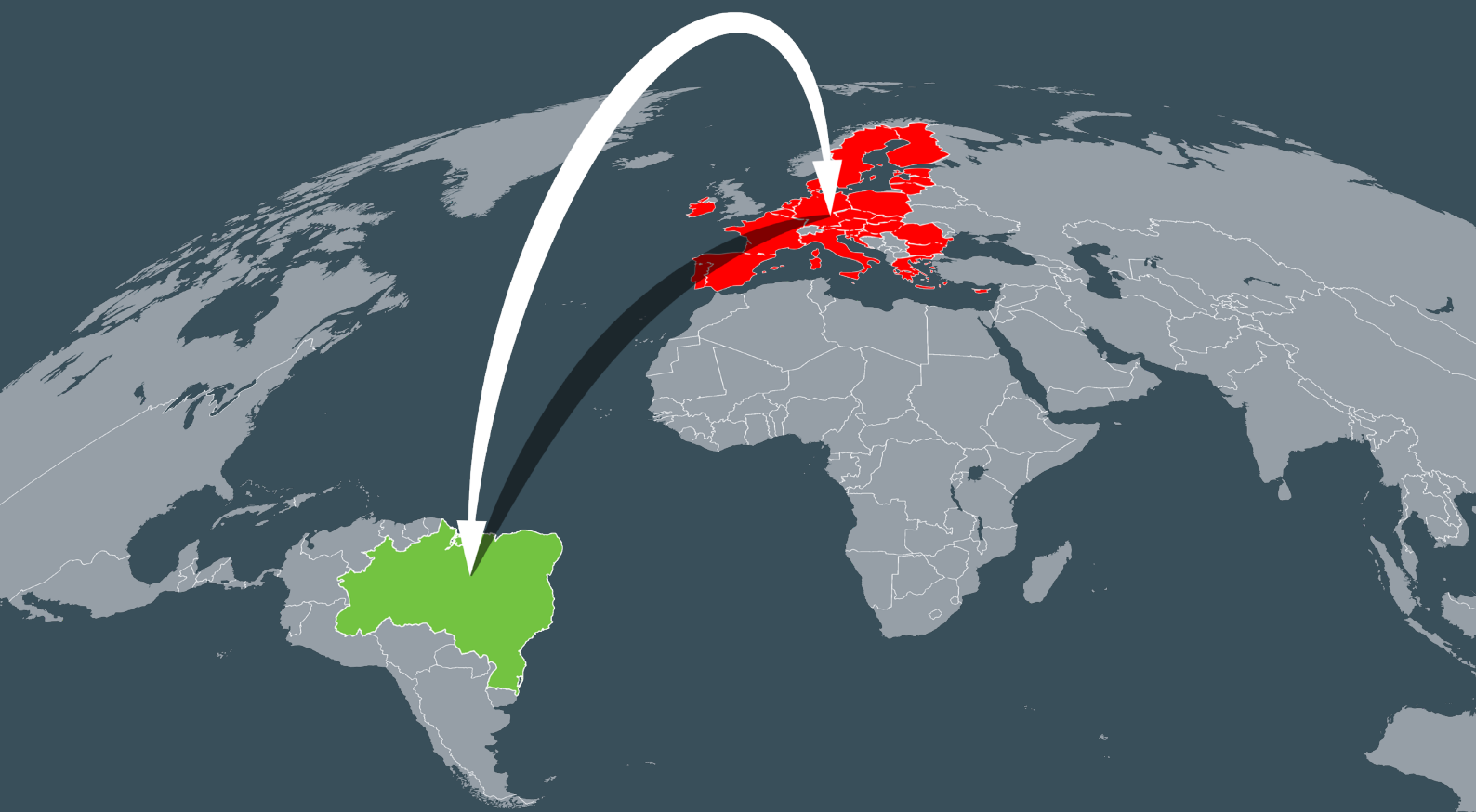




**RADAR
VERDE**

TRANSPARÊNCIA DA CARNE NA AMAZÔNIA



RADAR VERDE EUROPEAN UNION

To what extent do meatpacking companies authorized to export to the European Union demonstrate supply chain control over suppliers to prevent deforestation in the Legal Amazon



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Executive Summary

The climate crisis is intensifying the need for greenhouse gas emissions mitigation plans. In Brazil, deforestation accounts for 49% of these emissions, with the cattle sector contributing 27% of gross emissions. The European Union (EU), a key importer of Brazilian beef, established the European Union Deforestation Regulation (EUDR) in 2023 to promote the consumption of deforestation-free products, impacting exports from 2025 onward (SEEG, 2023).

In 2022, Brazilian beef exports to the EU reached 85 thousand tonnes, generating US\$ 661 million, according to the Brazilian Association of Meat Exporting Industries (ABIEC). The EUDR regulation, together with the Corporate Sustainability Due Diligence Directive (CS3D), may significantly affect this market by imposing strict traceability and environmental compliance requirements.

