



**MINISTRY OF FOREIGN AFFAIRS
OF DENMARK**
The Trade Council

JANUARY 2023

SOURCING BEEF FROM BRAZIL

Risk Mapping and Mitigation

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INTRODUCTION

The note is aimed at Danish companies that purchase or consider purchasing beef from Brazil or that for other reasons are exposed to sustainability risks related to the Brazilian cattle supply chain.

The objective is to map the current landscape of risk and mitigation strategies in Brazil. As such, the emphasis is on issues still outstanding, which should in no way belittle the many achievements already made, the great majority of compliant and sustainable producers in Brazil, nor the positive prospects and ambitions of the new Brazilian administration. Indeed, the hope of the authors is that this report will give insights into the many promising risk mitigation initiatives and building blocks already available in Brazil. The note is thus meant to supplement and bring these together with potential risk areas in the beef supply chain being the mere starting point for the forward-looking analysis.

Special attention is given to emerging solutions to the thorny issue of cleaning up indirect suppliers' socio-environmental irregularities (a shorthand for deforestation/transgressions of Brazil's Forest Code, environmental fines/embargoes¹, invasions of indigenous lands and labor conditions akin to slavery).

The issue of deforestation and indirect suppliers when sourcing beef from Brazil is of importance given that:

- According to a recent [Climate Champions report](#), the forest, land and agriculture industries contribute 22 percent to global emissions, half of which come from deforestation driven by commodities. [Research](#) suggests that the Brazilian cattle sector could be responsible for one-fifth of all emissions from commodity-driven deforestation across the entire tropics.
- Nonetheless, according to the [Investors Policy Dialogue on Deforestation \(IPDD\) Initiative](#) deforestation continues at a relentless rate with the tropics losing 11.1 million hectares of tree cover in 2021, including 3.75 hectares of primary forest, the type most critical to limiting global heating and biodiversity loss. More than 40% of the latter loss occurred in Brazil.
- Based on official data, roughly three quarters of all deforested areas in Brazil have historically become pasture or pasture/agriculture mosaics;
- Brazil is the biggest non-EU supplier of frozen beef to the EU.²
- State-of-the-art big data estimates based on official Brazilian data of some 4.1 million heads traded to slaughterhouses in two important frontline states (Mato Grosso & Pará) indicate that roughly half of all slaughtered heads may be contaminated with

¹ An embargo is an interdiction to produce on land used in violation of deforestation limits laid down in the Brazilian Forest Code.

² Cf. [EU-Deforestation-Law Traceability-Viable-in-Brazilian-Beef-and-Soy-Supply-Chains.pdf \(chainreactionresearch.com\)](#), p. 3.

potentially illegal deforestation from indirect suppliers, as the cattle pass from one property to another before being slaughtered (roughly four times higher the proportion found when looking only at heads coming directly from properties to slaughterhouses)³. The former proportion (roughly half) is also reflected in the estimated proportion of EU imports contaminated with potentially illegal deforestation;

- The recurrent stories in the mainstream press based on NGO's and authorities uncovering deforestation in indirect suppliers in the cattle chain.⁴ The deforestation and traceability commitments of industry players and their application in practice is constantly being challenged by close to real time on the ground data on deforestation produced by NGOs.⁵
- The EU's incoming due diligence deforestation regulation, which will impose mandatory due diligence obligations on companies to ensure that cattle products placed on the EU market do not come from land deforested or degraded after December 31st, 2020. After political agreement between the EU legislators early December 2022, the central provisions of the regulation will become applicable as of late summer 2024. However, [a recent estimate](#) based on a big sample of the direct and indirect suppliers of the three biggest Brazilian exporters of frozen beef to the EU indicates a considerable land area of deforestation alerts potentially uncompliant with the upcoming regulation.⁶ This and other research indicates the need to considerably further scale up and accelerate existing corporate commitments and initiatives on monitoring and exclusion of deforestation in indirect supply chains.

On this background, this note first sets out an account of the current status in terms of tackling deforestation when sourcing beef from Brazil. Looking forward, the note then outlines possible due diligence strategies focused on deforestation. As stated in the beginning, the note is primarily directed at purchasers of beef from Brazil but could have derived benefits in downstream and financial sectors.⁷

Disclaimer: both market and legislative status, expectations and requirements are evolving dynamically. This report constitutes no official recommendation, approval or indication of any mitigation measure's compliance therewith. It represents best efforts, but does not substitute

³ The Rotten Apples of Brazil's agribusiness, published in Science July 17th, 2020 • VOL 369 issue 6501.

⁴ For one recent example, see <https://www.reuters.com/business/environment/brazil-audit-finds-17-cattle-bought-by-jbs-came-irregular-ranches-2022-12-15/>

⁵ For an example of such an engagement tool see [Real-time Deforestation Monitoring!AidEnvironment](#)

⁶ On the other hand, this and other research quoted above based on animal transportation and rural cadastre data shows that despite challenges it is possible to expand traceability in cattle supply chain beyond direct suppliers using existing systems and tools. See p. 9-10 in the hyperlink for a discussion of the methodology of the estimate.

