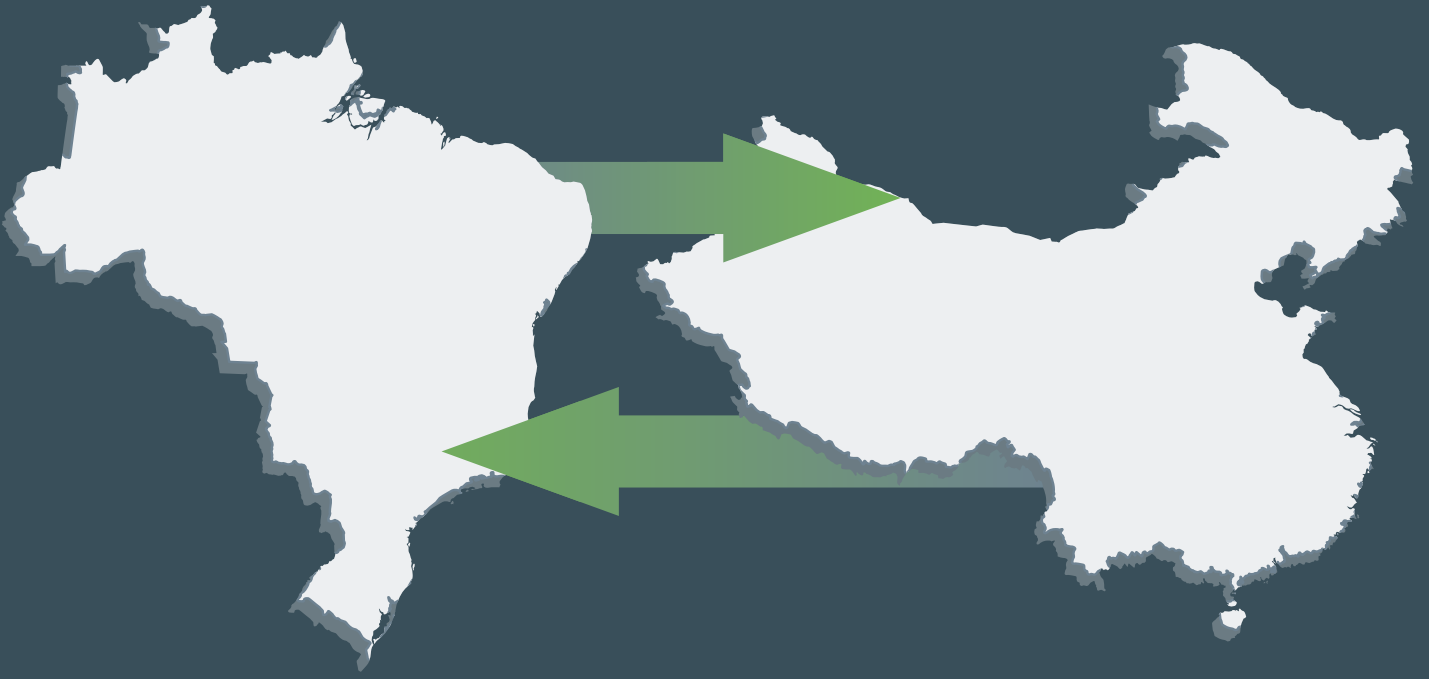




**RADAR
VERDE**

BEEF TRANSPARENCY IN THE BRAZILIAN AMAZON



**ARE BRAZILIAN BEEF
COMPANIES IN ACCORDANCE
WITH THE CHINA MEAT
ASSOCIATION SPECIFICATION
FOR THE MEAT INDUSTRY
GREEN TRADE?**

2025

1. Introduction	3
2. The CMA Specification for Meat Industry Green Trade.....	5
3. How does the beef industry in the Amazon relate to the specifications for Meat Industry Green Trade?	6
3.1 The size of the beef industry in the Amazon licensed to export to China and Hong Kong	6
3.2 Performance of the beef companies concerning the China Meat Association specification for zero deforestation policies	7
4. Discussion	14
5. Appendix.....	16
6. References	20



1 Introduction

Climate change is already disrupting agricultural production and food systems through higher temperatures, shifting rainfall patterns, and more frequent/intense extremes (heatwaves, droughts, floods), with documented consequences for food security and the stability of food prices (IPCC, 2023; World Bank, 2024; Adam & Matta, 2025). In the Amazon, drought and heat extremes have intensified in recent years, increasing fire risk and undermining ecosystem services that help regulate regional rainfall—effects that can cascade into higher production volatility and food-price pressures domestically and internationally (World Weather Attribution, 2024). Because deforestation is both a major source of Brazil’s greenhouse gas emissions and a driver of regional climatic feedbacks, achieving zero deforestation is increasingly central to climate-risk reduction, agricultural resilience, and long-run food security (SEEG, 2022; IPCC, 2023).

China’s food-security strategy has historically emphasized domestic supply stability and price management, while the country’s meat demand—particularly beef—has become increasingly reliant on imports over the past decade (Center for Strategic and International Studies, 2024). In parallel, influential Chinese industry initiatives have begun to articulate substituir por: expectations for “green trade” in meat supply chains, including environmental risk management and information disclosure (China Meat Association, 2021). These dynamics matter acutely for Brazil: China has been the main destination for Brazilian beef exports in recent years, accounting for roughly half of total export volume (ABIEC, 2024; Reuters, 2026).

On December 31, 2025, China announced a beef import safeguard package that will apply from January 1, 2026 for three years, establishing tariff-rate quotas (TRQs) by supplier and applying an additional 55% tariff on imports above the quota (MOFCOM, 2025; Reuters, 2025). For Brazilian beef specifically, China’s 2026 quota was reported at 1.106 million tonnes, rising modestly in 2027–2028 (Reuters, 2026). This policy increases the strategic value of “within-quota” procurement and creates a practical opening for sustainability-linked supplier selection—particularly if importers and regulators seek to maximize value, reduce reputational risk, and demonstrate alignment with emerging expectations for “deforestation and conversion-free” products.

This report assesses how beef companies operating in the Brazilian Amazon—specifically export-qualified slaughterhouse units—align with China Meat Association’s “Green Trade” expectations, and how the Radar Verde platform can support risk-based procurement and due diligence. Radar Verde compiles public data to evaluate companies and maps “purchase zones” to make supply-chain exposure and performance more transparent for buyers and stakeholders.



