not all properties and establishing a database to be used for monitoring and enforcement of compliance with environmental regulations, environmental and economic planning, and to combat illegal deforestation. The official deadline for registration was May 2016, but this has been extended several times as not all property owners have complied. Additionally, the self-reported information is not legally verified, meaning that land claims may overlap with public, protected or Indigenous lands.

Some 2.34 million ha of the total land area of 15.1 million ha (15.4%) were cleared for pasture, out of 2.37 million ha cleared for all purposes. Source: MapBiomas Project ‘Collection 5.0 of the annual coverage and land use maps series of Brazil’. Riverine Pantanal, especially the eastern part, contains a large number of small lakes and rivers that often dry up or overflow. The Pantanal is divided into several regions, including the northern Pantanal, which is the most populated and industrialized. The southern Pantanal is more rural and less developed. The western and central Pantanal are more remote and less accessible.

The federal ban also affected the Amazon, which is the world’s largest tropical forest. The ban was intended to protect the forest from illegal deforestation, and it has been renewed several times. The Amazon is home to millions of indigenous people, and the ban is crucial for preserving their way of life. The ban also aims to protect the forest’s biodiversity, which is home to millions of species.

The Pantanal is also home to many species of wildlife, including jaguars, caimans, and capybaras. The Pantanal is an important wetland for waterfowl, and it is home to many species of birds. The Pantanal is also a significant source of hydroelectric power, and it is home to many hydroelectric plants.

The Pantanal is home to many species of fish, including the pacu and the pirarucu. The Pantanal is also home to many species of reptiles, including the caiman and the turtle. The Pantanal is also home to many species of mammals, including the tapir, the anteater, and the armadillo.

In conclusion, the Pantanal is a unique and important landscape that is home to many species of wildlife and is an important source of hydroelectric power. The Pantanal is also home to many species of fish, reptiles, and mammals. The Pantanal is also an important wetland for waterfowl, and it is home to many species of birds. The Pantanal is divided into several regions, including the northern Pantanal, which is the most populated and industrialized. The southern Pantanal is more rural and less developed. The western and central Pantanal are more remote and less accessible.

The Pantanal is also home to many species of wildlife, including jaguars, caimans, and capybaras. The Pantanal is an important wetland for waterfowl, and it is home to many species of birds. The Pantanal is also a significant source of hydroelectric power, and it is home to many hydroelectric plants.

The Pantanal is also home to many species of fish, including the pacu and the pirarucu. The Pantanal is also home to many species of reptiles, including the caiman and the turtle. The Pantanal is also home to many species of mammals, including the tapir, the anteater, and the armadillo.
Some 37.4% of the burn scar was located in areas classified as grassland, 32.8% in forest and savannah and 22.6% in wetland (much of which would have been severely dried out by the drought).


157 Escavoo, Nem Pensar! (2020)

158 Spring J (2020a)


160 INPE website ‘Monitoramento dos focos ativos por bioma’. Fire hotspots are thermal anomalies (i.e. unusually hot areas) detected by satellites. It is important to distinguish hotspots from actual fires - they could represent fires or they could be hot tinfoil, although the occurrence of false positives is relatively low. Within fire-prone areas, accuracy depends on the size of the fire, the density of the canopy and proximity to built-up areas.

161 Shaledcss A (2020)

162 Since 2012, when incoming President Dilma Rousseff imposed a hiring freeze on the agency, staffing levels have reportedly dropped from a peak of more than 1,300 to about 600. Source: Savasevez M (2020).

163 Shaledcss A (2020)

164 Gonzales I (2020a). See also Savasevez M (2020). The Chico Mendes Institute for Biodiversity Conservation (Instituto Chico Mendes de Conservação da Biodiversidade, ICMBio) is the branch of the Ministry of the Environment charged with managing Brazil’s federal conservation units and protecting its natural heritage and biodiversity. The National Indian Foundation (Fundação Nacional do Índio, FUNAI) is the federal agency responsible for establishing and carrying out policies relating to Indigenous Peoples.

165 Gonzales I (2020a)

166 Gonzales I (2020a), Savasevez M (2020)

167 Muniz B, Fonseca B & Ribeiro R (2020)

168 Basso G (2020)

169 Raoni Rajão, co-coordinator of Laboratory for the study of environmental services management at the Federal University of Minas Gerais, testified in Goi’s L, Cowie S R Costa W (2020).