This study assesses the compliance of meatpacking companies exporting beef from the Brazilian Amazon to the EU with the specifications of the EUDR regulation, using the results of Radar Verde 2023.

Key findings descobertas

The results of Radar Verde 2023 were used to assess the zero deforestation policies of meatpacking companies exporting to the European Union (EU). The EUDR requires operators to demonstrate that their products are not sourced from recently deforested areas and comply with applicable legislation. The main findings of this study include:

- Meatpacking plants in the Legal Amazon authorized to export to the EU are concentrated in the state of Mato Grosso. There are eight meatpacking plants belonging to six companies, with a total slaughter capacity of 5,870 animals per day;
- None of the assessed companies demonstrated full compliance with the EUDR specifications;
- All assessed companies exporting to the EU operate in regions with more than 100,000 hectares of deforestation risk;
- 63% of the companies have control over direct suppliers, but no control over indirect suppliers;



- This performance is insufficient to meet EUDR requirements, as the regulation requires traceability of origin for indirect suppliers as well;
- Only 25% of the companies showed moderate supply chain control. The effectiveness of the deforestation policies of the remaining companies was low or very low.

Discussion and recommendations

The EU can influence sustainable practices in the Brazilian beef production chain by collaborating with financial institutions and government agencies to create incentives for improved production and environmental practices.

To meet EUDR requirements, Brazil needs to integrate origin traceability for sanitary purposes (SISBOV) with robust socio-environmental controls, covering the entire supply chain, including indirect suppliers.

Initiatives such as the National Program for the Conversion of Degraded Pastures represent opportunities for international investment to restore degraded pastures and improve agricultural productivity in a sustainable way. Encouraging municipalities and states with high environmental compliance may be crucial to the success of these initiatives.

European financial institutions operating in Brazil can play an important role in promoting sustainable practices by avoiding financing activities associated with deforestation.

Conclusion

Ensuring compliance with European regulations is essential to maintain Brazilian beef exports to the European Union (EU). Improving cattle traceability and implementing zero deforestation policies are key steps. The partnership between the European Union (EU) and Brazil has the potential to drive more sustainable practices and, in turn, increase the potential for food security for populations in both regions.



1. Introduction

The intensification of the climate crisis has led companies and countries to develop greenhouse gas emissions mitigation plans. Among these plans are targets to exclude the purchase of products associated with deforestation—responsible for approximately 49% of the country’s total emissions in 2021—which may affect Brazilian businesses where deforestation is the main source of emissions. The activity most exposed to negative impacts is the cattle sector, which has been responsible for 27% of the country’s gross emissions (SEEG, 2023).

Specifically, European Union (EU) regulations may affect the sector from 2025 onward. In 2022, beef exports to the EU totaled approximately 85 thousand tonnes, generating US\$ 661 million in revenue, according to the Brazilian Association of Meat Exporting Industries (ABIEC). Part of these exports may be affected by two regulations: the European Union Deforestation Regulation (EUDR), which is the focus of this report; and the Corporate Sustainability Due Diligence Directive (CS3D).

The EUDR was established in June 2023 and is expected to be implemented from January 2025. Its objective is to promote the consumption of deforestation-free products in order to reduce the impact of European consumption on global deforestation and forest degradation. The regulation applies to commodities such as cattle, timber, cocoa, soy, palm oil, coffee, rubber, and some of their derived products (leather, chocolate, etc.).

In this report, we assess whether meatpacking companies authorized to export beef from the Brazilian Amazon to the EU comply with the specifications of the EUDR. Our assessment is based on the results of Radar Verde 2023, a tool that evaluates the commitment of meatpacking companies to zero deforestation policies. Radar Verde seeks evidence of companies adopting zero deforestation policies to ensure that the beef they sell is not directly or indirectly associated with deforestation in the Amazon (Imazon & O Mundo Que Queremos, 2023).