2 The CMA Specification for Meat Industry Green Trade

The CMA document specifies the terms and definitions, basic requirements, supplier accountability, buyer accountability, green trade practice, information publicity, management, and punishment criteria associated with the meat industry's green trade (China Meat Association, 2021).

Relevant definitions of China beef imports from Brazil include:

- **ZERO DEFORESTATION.** Zero deforestation means that commodity production, procurement, supply or investment will not destroy forests; the converted forest area is less than 0.5 hectares.
- **ZERO CONVERSION.** Zero conversion means that commodity production, sourcing or investment will not cause or lead to the conversion of natural ecosystems; the conversion of natural vegetation is less than 0.5 hectares.
- **CUT-OFF DATE FOR DEFORESTATION.** The date by which a given company (or other commitment- or policy-setting entity) is responsible for making no-deforestation commitments is announced no later than the date of the zero-deforestation commitment.
- **THE TARGET DATE FOR ZERO DEFORESTATION/CONVERSION.** The target date is when a given company (or other commitment- or policy-setting entity) intends to fulfill its zero deforestation commitments or policies.
- **BUYER.** Refers to the company that purchases raw materials, processing materials or finished products from the supplier. Buyers include traders, manufacturers and retailers.
- **SUPPLIER.** Refers to the company that provides the buyer with raw materials, processing materials, or finished products. Suppliers include feed processors, live livestock and poultry slaughtering plants, meat products processors, and packaging materials manufacturers. A company can be either a supplier or a buyer. A supplier can be either a direct supplier or an indirect supplier.

The Appendix 1 reproduces examples of consequential specifications for beef production in Brazil. For example, companies “shall avoid supplying/purchasing products from areas with a high risk of deforestation, such as the Amazon rainforest and the Cerrado savanna.”



Moreover, companies “shall continuously improve transparency and traceability in supply chain management of the meat industry.” Traceability should be at the level of local production (such as farms) and of direct and indirect suppliers (or intermediary suppliers), which should be “taken into account.” Traceability should utilize “credible assurance systems (e.g., credible certification systems) capable of linking raw and auxiliary material supplies with production units having specific compliance or performance attributes.”

The CMA specifies transparency requirements such as that “Information should be made available online in a manner that allows interested stakeholders to access, search, aggregate, and download information easily.” The CMA also states, “Companies should follow good and standard practices in data management, data formats, accessibility, and presentation to disclose their information. Moreover, “In addition to regularly reporting the progress of commitment fulfillment, companies are encouraged to disclose information relative to the participation in the green procurement plan, and actively respond to inquiries from external parties on information and events.”



3 How does the beef industry in the Amazon relate to the specifications for Meat Industry Green Trade?

3.1 The size of the beef industry in the Amazon licensed to export to China and Hong Kong

Radar Verde identified 151 beef companies in the Legal Amazon operating under the Federal Inspection Service (SIF) and State Inspection Service (SIE). These groups had 194 slaughterhouses in the region and, according to the Brazilian Institute of Geography and Statistics (IBGE), they accounted for approximately 96% of slaughters in the Amazonian States in 2024.

Among the 151 slaughterhouses operating in the region, 71 are licensed to export to China (31) and Hong Kong (71). These companies could slaughter 48,540 head of cattle per day, representing 57% of the cattle slaughtering capacity in the Amazon, based on companies with SIE and SIF registrations. Of the total slaughterhouses licensed to export to China, 14 were licensed in March 2024 (Brasil, 2024, 2024). Not all licensed companies export at a given moment because of other considerations such as production and logistics costs, competition and business strategies.

It is important to note that regulations, inspection requirements and import procedures may vary between mainland China and Hong Kong; for these and other reasons, slaughterhouses may choose to apply for qualification with MAPA (Ministry of Agriculture and Livestock) to export only to Hong Kong, or only to China and even for both.



3.2 Performance of the beef companies concerning the China Meat Association specification for zero deforestation policies

Among the 31 export-qualified units located in the region, 68% of the slaughterhouses exhibited a low level of control, while 32% showed a very low level of control in the Radar Verde assessment (2025), indicating significant shortcomings in meeting socio-environmental criteria. Furthermore, only 65% of the companies demonstrated control limited to their direct cattle suppliers, underscoring the absence of effective mechanisms to monitor and manage indirect suppliers. This pattern reflects limited progress in extending traceability and risk management beyond direct suppliers to the broader cattle supply chain, particularly for indirect sourcing.

The companies licensed to export to China operated in regions with 31,000 to nearly 3.8 million hectares of exposure to deforestation risks (table 2 and figure 1). However, only one beef company responded to the Radar Verde questionnaire, despite none of them demonstrating that they fully control their beef supply chain. Therefore, all of them were not compliant with the China Meat Association specifications regarding information disclosure and sourcing from high deforestation risk areas:

“8.2.1 In addition to regularly reporting the progress of commitment fulfillment, companies are encouraged to disclose information relative to the participation in the green procurement plan, and actively respond to inquiries from external parties on information and events.”