170 Shaledcss A (2020)

171 Boadie A (2020), Soares I (2020)

172 Einhorn C et al (2020)


175 Inesc (2020)

176 Observatório do Clima (2021)

177 Piloto Policial (2020)

178 European Commission website ‘EU-Maccosuc trade agreement’

179 Kehoe L et al (2020)

180 Gonzales I (2020b), Greenpeace European Unit (2020)

181 According to a leaked copy of the negotiation text, published by Greenpeace Germany (see Greenpeace European Unit (2020)).

182 Angelo M (2020), Gezetzten I (2020)


185 2018–2019 supply chain links between ranches and meat processing facilities and other analyses were established through Greenpeace investigations, based on the integration of a number of sources of public data and information including:

- Land cover and land cover change
- The locations of fire hotspots and burned areas (burn scar)
- The location and boundaries of the Pantanal biome, Indigenous lands, conservation units and other public lands
- The locations, boundaries, ownership and CAR registration status of cattle ranches
- Environmental sanctions linked to ranches and their owners

- Meat processor traceability websites

- Trade from processing facilities to the global market and/or consumer goods and fast food companies.

Documentation is held by Greenpeace. The sources used for each of these types of data and information are listed in the references section at the end of the report.

Greenpeace provided the meat processors named in this report with the opportunity to comment prior to publication on the historic trade links it had established between ranches with operations in the Pantanal and specific slaughterhouses, as well as any legal/policy irregularities (e.g embargoes, icecubeCAR status) it had identified in those ranchers’ operations. The comments have been reflected at all relevant points. The full text of the replies received from each of the meat processors in response to Greenpeace’s opportunity to comment letters can be found in Annex 2.


187 The total area of Singapore is 71,908 ha (IICA World Factbook website ‘Country comparisons – area’). The Gecatoc London area covers approximately 159,950 ha (LG Inform website ‘Size of the geographical area – Extent of the realm measurements in hectares in England’).

188 These ranches and the companies they supplied were:

- Adevar de Oliveira – JBS / Macfiz / Minevca
- Áazio Bazanadê Neto – JBS
- Celse Miucu – JBS
- Daniel Martins Filho – JBS / Macfiz
- Eduardo Machani Bittencourt – JBS / Macfiz / Minevca
- Eliana Maria Lemos Monteico Conceição – JBS
- Fabio de Oliveira Luches – Minevca
- Francisco Evangelista Teodoco da Silva – JBS / Macfiz / Minevca
- João Felix Pezeca Neto – JBS / Macfiz
- Jose Dalben – JBS / Macfiz / Minevca
- Luiz Carlos Zilliani – JBS / Macfiz / Minevca
- Raul Amacal Campos – JBS / Macfiz / Minevca
- Sergio Jacinto Costa – JBS

189 Greenpeace identified 37 supply chain links between the case study properties and the big three meat processors, plus a further three rancher-level links not involving the case study properties. Of these 37 links, 23 were indirect. Of those 23, 17 of the links were through ranches owned by the same individual.

190 The full text of the replies received from each of the meat processors in response to Greenpeace’s opportunity to comment letters can be found in Annex 2.

191 Based on responses to Greenpeace’s opportunity to comment letters; see Annex 2. Macfiz did not indicate current compliance. Also, JBS failed to comment on the current status of ranches linked to Celse Miucu, Francisca Evangelista Teodoco da Silva or João Felix Pezeca Neto, identified by Greenpeace as tier-one suppliers during the period studied.

The following ranches all had at least one property that was described as either ‘compliant with [JBS’s] Responsible Pocurement Policy’, ‘able to commercialize cow materials with [JBS]’ or ‘listed in Minevca’s database and... eligible for commercialization’:

- Adevar de Oliveira – JBS / Minevca
- Áazio Bazanadê Neto – JBS
- Daniel Martins Filho – JBS
- Eduardo Machani Bittencourt – Minevca
- Eliana Maria Lemos Monteico Conceição – JBS
- Fabio de Oliveira Luches – Minevca
- Francisco Evangelista Teodoco da Silva – Minevca
- Jose Dalben – JBS / Minevca
- Luiz Carlos Zilliani – JBS
- Raul Amacal Campos – Minevca
- Sergio Jacinto Costa – JBS

192 Based on responses to Greenpeace’s opportunity to comment letters; see Annex 2. The current approved suppliers that appear to violate JBS’s policy are:

- Adevar de Oliveira / Fazenda Boa Sorte
- Luiz Carlos Zilliani / Fazenda Santa Teczera
- Samuel Alexandroni Santos / Fazenda Sete de Setembro (Santos is an intermediary rancher identified in one of the case studies; this rancher’s property registration is currently suspended)

The historic trading relationship that appears to have been in violation of JBS’s policy at the time was with Raul Amacal Campos / Fazenda Espreança. JBS failed to confirm the current status of this ranch as a supplier.