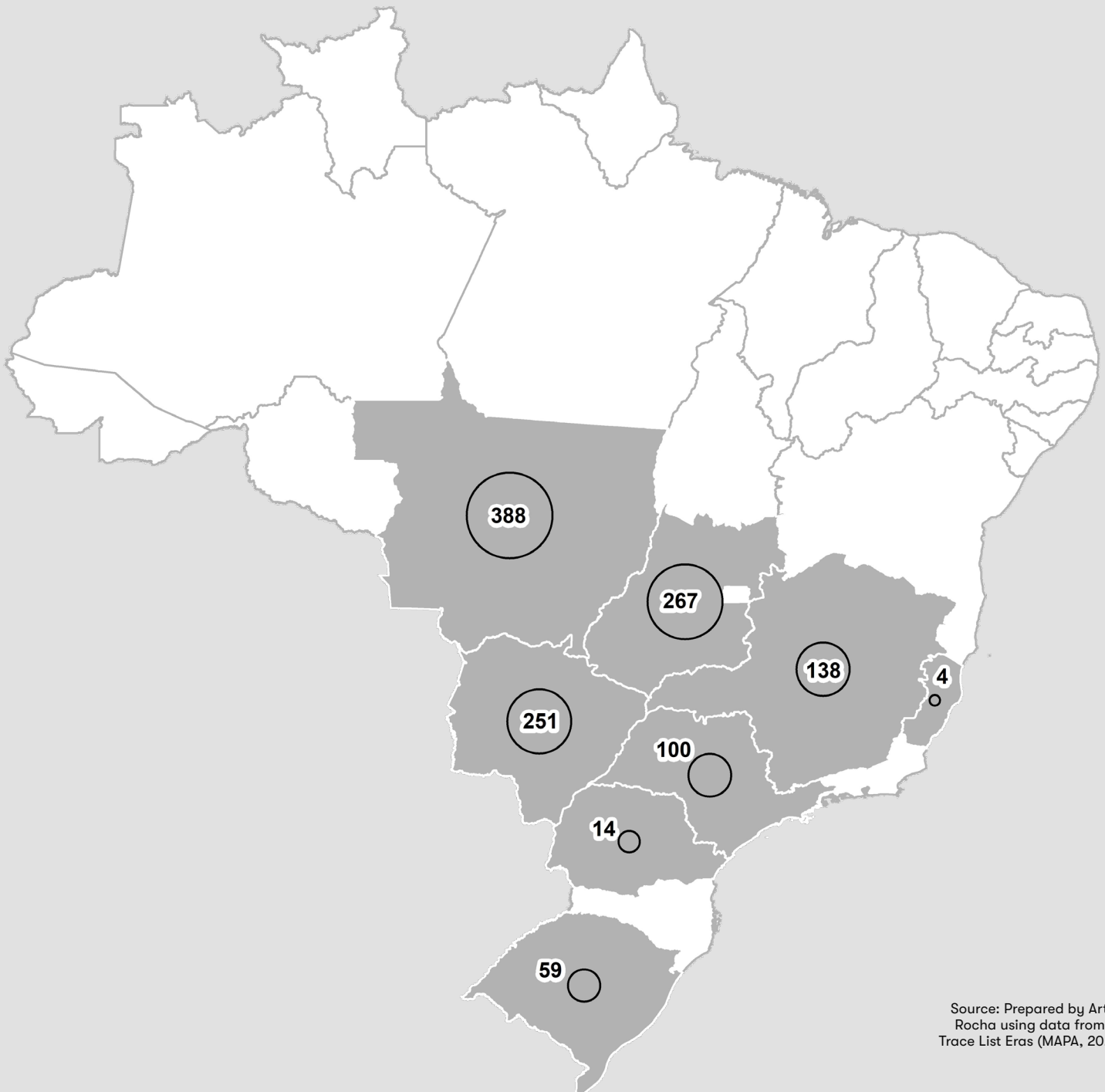
2. European market requirements for Brazilian beef

2.1 Traceability of origin for sanitary safety

Since 2000, the European Union has required individual traceability of animals destined for slaughter in order to ensure sanitary safety. Normative Instruction No. 51 of 2018, issued by the Ministry of Agriculture and Livestock (MAPA), established the Brazilian System of Individual Identification of Cattle and Buffalo (SISBOV), which sets rules for exporting meat to markets with this requirement. However, traceability from the animal's property of origin (birth) is not required, but only for the period of up to 90 days before slaughter, and these may be different. Moreover, this requirement is for sanitary purposes and not for socio-environmental control.

Only authorized properties can supply cattle for slaughter to be marketed to the EU. The list of approved establishments is updated annually by MAPA. In June 2024, 1,221 establishments, distributed across the states of Espírito Santo, Goiás, Minas Gerais, Mato Grosso do Sul, Mato Grosso, Paraná, Rio Grande do Sul, and São Paulo, held this authorization.

Figure 1. Number of rural establishments supplying cattle in Brazil, by state, authorized for the European Union in 2024



Source: Prepared by Arthur Rocha using data from the Trace List Eras (MAPA, 2024).



2.2 Risk analysis and traceability of origin to avoid products associated with deforestation

The EUDR establishes that any operator or trader exporting cattle, timber, cocoa, soy, palm oil, coffee, rubber, and some of their derived products (leather, chocolate, etc.) to the European Union (EU) market, or exporting them from the EU to other markets, must be able to demonstrate that these do not originate from recently deforested areas or have contributed to forest degradation. Countries and companies trading with the EU will have 18 months to comply with this regulation from the date it entered into force; however, micro and small enterprises may have a longer deadline.