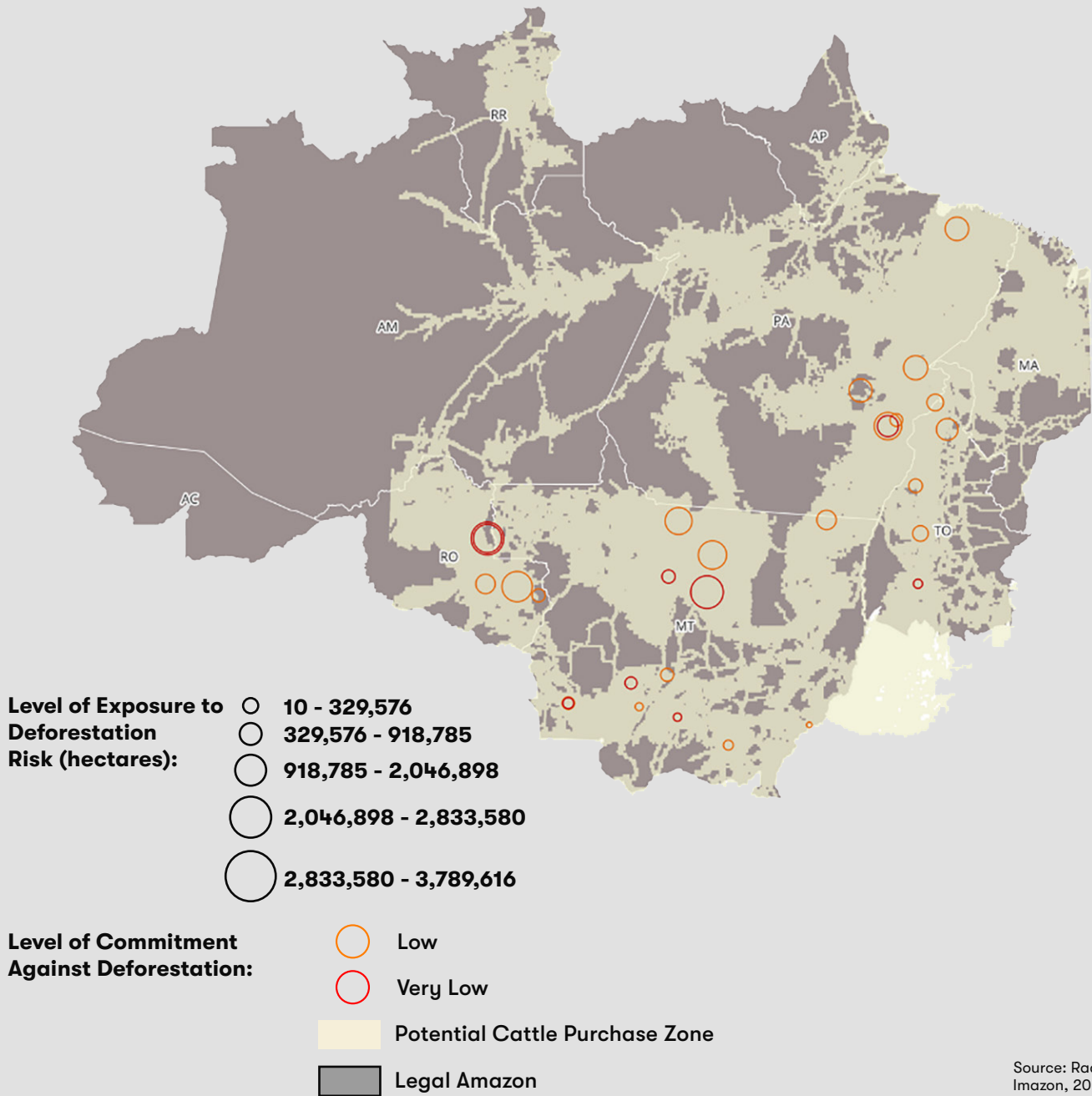
“4.9 Company shall avoid supplying/purchasing products from areas with a high risk of deforestation, such as the Amazon rainforest and the Cerrado savanna...”

Table 2. Level of commitment against deforestation by slaughterhouses in the Brazilian Amazon licensed to export to China and Hong Kong.