Minevca drew different conclusions on the status of two of these suppliers (Luiz Carlos Zilliani / Fazenda Santa Teczera and Raul Amacal Campos / Fazenda Espreança). The historic trading relationship that appears to have been in violation of Macfiz’s policy was with João Felix Pezeca Neto / Fazenda Fredericinas Novas.

193 The historic trading relationship that appears to have been in violation of Macfiz’s policy was with João Felix Pezeca Neto / Fazenda Fredericinas Novas.

194 Maccison O (2021)

195 JBS (2019)

196 See also eg Observatório do Clima (2021).


198 Ranches (including intermediary ranches) with identified environmental violations and/or property registration irregularities on one or more of their ranches during the...
trade period assessed for this investigation include:

Adeva da Oliveira (note, the CAR status of Fazenda Recceio is just one of the multiple issues associated with this rancher's operations; it was recategorized as active as of 9 November 2020 but pucloc to that had been listed as pending since 4 August 2018)

Álvaro Barreto Neto

Daniel Martins Filho (note, Filho received a US$938,000 fine from IBAMA for the illegal construction of levees along the ciever boundary of Fazenda Santa Helena (Cecilia II))

Fábio de Oliveira Luchesi (the CAR status of Fazenda Santa Helena was recategorized as active only as of 17 November 2020; pucloc to that it was Listed as pending)

Ivanildo da Cunha Miranda

João Felix Pereira Neto

Jose Dalbem

Luiz Carlos Ziliani

Raul Amato Campos

The full text of the replies received from each of the meat processors in response to Greenpeace's opportunity to comment can be found in Annex A.

See the case study below on Ivanildo da Cunha Miranda.

Maczíg's latest zcro degeofication commitment extends to the Cerrado, but not the Pantanal.

See Maczíg website 'Maczíg Vecde'.

See JBS–Fçıbo, Bertín, Minecva M Maczíg (208).

As promised by the European Commission.

See European Parliament (208).

As proposed by the UK Government. See Department of Environment, Food and Rural Affairs (208).

See eg Visipec website 'Home'.

See MaczÍg (2021b) and Minecva (2021)

Visipec (nd) p2

The Brazilian Federal Inspection Service (Serviço de Inspeção Federal, SIF), organised by the Ministry of Agriculture, Livestock and Food Supply and overseen by the Department of Inspection of Animal Origin Products (Departamento de Inspeção de Produtos de Origem Animal, DIPOA), is responsible for 'ensuring the quality of edible and inedible animal products intended for the domestic and foreign markets and the suitability of imported products' (Federal Government of Brazil (2017)). The system operates in approximately 5,000 establishments across the country, each identified by a SIF number. The seal on a facility's products is meant to indicate that they are of safe animal origin and meet the criteria required by legislation; it also enables traceability of those products back to the facility where they originated.

SIF-registered facilities are able to trade throughout the country (unlike those registered with the state or municipal inspection services, which can trade only locally) and, if they export products, they must meet additional criteria (see eg alverson (2008)).

Ministério da Agricultura, Pecuária e Abastecimento website 'Consulta de estabelecimento nacional: Dados do estabelecimento'

Ministério da Agricultura, Pecuária e Abastecimento website 'Consulta de estabelecimento nacional: Dados do estabelecimento nacional'; details can be found by searching for the SIF number.

Ministério da Agricultura, Pecuária e Abastecimento website 'Consulta de estabelecimento nacional: Dados do estabelecimento nacional'; details can be found by searching for the SIF number.

Greenpeace Brazil and Repórter Brasil field investigations, October 2020

JBS (2021b) p14

Maczíg (2028) p8

Minecva (2028) p1

See Yonatan (2021) and Planet (https://www.planet.com/).

Ownership and sizes of properties were established based on data from official sources (CAR website 'Consulta demonstrativo do CAR', IBAMA website 'Consulta de autuações ambientais e embargos', Secretaria de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público' and Secretaria Estadual de Meio Ambiente, Departamento de Gestão Ambiental, Produção e Agricultura Familiar (SEMAGRIO) Portal de Informações e Geopositionamento de Mato Grosso do Sul (PIN MS) website 'Mapa consulta SICAR').