Operators must collect information, documents, and data demonstrating that the commodities comply with the due diligence requirements established by the regulation. To this end, they must collect, organize, and retain information for five years from the export date of the products, accompanied by evidence related to each product. Below are some of the relevant information requirements for the cattle sector (Adapted from Article 9 of the EUDR, 2023):

- Adequately conclusive and verifiable information that the products are deforestation-free;
- Adequately conclusive and verifiable information that the commodities were produced in accordance with the applicable legislation of the country of production, including any provisions granting the right to use the respective area for the purposes of commodity production;
- The geolocation of all plots of land where the commodities contained in the product were produced or made, as well as the date or time range of production;
- When a product contains or was made with commodities produced in different plots of land, the geolocation of each of these plots must be included;
- Any deforestation or forest degradation in the supplied plots of land automatically disqualifies all commodities and products from those plots from being placed or made available on the market or exported;
- For products that contain or were produced using cattle, and for other relevant products that were fed with these products, geolocation must refer to all establishments where the cattle were kept;



- For all other relevant products listed in Annex I of the regulation, geolocation must refer to the plots of land.

Operators must analyze the collected information and any relevant documentation to assess whether there is a risk that the products do not comply with regulatory requirements. Products should only be placed on the market or exported if the assessment indicates no or negligible risk of non-compliance, considering the following criteria (Adapted from Article 10 of the EUDR, 2023):

- Risk classification of the country of production or parts thereof (in accordance with Article 29 of the regulation);
- The presence of forests in the country of production or parts thereof;
- The presence of Indigenous peoples in the country of production or parts thereof;
- Good-faith consultation and cooperation with Indigenous peoples in the country of production or parts thereof;
- The existence of duly substantiated claims by Indigenous peoples based on objective and verifiable information regarding the use or ownership of the land used for the production of the relevant commodity;
- The prevalence of deforestation or forest degradation in the country of production or parts thereof;
- The source, reliability, validity, and links to other available documentation of the information referred to in Article 9;
- Concerns related to the country of production and origin or parts thereof, such as levels of corruption, prevalence of document and data falsification, lack of law enforcement, violations of international human rights, armed conflicts, or the presence of sanctions imposed by the United Nations Security Council or the Council of the European Union;
- The complexity of the supply chain and the stage of processing of the products, particularly the difficulties in linking the relevant products to the plot of land where the commodities were produced;



- The risk of circumventing this regulation or mixing with products of unknown origin or produced in areas where deforestation or forest degradation has occurred or is occurring;
- Conclusions of meetings of Commission expert groups supporting the implementation of this regulation, as published in the Commission's expert group register;
- Substantiated concerns submitted under Article 31 of this regulation and information on the history of non-compliance of operators or traders along the supply chain with this regulation;
- Any information indicating a risk that the relevant products are not in compliance;
- Additional information on compliance with this regulation, which may result from certification or other third-party verified schemes, such as voluntary schemes recognized by the Commission under Article 30(5) of Directive (EU) 2018/2001 of the European Parliament and of the Council, provided that the information meets the requirements set out in Article 9 of this regulation;
- Operators must document and review risk assessments at least annually and make them available to competent authorities upon request;
- Operators must be able to demonstrate how the collected information was verified against the risk assessment criteria and how the level of risk was determined.



3. Performance of zero deforestation policies of meatpacking companies exporting to the European Union in the Amazon

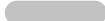
Radar Verde analyzed in 2023 the meatpacking companies in the Legal Amazon exporting to the European Union. These total eight meatpacking plants (Figure 2), concentrated in the state of Mato Grosso, belonging to six companies with a total slaughter capacity of 5,870 animals per day (Figure 3).

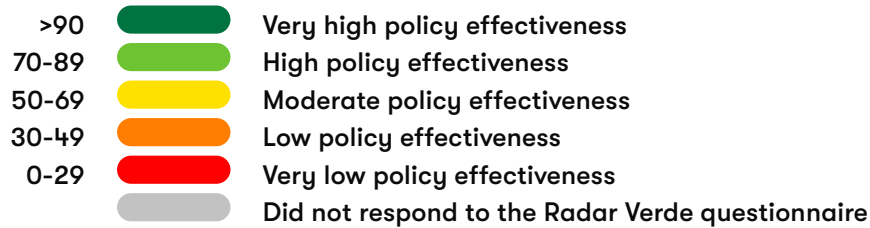
All assessed companies exporting to the European Union operate in a region with more than 100,000 hectares of deforestation risk. However, no beef company responded to the Radar Verde questionnaire to demonstrate that it monitors its cattle supply chain. Therefore, none of them were in compliance with the EUDR specifications regarding information disclosure and sourcing from areas with high deforestation risk.

63% of meatpacking companies exporting to the European Union in the Amazon demonstrated supply chain control over their direct suppliers; none demonstrated control over their indirect suppliers; and only 25% of the listed meatpacking companies showed moderate supply chain control. The others had the effectiveness of their socio-environmental policy classified as low or very low (Figures 4, 5 and 6). This performance does not meet the EUDR requirements, as the regulation requires traceability of origin for indirect suppliers as well.