SLAUGHTERHOUSE	SIF	UF	MUNICIPALITY	SLAUGHTER CAPACITY (HEAD/DAY)	MAXIMUM DISTANCE FOR CATTLE PURCHASE (KM)	SIGNATORY OF THE FEDERAL PROSECUTORS SETTLEMENT AGREEMENT AGAINST DEFORESTATION (TAC)?	LEVEL OF COMMITMENT AGAINST DEFORESTATION			LEVEL OF EXPOSURE TO DEFORESTATION RISK (HECTARES)	DID THE COMPANY SHARE ANY ADDITIONAL INFORMATION? (GRAY - NO; BLUE - YES)	EXPORT TO HONG KONG	EXPORT TO CHINA
							DIRECT	INDIRECT SUPPLIER	OVERALL SCORE				
Marfrig Global Foods S/A	2015	MT	VÁRZEA GRANDE	250	360	YES	78	2,9	40,4	144,419		X	X
JBS S/A	2880	RO	PIMENTA BUENO	700	500	YES	75,7	2,4	39,1	3,253,021		X	X
JBS S/A	4268	MT	COLÍDER	880	350	YES	75,7	2,4	39,1	2,683,851		X	
JBS S/A	4302	MT	ALTA FLORESTA	1100	350	YES	75,7	2,4	39,1	2,566,988		X	X
JBS S/A	2350	PA	TUCUMÃ	450	300	YES	75,7	2,4	39,1	2,053,336		X	
JBS S/A	457	PA	MARABÁ	680	300	YES	75,7	2,4	39,1	2,046,897		X	X
JBS S/A	200	MT	JUARA	800	300	YES	75,7	2,4	39,1	1,653,726		X	
JBS S/A	4001	TO	ARAGUAÍNA	550	400	YES	75,7	2,4	39,1	1,602,111		X	
JBS S/A	4149	RO	PORTO VELHO	550	250	YES	75,7	2,4	39,1	1,510,753		X	
JBS S/A	175	RO	SÃO MIGUEL DO GUAPORÉ	700	340	YES	75,7	2,4	39,1	1,397,871		X	
JBS S/A	3470	MT	CONFRESA	600	300	YES	75,7	2,4	39,1	1,286,291		X	X
JBS S/A	2951	AC	RIO BRANCO	300	250	YES	75,7	2,4	39,1	1,111,942		X	
JBS S/A	4121	MT	ÁGUA BOA	500	480	YES	75,7	2,4	39,1	914,441		X	
JBS S/A	807	PA	REDENÇÃO	1000	225	YES	75,7	2,4	39,1	649,328		X	
JBS S/A	1110	PA	SANTANA DO ARAGUAIA	500	200	YES	75,7	2,4	39,1	585,821		X	X
JBS S/A	4333	RO	VILHENA	1500	300	YES	75,7	2,4	39,1	527,250		X	X
JBS S/A	3000	MT	DIAMANTINO	800	350	YES	75,7	2,4	39,1	510,480		X	X
JBS S/A	2979	MT	ARAPUTANGA	1500	500	YES	75,7	2,4	39,1	464,004		X	
JBS S/A	51	MT	PONTES E LACERDA	1200	500	YES	75,7	2,4	39,1	461,972		X	X
JBS S/A	2019	MT	PEDRA PRETA	600	500	YES	75,7	2,4	39,1	226,685		X	
JBS S/A	42	MT	BARRA DO GARÇAS	1600	390	YES	75,7	2,4	39,1	31,300		X	X
Masterboi Ltda	860	TO	NOVA OLINDA	760	600	YES	75,4	2,9	39,1	4,790,084		X	
Masterboi Ltda	2437	PA	SÃO GERALDO DO ARAGUAIA	1100	300	YES	75,4	2,9	39,1	918,785		X	X
Minerva	1940	TO	ARAGUAÍNA	840	400	YES	74,4	2,9	38,6	1,620,072		X	X
Minerva	791	RO	ROLIM DE MOURA	340	340	YES	74,4	2,9	38,6	1,284,355		X	X
Minerva	2911	MT	MIRASSOL D'OESTE	900	500	YES	74,4	2,9	38,6	437,495		X	
Minerva	2500	MT	PARANATINGA	500	300	YES	74,4	2,9	38,6	402,670		X	
Frigorífico Rio Maria	101	PA	CANAÃ DOS CARAJAS	300	200	YES	73,8	2,9	38,4	1,736,601		X	
Frigorífico Rio Maria	112	PA	RIO MARIA	400	200	YES	73,8	2,9	38,4	489,286		X	X
Frigol S/A	2583	PA	ÁGUA AZUL DO NORTE	1200	300	YES	73,3	2,9	38,1	1,872,992		X	X
Frigol S/A	4150	PA	SÃO FÉLIX DO XINGU	450	300	YES	73,3	2,9	38,1	1,751,716		X	
Plena Alimentos Ltda	3215	TO	PARAÍSO DO TOCANTINS	420	400	YES	75	0	37,5	789,888		X	X
Mercúrio Alimentos S/A	4413	PA	XINGUARA	1000	400	YES	74,3	0	37,2	2,653,512		X	X
Mercúrio Alimentos S/A	4554	PA	CASTANHAL	1100	500	YES	74,3	0	37,2	1,933,751		X	X
Vale Grande Indústria e Comércio de Alimentos S/A (Frialto)	4490	MT	MATUPÁ	400	350	YES	74,4	0	37,2	2,833,579		X	X
Vale Grande Indústria e Comércio de Alimentos S/A (Frialto)	2937	MT	NOVA CANAÃ DO NORTE	750	350	YES	74,4	0	37,2	2,742,233		X	
Vale Grande Indústria e Comércio de Alimentos S/A (Frialto)	3405	RO	JI-PARANÁ	1500	330	YES	74,4	0	37,2	2,126,735		X	
Ativo Alimentos Exportadora e Importadora Eireli (Mafrinorte)	2801	PA	CASTANHAL	700	500	YES	73,9	0	37,0	2,849,341		X	
Naturafriq Alimentos Ltda	1811	MT	BARRA DO BUGRES	500	300	YES	73,3	0	36,7	135,319		X	X
LKJ - Frigorífico Ltda	723	TO	ARAGUAÍNA	800	400	YES	69,5	0	34,8	1,670,891		X	
Agra Agroindustrial de Alimentos S/A	3941	MT	RONDONÓPOLIS	320	500	YES	68	0	34,0	256,536		X	X
Frigorífico Valencio Ltda	1891	PA	XINGARA	240	300	NO	67,4	0	33,7	1,666,998		X	
Frigorífico Pantanal	585	MT	VÁRZEA GRANDE	700	360	NO	62,4	0	31,2	106,289		X	
Boi Brasil	1723	TO	ALVORADA	760	400	NO	50,7	0	25,4	58,388		X	
Boi Brasil	2852	TO	ARAGUAÍNA	420	400	NO	50,7	0	25,4	1,651,317		X	
Frigorífico Redentor S/A	411	MT	GUARANTÃ DO NORTE	650	750	YES	39,5	0	19,8	3,756,090		X	X
Golden Imex Eireli (Bmg Food's)	2620	MT	JURUENA	800	1000	NO	31,5	0	15,8	1,618,061		X	
Cooperativa dos Produtores de Carne e Derivados de Carne (Cooperfrigo)	93	TO	GURUPI	400	400	YES	28,16	0	14,08	199,521		X	X
R.E. Ribeiro Soares - ME	1367	PA	SANTARÉM	500	350	YES	26,4	0	13,2	1,929,636		X	
Frigorífico Fortefrigo Ltda	372	PA	PARAGOMINAS	420	300	YES	6,6	0	3,3	1,094,009		X	
Fribev - Frigorífico Bela Vista	4398	PA	XINGUARA	600	300	YES	5,8	0	2,9	1,521,978		X	X
Indústria Frigorífica Boa Carne Ltda	5125	MT	COLÍDER	850	150	NO	5,6	0	2,8	538,703		X	X
Irmãos Gonçalves, Comércio e Indústria Ltda	2443	RO	JARU	1800	250	NO	1,9	0	1,0	1,440,543		X	X
Rio Beef Frigorífico	4267	RO	JI-PARANÁ	700	800	NO	1,76	0	0,88	3,789,616		X	X
Comcarne Comercial de Carne Ltda (Fribal)	2431	MA	IMPERATRIZ	760	100	NO	1	0	0,5	84,160		X	
Friogestrela S/A	1886	MT	RONDONÓPOLIS	420	500	NO	0,8	0	0,4	252,761		X	
Distriboi	4695	RO	JI - PARANÁ	100	400	NO	0,3	0	0,2	2,827,823		X	X
Frigo 10 Ltda	2515	RR	BOA VISTA	700	400	NO	0,3	0	0,2	749,426		X	
Vale Company Comércio e Serviços Ltda	4466	MT	RONDONÓPOLIS	640	500	NO	0,3	0	0,2	72,053		X	
Pantaneira Indústria e Comércio de Carnes e Derivados	1206	MT	VÁRZEA GRANDE	500	360	YES	0	0	0,0	148,681		X	X
Abatedouro de Bovinos Sampaio Ltda	2258	PA	REDENÇÃO	180	300	YES	0	0	0,0	1,045,624		X	
Frigorífico Paraíso	4625	TO	PARAÍSO DO TOCANTINS	400	400	NO	0	0	0,0	814,158		X	
Frigomarca	4686	PA	NOVO PROGRESSO	500	200	NO	0	0	0,0	1,472,642		X	
Frisacre Frigorífico Santo Afonso do Acre Ltda	3297	AC	RIO BRANCO	300	250	NO	0	0	0,0	1,106,695		X	
Agropam - Agricultura e Pecuária Amazonas S/A	2803	AM	BOCA DO ACRE	300	250	YES	0	0	0,0	922,771		X	
Distriboi	4334	RO	ROLIM DE MOURA	420	340	NO	0	0	0,0	1,338,144		X	
Fortunceres S.A.	3250	RO	CHUPINGUAIA	1500	300	YES	0	0	0,0	508,922		X	
Fortunceres S.A.	1751	MT	TANGARÁ DA SERRA	700	400	YES	0	0	0,0	419,350		X	X
Fortunceres S.A.	1900	MT	PONTES E LACERDA	700	420	YES	0	0	0,0	329,576		X	X
R.C. Moreira Costa - Fricol	2927	PA	RONDON DO PARÁ	180	300	NO	0	0	0,0	1,626,973		X	
Frisacre Frigorífico Santo Afonso do Acre Ltda	4488	RO	CACOAL	360	180	NO	0	0	0,0	372,740		X	