Fazenda Bonsucesso is listed on the Mato Grosso do Sul SICAR website as belonging to the estate of Piscência do Costa Lima, with Mauri da Costa Lima acting as appointed legal representative.

MINISTÉRIO PÚBLICO FEDERAL, Procuradoria da República no Estado de Mato Grosso do Sul (SEMAGRO) Portal de Informações e Geopositionamento de Mato Grosso do Sul (PIN MS) website 'Mapa consulta SICAR'.

The full text of the replies received from each of the meat processors in response to Greenpeace's opportunity to comment can be found in Annex A.


USD equivalents given in this report are approximate amounts, based on the average exchange rates in the years during which the fines were imposed.

Ownership and sizes of properties were established based on data from official sources (CAR website 'Consulta demonstrativo do CAR', IBAMA website 'Consulta de autuações ambientais e embargos', Secretaria de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público' and Secretaria Estadual de Meio Ambiente, Departamento de Gestão Ambiental, Produção e Agricultura Familiar (SEMAGRIO) Portal de Informações e Geopositionamento de Mato Grosso do Sul (PIN MS) website 'Mapa consulta SICAR').

The business is described as being located on the edge of the São Lourenço river in Corumbá, which matches the location of the business as described by Amnesty International (2020).

The embargoes are against Agropecuária Itapajé, gov.br embargos; details can be found by searching for IBAMA website 'Consulta de autuações ambientais e embargos'; details can be found by searching for the CAR number MT-5106828-C488DC83E51B4436B221ACFBB0586505. A previous check on 25 November 2020 showed a status of 'pending'.

286 Source: Marfrig website 'Conheça a origem da nossa carne'.

287 Documentation held by Greenpeace.

288 The company’s partners are Raul Amacal Campos Filho, Doza Nougues Amacal Campos, Paula Nougues Amacal Campos Pacheco, Raul Amacal Campos, Helena Nougues Amacal Campos Pezoczo and Roberta Amacal Campos. Source: Receita Federal website ‘Emissão de compravante de inscrição e de situação cadastral’ (details can be found by searching for the CNPJ 25530968000188).

289 The Mato Grosso state registry lists the size of the property as 10,330 ha (see Secretário de Estado de Meio Ambiente de Mato Grosso website ‘SIMCAR portal público’, CAR number MT70390/2018). For consistency, all figures reported in the text are from the federal registry (CAR website ‘Consultas demonstrativo do CAR’).

290 Documentation held by Greenpeace.


292 Documentation held by Greenpeace.

293 Link to Jose Dalben confirmed by IE number 132896613. Source: Marfrig website ‘Conheça a origem da nossa carne’. Other listed ranches linked to Raul Amaral Campos are Fazenda Furninha (IE 132212568), Fazenda Gaivota (IE 132212740) and Fazenda Santa Tezcinha (IE 132212568). Source: Ministério da Agricultura, Pecuária e Abastecimento, CAR number 404633/2018. Source: Secretário de Estado de Meio Ambiente de Mato Grosso (2020).

294 The embargoes are against Agropecuária Itapajé, process number 404633/2018. Source: Secretário de Estado de Meio Ambiente de Mato Grosso (2020).

295 Documentation held by Greenpeace.

296 The company’s partners are Raul Amacal Campos Filho, Doza Nougues Amacal Campos, Paula Nougues Amacal Campos Pacheco, Raul Amacal Campos, Helena Nougues Amacal Campos Pezoczo and Roberta Amacal Campos. Source: Receita Federal website ‘Emissão de compravante de inscrição e de situação cadastral’ (details can be found by searching for the CNPJ 25530968000188).

297 Documentation held by Greenpeace.

298 Documentation held by Greenpeace.

299 Documentation held by Greenpeace.

300 Documentation held by Greenpeace.


302 Documentation held by Greenpeace.

303 Link to Raul Amacal Campos confirmed by IE number 132212579. Source: Marfrig website ‘Conheça a origem da nossa carne’ and Ministério da Agricultura, Pecuária e Abastecimento, CAR number 708859/2017. Source: Marfrig website 'Conheça a origem da nossa carne'.