Table 1. Performance of zero deforestation policies of meatpacking companies exposed to deforestation risk in the Amazon and licensed to export to the European Union, according to Radar Verde 2023

COMPANY	LEVEL OF EXPOSURE TO DEFORESTATION RISK (HECTARES)	SIGNATORY OF THE FEDERAL PROSECUTORS SETTLEMENT AGREEMENT AGAINST DEFORESTATION (TAC)?	LEVEL OF CHAIN CONTROL	LEVEL OF TRANSPARENCY		
				DIRECT SUPPLIERS	INDIRECT SUPPLIERS	OVERALL SCORE
Agra Agroindustrial De Alimentos S/A	259,201	YES				
JBS S/A	413,147	YES				
Marfrig Global Foods S. A.	348,390	YES				
Minerva S. A.	375,349	YES				
Naturafrig Alimentos Ltda	112,589	YES				
Vale Grande Industria e Comercio de Alimentos S/A	1,632,496	YES				



Source: Barreto et al., 2023;
Radar Verde, 2023.

Table 2. Performance of zero deforestation policies of meatpacking plants exposed to deforestation risk in the Amazon and licensed to export to the European Union, according to Radar Verde 2023

FEDERAL SANITARY INSPECTION NUMBER (SIF)	SLAUGHTERHOUSES THAT EXPORTED TO USA	UF	SIGNATORY OF TAC?	SLAUGHTER CAPACITY	MAXIMUM PURCHASE ZONE	LEVEL OF EXPOSURE TO DEFO- RESTATION (HA)	LEVEL OF CHAIN CONTROL	LEVEL OF TRANSPARENCY		
								DIRECT SUPPLIERS	INDIRECT SUPPLIERS	OVERALL SCORE
3941	Agra Agroindustrial De Alimentos S/A	MT	YES	320	500	259.201				
2979	JBS S/A	MT	YES	1500	500	374.715				
42	JBS S/A	MT	YES	1600	390	40.706				
1900	Marfrig Global Foods S/A	MT	YES	700	420	280.138				
2015	Marfrig Global Foods S/A	MT	YES	250	360	140.406				
2500	Minerva	MT	YES	500	300	375.349				
1811	Naturafrig Alimentos Ltda	MT	YES	500	300	112.589				
3348	Vale Grande Industria e Comercio de Alimentos S/A (Frialto)	MT	YES	500	350	1.632.496				

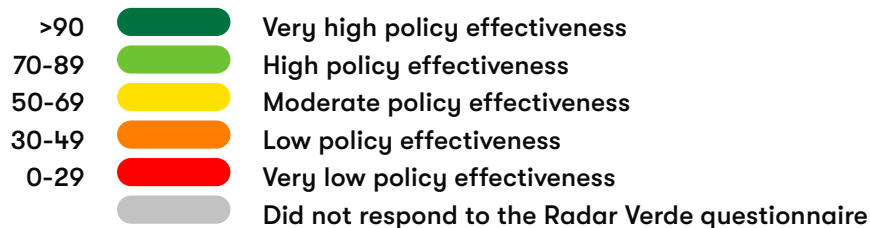


Figure 2. Supply chain level of transparency by meatpacking companies authorized to export to the European Union (number of companies and slaughter capacity) according to Radar Verde 2023