> 90 Very high policy effectiveness
 70 - 89 High policy effectiveness
 50 - 69 Intermediate policy effectiveness
 30 - 49 Low policy effectiveness
 0 - 29 Very low policy effectiveness

Figure 1. Slaughterhouses licensed to export to China in the Legal Amazon: Potential Cattle Purchase Zone, Level of Exposure to Deforestation Risk and the Level of Commitment Against Deforestation.

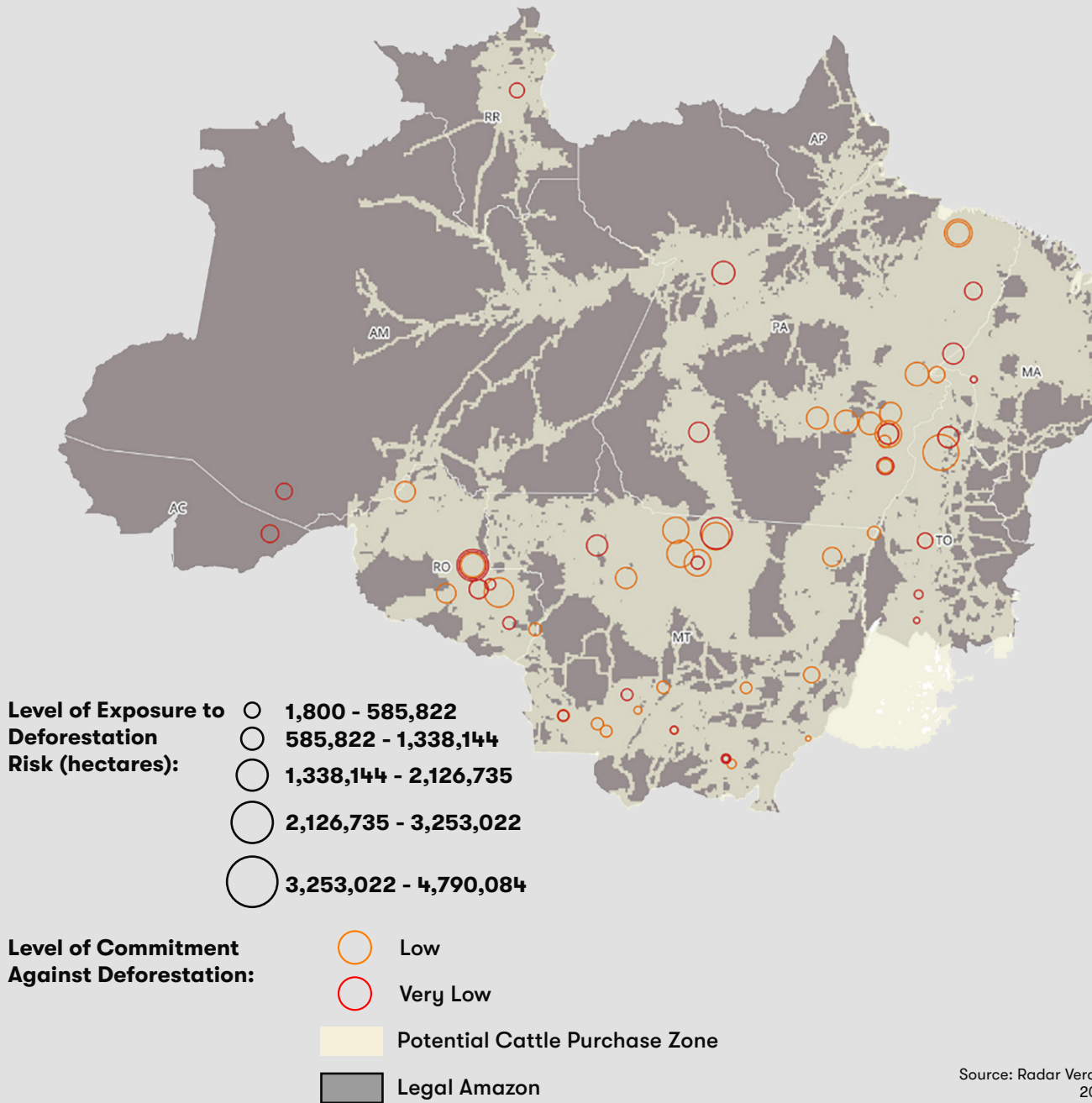


Source: Radar Verde, 2025; Imazon, 2025; MAPA, 2025.