304 Documentation held by Greenpeace.

305 Documentation held by Greenpeace.

306 Link to Jose Dalben confirmed by IE number 132896613. Source: Marfrig website ‘Conheça a origem da nossa carne’. Other listed ranches linked to Raul Amaral Campos are Fazenda Furninha (IE 132212568), Fazenda Gaivota (IE 132212740) and Fazenda Santa Tezcinha (IE 132212568). Source: Ministério da Agricultura, Pecuária e Abastecimento, CAR number 404633/2018. Source: Secretário de Estado de Meio Ambiente de Mato Grosso (2020).

307 Documentation held by Greenpeace.

308 Documentation held by Greenpeace.

309 Documentation held by Greenpeace.

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322 Documentation held by Greenpeace.

323 Documentation held by Greenpeace.

324 Documentation held by Greenpeace.
Secretário de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público', accessed 25 November 2020 and 5 February 2021; details can be found by searching for the CAR numbers MT26775/2017 and MT35750/2018.

Documentation held by Greenpeace.

Friboi website 'Garantia de origem'.

Link to Luiz Carlos Zilliani confirmed by IE number 132608962. Source: Maz psychic website 'Conheça a origem da nossa carne'.

Link to Luiz Carlos Zilliani confirmed by IE number 132608962. Source: Maz psychic website 'Conheça a origem da nossa carne'.

JBS (2021a)

Macfiz (2021a)

Mintzva (2021)

Mintzva (2021)

Secretário de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público', accessed 5 February 2021; details can be found by searching for the CAR number MT37296/2019.

Secretário de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público', accessed 5 February 2021; details can be found by searching for the CAR number MT-5182564-6295965E0A4D39CV4D3662F408C86E.

IBAMA website ‘Consulta de autuações ambientais e embargos’, details can be found by searching for ‘Autuações Ambientais’ in its name within this date range.


Documentation held by Greenpeace.

Friboi website 'Garantia de origem'.

Link to Daniel Martins Filho confirmed by IE number 287715132. Source: Maz psychic website 'Conheça a origem da nossa carne'.

JBS (2021a)

Macfiz (2021a)

Listed as Fazenda São Caçus e Santa Monica on the Secretário de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público'; other official documents held by Greenpeace refer to São Caçus only, but the associated property boundaries are the same.

Secretário de Estado de Meio Ambiente de Mato Grosso website 'SIMCAR portal público', accessed 5 February 2021; details can be found by searching for the CAR number MT37296/2019.

CAR website ‘Consulta demonstrativo do CAR’, accessed 5 February 2021; details can be found by searching for the CAR number MT-5182564-6295965E0A4D39CV4D3662F408C86E.

IBAMA website ‘Consulta de autuações ambientais e embargos’, details can be found by searching for ‘Autuações Ambientais’ in the name of Raymundo Victor Costa Ramos Sharp within this date range.

Documentation held by Greenpeace.

Friboi website 'Garantia de origem'.

JBS (2021a)

Camargos D R Campos A (2020)

Instituto Centro de Vida (2020) pp7-9

Camargos D R Campos A (2020)

Camargos D R Campos A (2020)

Camargos D R Campos A (2020)

Friboi website 'Garantia de origem'

Friboi website 'Garantia de origem'

Friboi website 'Garantia de origem'

Friboi website 'Garantia de origem'


Climate Change website ‘The Paris Agreement’.

Amigo I (2020)

Nobre CA et al (2016)


Lovejoy TE & Nobce C (2019), Webb J (nd)

Calma J (2019)

Kimbrough L (2020), Reuters (2020)

Chain Reaction Research (2020c)


Shalders A (2020)

Hiba J (2020)


Swiss Re (2020) pp4, 7-24-27

Rajão R et al (2020)

Clark MA et al (2020)

Aske K (2020)

Due to its links to deforestation and habitat degradation, industrial meat production contributes to the increased risk of zoonoses – diseases such as COVID-19 that are originally found in non-human animals but jump the species barrier and begin to infect humans. For more information, see EcoHealth Alliance (2019), IPBES (2020), United Nations Environment Programme & International Livestock Research Institute (2020) and World Health Organization website ‘Zoonoses’.

Soya is the second most significant driver of global deforestation after beef, and about 98% of it is used for animal feed. See European Commission (2013) pp23-27, Mendes S, Pacson UM & Kantrez T (2015) p6 and Sharma S, IATP & Schlesinger S (2017) p25. For more on this topic, see eg Greenpeace (2020b).

For details on Greenpeace’s vision ‘for a healthier life and planet’, see Greenpeace (2018).
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