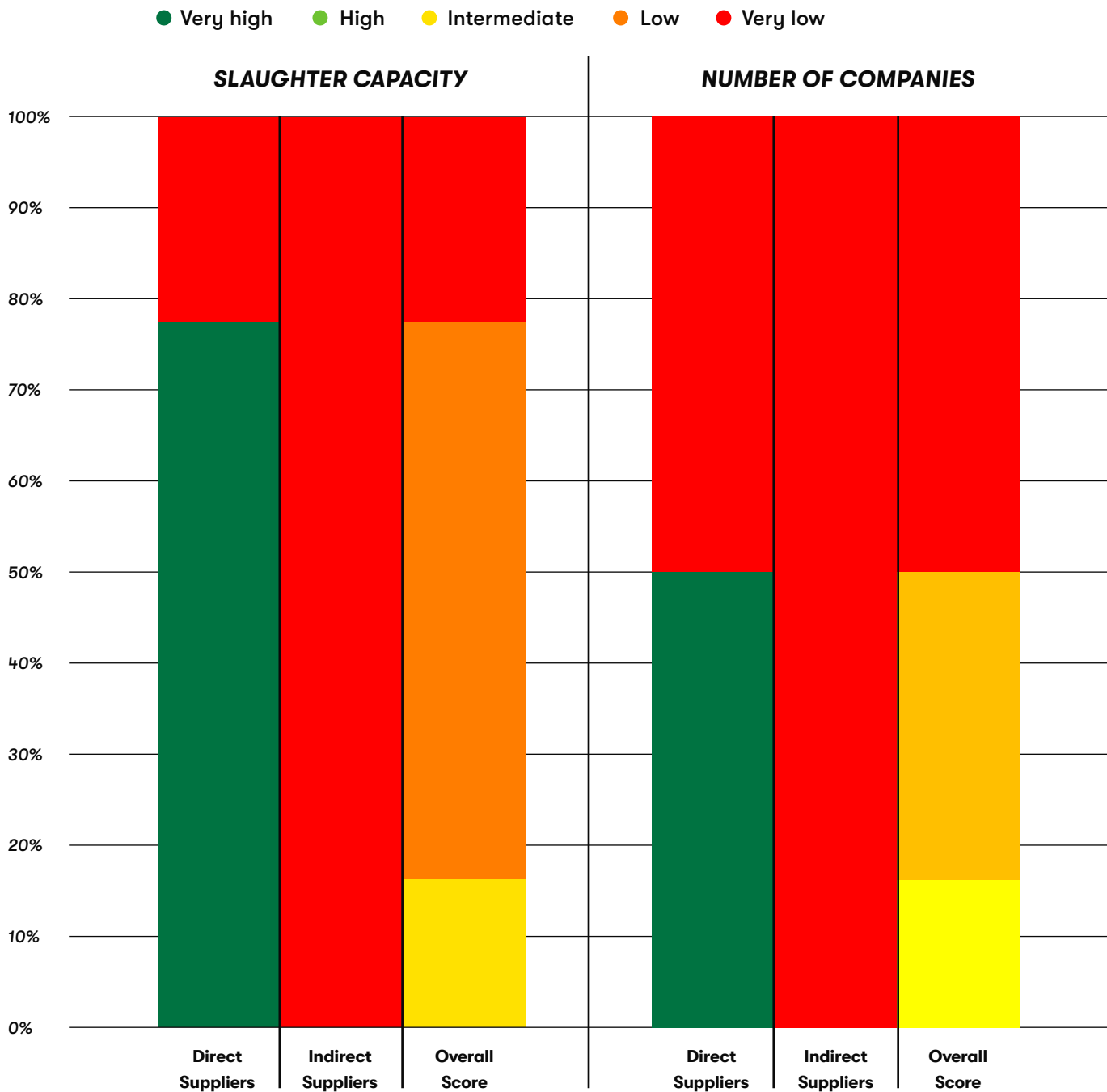
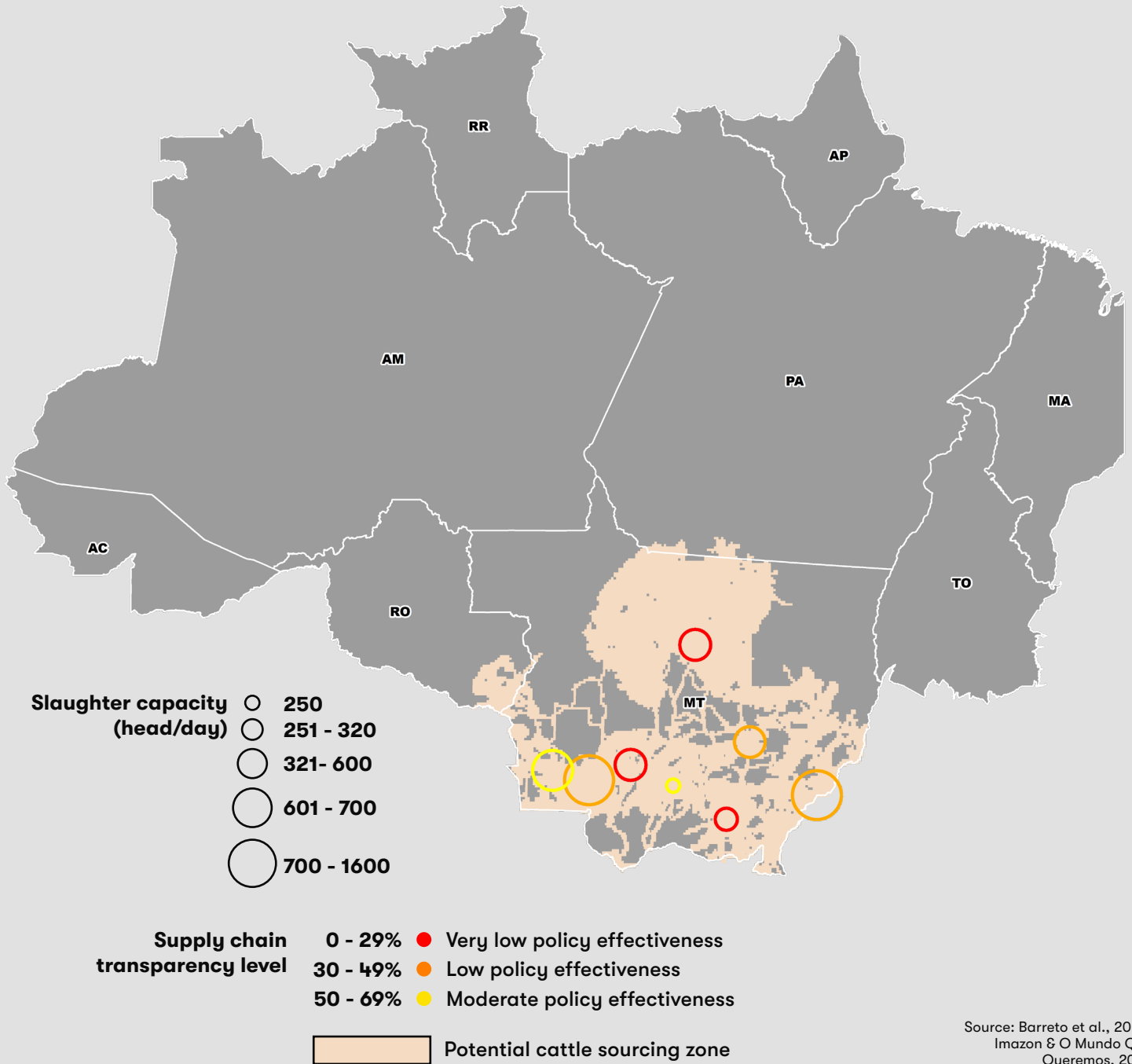