According to data from the Hong Kong Department of Industry and Commerce (TID), exports of products destined for Hong Kong are largely re-exported to mainland China. Therefore, when analyzing the performance of slaughterhouses supplying the Chinese market, it is essential to consider not only those that export directly to China, but also those that send their products to Hong Kong. Assessing the socio-environmental performance of these slaughterhouses – especially regarding deforestation control and animal origin – is fundamental, since meat exported to Hong Kong may subsequently supply the Chinese market. As previously presented in Table 1, Figure 2 below illustrates the slaughterhouses in the Legal Amazon region identified in the Radar Verde assessment that are licensed to export beef to Hong Kong. These slaughterhouses have a combined slaughtering capacity of 48,540 animals per day, representing 57% of the total slaughtering capacity in the Legal Amazon region. Among the slaughterhouses in the Legal Amazon licensed to export beef to Hong Kong, 61% have policies indicating a low level of control over their suppliers, and 55% demonstrate control limited to their direct suppliers

Figure 2. Slaughterhouses licensed to export to Hong Kong in the Legal Amazon: Potential Cattle Purchase Zone, Level of Exposure to Deforestation Risk and the Level of Commitment Against Deforestation.





4 Recommendations

With food security increasingly challenged by climate change, the China–Brazil partnership can support practical progress in Brazil’s beef sector. As a major importer of Brazilian beef, China is well positioned to encourage wider uptake of sustainability standards. Aligning trade practices with the China Meat Association’s (CMA) environmental specifications could help advance deforestation-free production and strengthen long-term food security.

Radar Verde assessed the socio-environmental performance of slaughterhouses in the Legal Amazon that are licensed to export to China and found clear compliance gaps with the China Meat Association (CMA) Green Trade specification. Among the 31 export-qualified units, 68% received low scores, and 65% monitor only direct suppliers—without effective mechanisms to control, including indirect suppliers. In addition, licensed plants operate in purchasing regions with substantial exposure to deforestation risk (from ~31,000 to nearly 3.8 million hectares), while transparency remains limited: only one company responded to the Radar Verde questionnaire, and none demonstrated full supply-chain control consistent with the disclosure expectations of the China Meat Association (CMA) Green Trade specification.

Taken together, these results provide importers with an immediate, evidence-based basis to differentiate suppliers; especially in a context in which China’s new safeguard regime (TRQs and an additional 55% tariff above quota) increases the strategic value of “getting supplier selection right” for the scarce within-quota channel. Radar Verde can therefore be used as a practical screening tool to guide preferred-supplier lists and to prioritize within-quota procurement toward companies with stronger controls and lower deforestation exposure.

Operationally, one approach is to integrate Radar Verde into a three-step procurement screen. First, use Radar Verde scores and purchase-zone mapping to pre-qualify suppliers, prioritizing those that can demonstrate control over both direct and indirect suppliers and that source from lower-deforestation-risk. Second, convert screening into an escalation pathway aligned with the CMA Green Trade logic: best performance suppliers receive priority volumes; intermediate performance suppliers receive conditional volumes tied to time-bound corrective actions (e.g., publish verifiable indirect-supplier monitoring evidence, improve disclosure, and strengthen exclusion rules); low performance suppliers are excluded until improvements are independently verifiable. This mirrors the CMA’s expectation that companies disclose progress and respond to external inquiries, and that unqualified suppliers can be eliminated through formal mechanisms. Third, use Radar Verde as a due-diligence



triage filter to determine where deeper audits and transaction-level evidence are most needed, thereby allocating compliance resources to the highest-risk suppliers rather than applying the same intensity across all exporters.

A useful next step—and a bridge to emerging “deforestation-free” procurement—is to position Radar Verde as complementary infrastructure for importers who are already piloting verified deforestation-free beef. In October 2025, a Chinese importer association committed to purchasing deforestation-free Brazilian beef under Imaflora’s Beef on Track protocol, signaling a move from general sustainability intent toward measurable, volume-linked implementation (Reuters). Radar Verde complements such pilots by helping importers (i) identify which slaughterhouses are structurally best placed to scale deforestation-free supply (stronger policies, stronger monitoring, lower-risk purchase zones), and (ii) document a defensible supplier selection process for broader “risk-managed within-quota” procurement while certified deforestation-free volumes remain limited.

Finally, Radar Verde is also directly relevant for Brazilian and international investors exposed to the beef segment that serves China. The same screening logic that helps importers protect within-quota value can help investors. They can prioritize capital, engagement, and underwriting toward beef companies aligned with China-linked sustainable beef expectations (traceability, disclosure, and deforestation-risk control), reducing risks from tightening market access and scrutiny. In practice, investors can use Radar Verde to (i) focus due diligence on high-performing firms, (ii) set investee performance covenants (e.g., indirect-supplier coverage milestones and disclosure requirements), and (iii) guide stewardship and engagement toward the plants most likely to remain eligible as Chinese buyers expand deforestation-free imports and strengthen preferred-supplier lists.



5 Appendix 1 . Examples of the China Meat Association specifications for Meat Industry Green Trade

Issues and criteria specification items

Basic requirements

- 4.6 The company shall continuously improve transparency and traceability in the supply chain management of the meat industry.

- 4.9 Company shall avoid supplying/purchasing products from areas with high risk of deforestation, such as the Amazon rainforest and the Cerrado savanna, the Congo Basin in Africa, and the Great Barrier Reef in Australia.

Planning, supplier responsibility, Zero Deforestation Commitments in the Process of Production and Operation

- 5.1.1.1 Suppliers shall commit not to convert natural forests into agricultural land, plantation land, land for animal husbandry production or other land uses in the process of production and management, and to avoid activities that may cause serious or sustained degradation of such natural forests.

Product Traceability

- 5.1.5.1 The source information of various raw and auxiliary materials and products in the supply chain shall be clear and unambiguous, based on which it shall be able to determine that the manufacturers and processors of origin comply with the commitments.

- 5.1.5.2 Suppliers shall know the origin of raw and auxiliary materials to the level of the farm, plantation, ranch, place of production or forest management unit.

- 5.1.5.3 To meet the above-stated requirement that the origins of materials in supply chains are precisely traced, buyers at any stage of the supply chain must institute adequate traceability conditions through one or more of the following methods:



- a) tracing raw and auxiliary materials back to the production or processing units of origin (Certificate of Origin);
- b) tracing raw and auxiliary materials back to an intermediate supplier that itself has effective control mechanisms in place to ensure that its supplies are traced to the production or processing units of origin and can provide sufficient evidence of this to the buyer;
- c) utilising credible assurance systems (e.g., credible certification systems) capable of linking raw and auxiliary material supplies with production units having specific compliance or performance attributes;
- d) tracing raw and auxiliary materials to administrative jurisdictions or landscapes where it has been demonstrated that performance with regard to specific social or environmental issue(s) is adequate to fulfill the buyer's commitments on the corresponding issue(s).

5.1.5.4 Suppliers shall provide documentary evidence of zero deforestation/zero conversion

Buyer responsibility

5.2.1 Buyers shall refuse to purchase products with deforestation impact and conversion factors and non-conforming deforestation-related products listed in this Specification.

5.2.2 Buyers shall strictly abide by the principle of respecting human rights to subsistence and development and refuse to accept products produced and provided without respect for human rights.

5.2.3 Buyers shall set a clear cutoff date for deforestation and a target date for zero deforestation.

5.2.4 To ensure that the goods are sourced from non-deforested areas and free from conversion circumstances, buyers have the responsibility and right to trace and monitor the purchased goods according to the committed cutoff date for deforestation.



5.2.5 Before purchase, buyers shall assess suppliers effectively; after purchase, buyers shall evaluate each link of the purchase and make an effective evaluation.

Suppliers Management System Establishment

6.2.2.2 In order to implement the procurement plan stipulated by the company's supply chain commitments, the buyers should formulate supplier requirements, including when the company can or must add, suspend, exclude or adjust the purchase terms with the suppliers.

6.2.2.3 According to the tracing results, the raw materials provided by the supplier can be certified for compliance:

- a) tracing materials back to the production or processing units of origin; The production and processing unit in the place of origin certifies that the meat raw materials come from low-risk areas of deforestation and conversion;
- b) tracing materials back to an intermediate supplier that itself has effective control mechanisms in place so that its supplies are traced to the production or processing units of origin, and can provide sufficient evidence of this to the buyer;
- c) utilising credible assurance systems (e.g., credible certification systems) capable of linking raw and material supplies with production units having specific compliance or performance attributes; or tracing raw and auxiliary materials to jurisdictions or landscapes where it has been demonstrated that performance with regard to specific social or environmental issue(s) is adequate to fulfil the buyer's commitments on the corresponding issue(s).

Requirements for the organization, management, supervision and evaluation

6.2.3.1 The buyer shall evaluate the supplier's progress and degree of compliance by regular information collection or review.



- 6.2.3.2 Measures shall be taken to operate supplier management systems that define policies, procedures, supplier expectations, and supplier engagement strategies at the level of the commodity-buying company or its supply chains.
- 6.2.3.3 Measures shall be adopted to regularly evaluate the satisfaction and pass rate of the supplier's products.
- 6.2.3.4 Measures shall be taken to ensure the engagement of non-compliant suppliers when environmental and social risks, negative impacts and/or non-compliance with company commitments are detected; this includes the development of supplier implementation plans to address these issues
- 6.2.3.5 Establishing a supplier elimination mechanism. The suppliers who are evaluated as unqualified or rank at the bottom shall be eliminated.

Information disclosure

- 8.1 Companies should regularly publicise the progress and results of zero deforestation/zero conversion between the trading parties in the production and operation process. (item)
- 8.2.1 In addition to regularly reporting the progress of commitment fulfillment, companies are encouraged to disclose information relative to the participation in the green procurement plan, and actively respond to inquiries from external parties on information and events.
- 8.2.2 Companies should follow good and standard practices in data management, data formats, accessibility, and presentation to disclose their information. Information should be made available online in a manner that allows interested stakeholders to easily access, search, aggregate, and download information.



6 References

Adam, C., et al. (2025). The impact of temperature and rainfall volatility on food prices and inflation. International Monetary Fund (IMF) Working Paper.

Association of Brazilian Beef Exporters (ABIEC). (2024). Beef report (2024 edition).

Association of Brazilian Beef Exporters (ABIEC). (2025). Beef report 2025.

Barreto, P., Pereira, R., Rocha, A. J. da S., S Trigueiro, C. (2023). The beef supply chain continues to contribute to deforestation in the Amazon. https://drive.google.com/file/d/1y6JHw_X1kzp_1QXITCgg2U6gR2wTX70a/view

Brasil. (2023a, April 13). Acordos assinados pelo setor privado e por entes públicos brasileiros por ocasião da visita do Presidente Luiz Inácio Lula da Silva à República Popular da China. Ministério Das Relações Exteriores. https://www.gov.br/mre/pt-br/canais_atendimento/imprensa/notas-a-imprensa/acordos-assinados-pelo-setor-privado-e-por-entes-publicos-brasileiros-por-ocasio-da-visita-do-presidente-luiz-inacio-lula-da-silva-a-republica-popular-da-china

Brasil. (2023b, December 6). Governo Federal institui Programa Nacional de Conversão de Pastagens Degradadas. Ministério Da Agricultura e Pecuária. <https://www.gov.br/agricultura/pt-br/assuntos/noticias/governo-federal-institui-programa-nacional-de-conversao-de-pastagens-degradadas>

Brasil. (2024, April 20). Ministry of Agriculture presents Pasture Conversion Program to investors in the United States. Ministério Da Agricultura e Pecuária. <https://www.gov.br/agricultura/en/news/ministry-of-agriculture-presents-pasture-conversion-program-to-investors-in-the-united-states-of-america>

Brasil. (2024, March 12). Mais 38 frigoríficos brasileiros podem exportar carnes para a China – Ministério da Agricultura e Pecuária. Ministério Da Agricultura e Pecuária. <https://www.gov.br/agricultura/pt-br/assuntos/noticias/mais-38-frigorificos-brasileiros-podem-exportar-carnes-para-a-china>

Brasil. (2024). Brazil and Japan signed 38 agreements during the visit of Prime Minister Fumio Kishida to Brasília. Presidência Da República. <https://www.gov.br/planalto/en/latest-news/2024/05/brazil-and-japan-signed-40-agreements-during-the-visit-of-prime-minister-fumio-kishida-to-brasilia>



China Meat Association. (2021). Group Standard - Specification for Meat Industry Green Trade.