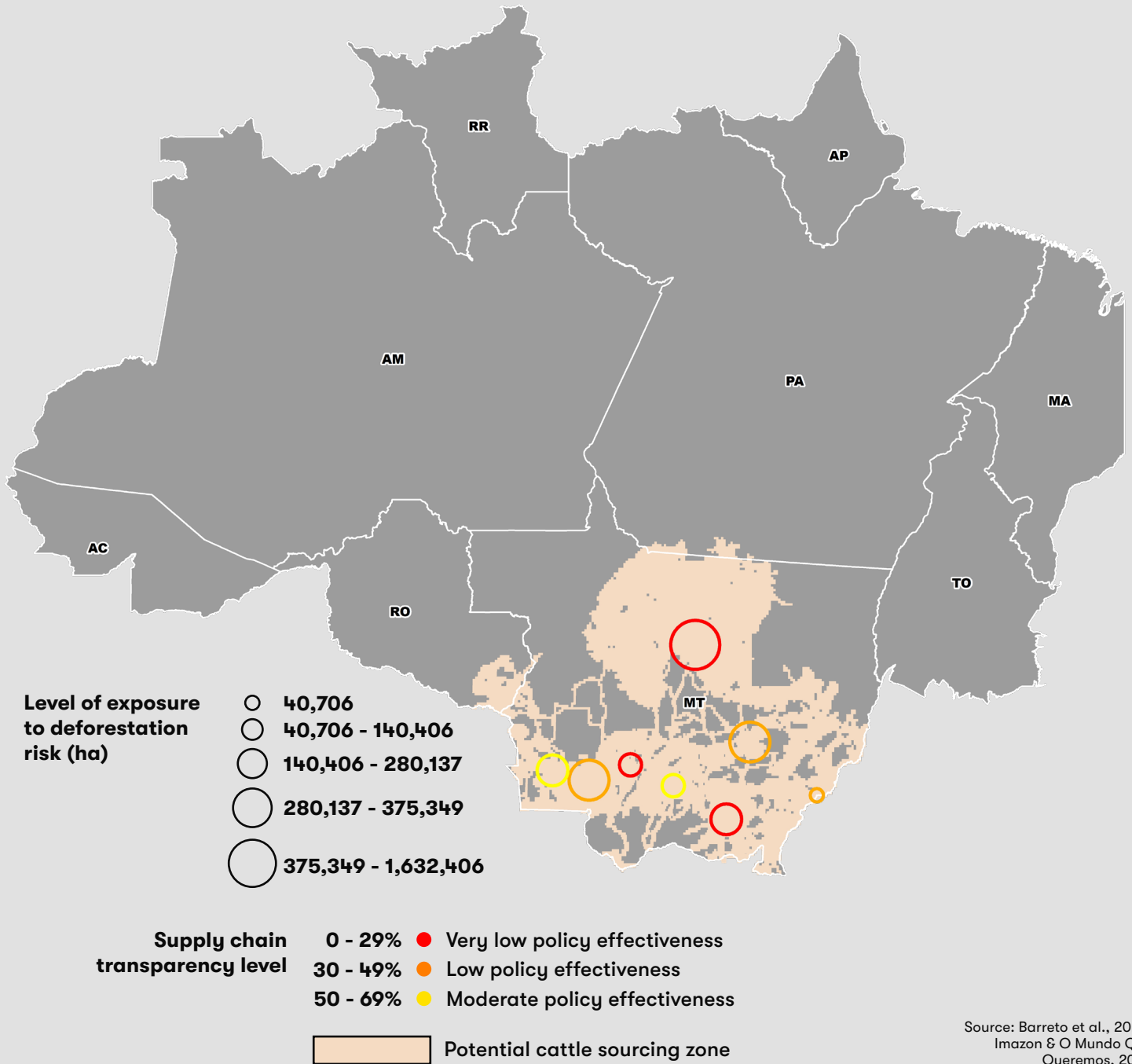