China Meat Association. (2021). Specification for Meat Industry Green Trade (T/CMA 014-2021). (Repórter Brasil)

Chung Cathy. (2022, July 27). Mainland China Food Imports: Putting E-Commerce on the Menu. HKTDC Research. <https://research.hktdc.com/en/article/MTEyMDg1ODYzMA>

Gbadegesin, T., et al. (2024). Climate shocks and their effects on food security, prices, and inflation. World Bank.

Imazon, S O Mundo Que Queremos. (2023). Radar Verde - Transparency of beef in the Brazilian Amazon - Results 2023. https://radarverde.org.br/wp-content/uploads/2023/11/00_RV-Relatorio-final-2023-ENGLISH_VERSION.pdf

Imazon; O Mundo Que Queremos. (2025). Beef transparency in the Brazilian Amazon. (Radar Verde report).

Intergovernmental Panel on Climate Change (IPCC). (2023). Climate Change 2023: Synthesis report.

Kevin Dong, Mallie Prytherch, Lily McElwee, Patricia Kim, Jude Blanchette, S Ryan Hass. (2024). 'China's Food Security Key Challenges and Emerging Policy Respons. In CSIS BRIEFS. https://csis-website-prod.s3.amazonaws.com/s3fs-public/2024-03/240315_Dong_China_Food.pdf?VersionId=rOsgnnGSZNxS9mlyqQh37xbVUW2wxc0N

Lopes, C. L., Segovia, M. E., S Chiavari, J. (2023, December 18). Where Does Brazil Stand with the Implementation of the Forest Code? A Snapshot of CAR and PRA in Brazilian States - 2023 Edition. Climate Policy Initiative. <https://www.climatepolicyinitiative.org/publication/where-does-brazil-stand-with-the-implementation-of-the-forest-code-a-snapshot-of-car-and-pra-in-brazilian-states-2023-edition/>

Ministry of Commerce of the People's Republic of China. (2025, December 31). Announcement No. 87 of 2025 on safeguard measures on imported beef.



Observatório do Clima. (2023). SEEG - Sistema de Estimativa de Emissão de Gases. <https://plataforma.seeg.eco.br/>

Rattis, L., Brando, P. M., Macedo, M. N., Spera, S. A., Castanho, A. D. A., Marques, E. Q., Costa, N. Q., Silverio, D. V., S Coe, M. T. (2021). Climatic limit for agriculture in Brazil. *Nature Climate Change* 2021 11:12, 11(12), 1098–1104. <https://doi.org/10.1038/s41558-021-01214-3>

Reis, T., Ermgassen, zu E., S Pereira, O. (2023, November 21). Brazilian beef exports and deforestation. *Trase - Insights*. <https://trase.earth/insights/brazilian-beef-exports-and-deforestation>

Reuters. (2025a, December 31). China to impose additional tariffs of 55% on some beef imports in 2026.

Reuters. (2025b, November 25). China extends beef import probe into 2026, giving respite for global suppliers.

Reuters. (2025c, August 6). China extends probe on imported beef in respite for global suppliers.

Reuters. (2025d, October 21). Chinese meat body to import deforestation-free beef from Brazil.

Reuters. (2025e, December 3). Brazil Amazonian state postpones cattle tracking key to preventing deforestation.

Reuters. (2026a, January 6). Brazil unclear whether beef in transit to China subject to new import quotas.

Secretaria de Meio Ambiente e Sustentabilidade do Pará. (2025, December 3). Decreto do governador amplia o prazo para a rastreabilidade de bovinos e bubalinos no estado.

Reuters. (2025, October 21). China to buy Brazil's deforestation-free beef, says NGO. (Reuters)



Reuters. (2025, December 31). China to impose additional tariffs of 55% on some beef imports from 2026. (Reuters)

The Economist. (2023, July 13). China is obsessed with food security. Climate change will challenge it. The Economist. https://www.economist.com/china/2023/07/13/china-is-obsessed-with-food-security-climate-change-will-challenge-it?utm_medium=cpc.adword.pdSutm_source=googleSppccampaignID=19495686130SppcadID=Sutm_campaign=a.22brand_pmaxSutm_content=conversion.direct-response.anonymousSgad_source=1Sgclid=Cj0KCQjwn7mwBhCiARIsAGoxjAL4y-SPspdn2F6gT1lhClwiE_Q8HP1dWGNAbdxlaJHweebIjRy7FrQaAoW4EALw_wcBSgclsrc=aw.ds

Vasconcelos, A., Ermgassen, E. zu, S Zhang, Y. (2024, March 18). How Brazil and China can use data for a more sustainable cattle sector - Insights - Trase. Trase-Insights. <https://trase.earth/insights/how-brazil-and-china-can-use-data-for-a-more-sustainable-cattle-sector>

Walendorff, R. (2023, August 3). Brazil seeks partners to recover degraded pasturelands. Valor International. <https://valorinternational.globo.com/agribusiness/news/2023/08/03/brazil-seeks-partners-to-recover-degraded-pasturelands.ghtml>

Whiting, K. (2022, March 11). Food security: How China plans to feed its 1.4 billion people. World Economic Forum. <https://www.weforum.org/agenda/2022/03/china-seawater-rice-food-security/>

World Weather Attribution. (2022, July 4). Climate change increased heavy rainfall, hitting vulnerable communities in Eastern Northeast Brazil. World Weather Attribution. <https://www.worldweatherattribution.org/climate-change-increased-heavy-rainfall-hitting-vulnerable-communities-in-eastern-northeast-brazil/>

World Weather Attribution. (2024, January 24). Climate change, not El Niño, main driver of exceptional drought in highly vulnerable Amazon River Basin. World Weather Attribution. <https://www.worldweatherattribution.org/climate-change-not-el-nino-main-driver-of-exceptional-drought-in-highly-vulnerable-amazon-river-basin/>



World Weather Attribution. (2024, January 24). Climate change, not El Niño, main driver of exceptional drought in highly vulnerable Amazon River Basin.

WWF. (2017, November 10). China Meat Association And Its 64 Chinese Company Members Jointly Announce Chinese Sustainable Meat Declaration with WWF.

<https://www.wwf.org.br/?61882/China-Meat-Association-And-Its-64-Chinese-Company-Members-Jointly-Announce-Chinese-Sustainable-Meat-Declaration-with-WWF>



RADAR
VERDE

BEEF TRANSPARENCY IN THE BRAZILIAN AMAZON