Figure 3. Meatpacking plants licensed to export to the European Union: slaughter capacity, potential cattle sourcing zones, and level of transparency in the supply chain



Source: Barreto et al., 2023;
Imazon & O Mundo Que
Queremos, 2023

Figure 4. Meatpacking plants licensed to export to the European Union: level of exposure to deforestation risk, potential cattle sourcing zones, and level of transparency in the supply chain



Source: Barreto et al., 2023;
Imazon & O Mundo Que
Queremos, 2023



4. Discussion

Amid the pressing challenge of food security in the face of climate change, the partnership between Brazil and the European Union offers a significant opportunity to promote meaningful changes in the beef industry, which is responsible for most deforestation in Brazil. As a major importer of Brazilian beef, the EU could influence the practices shaping this sector in Brazil.

Radar Verde demonstrates that companies operate in regions with high deforestation risk without proper controls. This condition requires greater due diligence from European importers in accordance with EUDR rules.

Radar Verde reveals different situations among beef companies: some are beginning to adopt zero-deforestation policies, while others are lagging behind in this regard. Even among those that have already implemented some form of policy, attention generally focuses on fattening farms, and they do not have robust and transparent monitoring and control of deforestation on breeding farms, which must be monitored under the EUDR. This is concerning because there is a proven link between deforestation and operations on breeding farms (Barreto et al., 2023).

In addition, Radar Verde shows that a lack of transparency prevails among most beef companies regarding their zero-deforestation policies and results, posing challenges to accountability and trust-building within the industry.

To ensure compliance with the commercial specifications required by European regulations, Brazil will need to connect origin control for sanitary purposes (SISBOV) with socio-environmental control (property and deforestation maps) for both direct and indirect suppliers.

European meat retailers and European financial institutions operating in Brazil would benefit from anti-deforestation rules. Some of these have faced legal proceedings and have been accused of purchasing from and financing deforestation, even indirectly, in the country (Papini et al., 2020). A study released by the Brazilian Institute for Consumer Protection (IDEC) through the 2020 Fair Finance Guide report revealed that financial institutions from the Netherlands, Germany, and Norway invested more than US\$11 billion (R\$59.3 billion at current values) in 26 leading Brazilian retail and agribusiness companies, selected from among companies operating with a high risk of association with deforestation in the Cerrado and the Amazon. One of the companies benefiting from these investments is the Casino Group, which owns the retailer Pão de Açúcar in Brazil and which, in 2021, faced a lawsuit filed by Indigenous peoples from Brazil and Colombia accusing the group of selling beef linked to land grabbing and deforestation in the Amazon (Vidalon & Lough, 2021).

In light of these risks and the need to promote more sustainable practices, the European Union could play an important role in removing deforestation from Brazil's beef supply chain. In addition to restricting the purchase of beef whose cattle origin is lin-



ked to illegal farms, the European Union could also collaborate with private and public financial institutions and federal and state agencies to design incentives for farmers to adopt better production and environmental practices. For example, prioritizing municipalities and states with the highest environmental compliance rates may be critical to this effort. Environmental compliance indicators could include lower deforestation rates and a high percentage of illegally deforested areas under environmental regularization programs (as required by the Forest Code). It is important to emphasize that the performance of state governments in enforcing the Forest Code varies considerably across Brazil and within the Amazon (Lopes et al., 2023).

Initiatives can be developed within a framework of collaboration among the parties and through the National Program for the Conversion of Degraded Pastures, established by the federal government in 2023, which aims to restore and convert up to 40 million hectares of low-productivity pastureland into arable land over ten years (Brasil, 2023). The Brazilian government is seeking international investors to finance this program (Brasil, 2023; Walendorff, 2023). New initiatives should learn from the lessons of actions already underway (for example, Carrefour Investe em Pecuária Sustentável, n.d.).

By implementing these recommendations, both trading partners would strengthen forest protection and, consequently, the mitigation of climate extremes. In addition, combating deforestation would encourage more productive use of degraded pastures in the country, as has already occurred in the past (see Veríssimo et al., 2022). In this way, they would also contribute to increasing the potential for food security for the populations of both regions.



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