⁷ For the financial sector, Global Canopy's [Finance Sector Roadmap](#) for eliminating commodity-driven deforestation highlights how that sector can work with companies to encourage them to address deforestation-risks.

companies' own due diligence duties and does not claim to be complete, exact and up-to-date in all respects. The Danish Ministry of Foreign Affairs cannot be held liable for its use, which is merely meant as a starting point and guide of inspiration. Furthermore, this note focuses on deforestation and related rights issues and therefore does not deal in detail with all aspects of responsible business conduct, while sourcing from Brazil.

The Trade Council (part of the Danish diplomatic mission in São Paulo) is available to help Danish importers update or develop their current due diligence strategy for import of beef from Brazil – please refer to section 5 for our contact details.

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ENVIRONMENTAL ASPECTS

In practice, traceability will be central to identifying cattle products contaminated by deforestation in order to avoid its import into the EU. Brazil already possesses the necessary building blocks to build a traceability system for a sustainable cattle supply chain. The challenge that remains is more one of putting them together and deploying them. Some first attempts at providing such deforestation-free traceability and transparency to the supply chain exist.

A fundamental divide in this respect runs between on the one hand a universal, public system (SeloVerde) open to external oversight that includes all farmers, and on the other hand certification systems, which are partial, voluntary and privately run and audited. Both have drawbacks.

The public system (SeloVerde) is limited in geographic scope, while the private systems run by the big Brazilian meatpackers - at least in the short run - remain limited in number of cattle heads they cover and not without vulnerabilities from a due diligence point of view. As an example, the audits of the private systems have been shown in the past to have a [mixed track record](#) in terms of accuracy and reliability. In this context, it is relevant to remember the words of the impact assessment report accompanying the European Commission's proposal for a due diligence deforestation regulation:

“Certification (or verification) schemes may, in some cases, contribute to achieving compliance with the due diligence requirement; however the use of certification does not automatically imply compliance with due diligence obligations. There is abundant literature on certification schemes shortcomings in terms of governance, transparency, clarity of standards, reliability of monitoring systems, etc.”⁸

⁸ [KOM \(2021\) 0706 - SWD-dokument: 1 EN impact assessment part1 v5.pdf \(eu.dk\)](#), p. 40.

CURRENT STATUS

It cannot be denied that Brazil's cattle sector has had a mixed history in terms of sustainability, including regular press reports of environmental irregularities discovered by NGO's and even run-ins with Brazil's public prosecution service⁹. The latter has led to highly relevant protocols on how the Brazilian meatpackers should monitor their commitments concerning cattle suppliers - commitments formally known as Terms of Adjustment of Conduct or **TAC** - as well as protocols on how they should audit those commitments.

The purpose of the monitoring and auditing of these commitments is to curb the sale of bovine products derived from illegally deforested areas in the Brazilian Amazon, ranches that use slave labor, lack environmental licenses, are located on indigenous land or in protected areas, or present other environmental and social irregularities.

The monitoring protocol describes how the meatpacker - a likely supplier to foreign companies - should check for each of these issues. The monitoring protocols are elaborated by the Public Ministry (MPF) (Brazil's federal Prosecution Service) in cooperation with a NGO called Imaflora. The protocol covers the [Amazon](#) biome. A similar voluntary protocol exists for the [Cerrado](#) biome (Brazilian savannah).

In this context, Imaflora leads the 'Beef-on-Track platform' to provide expertise on monitoring tools, policies and procedures. This process has already led to some improvement of the above-mentioned mixed track record in terms of reliability of meatpackers' audits. Importantly, some 50 out of 153 slaughterhouses in the Amazon are now subject to TAC-audits by certification bodies approved by the MPF. More details and a search filter can be found [here](#)¹⁰. The search filter currently covers the states of Pará and Mato Grosso, but the states of Amazonas, Acre and Rondonia might be covered in the foreseeable future.

The protocols - and the beef-on-track processes - are currently limited to the first tier/direct cattle suppliers. Cleaning up environmental irregularities here is certainly a necessary first step with considerable outstanding work still to do, but obviously doesn't address the environmental irregularities concentrated further upstream in the value chain/earlier in the lifecycle of the cattle. Therefore, while sourcing in the Amazon

⁹ For more detail see pp. 7-11 in [Mekon-Ecology-2020-Beef-Leather-Supply-Chain-Latin-America-Europe-vFINAL.pdf \(mekonecology.net\)](#).

¹⁰ In addition to the TAC-disciplines, the search filter also covers decade-old public livestock deforestation commitments by the three big meatpackers (Minerva, Marfrig and JBS), which go beyond mere legal commitments. Unfortunately, the audit process is reportedly not very strong. Beef-on-track is developing better audit techniques that it would definitely be recommendable to engage trading partners/meatpackers to implement in the framework of the public commitments.

from companies and slaughterhouses subject to TAC audits would certainly be better than Amazon slaughterhouses without, it still doesn't provide sufficient deforestation due diligence assurance.

MARKET EXPECTATIONS FROM THE CONSUMER GOODS INDUSTRY

Market pressure for deforestation free cattle supply chains is also being articulated to an increasing degree by the consumer goods industry. Notably, the Forest Positive Coalition of the Consumer Goods Forum (FPC-CFG) - a CEO-led initiative representing 21 major international companies in the industry - has developed [guidance](#) that also take into account upstream tiers or indirect suppliers. This is very important since most problems in the cattle sector are hidden not in the last farm before the slaughterhouse, but in earlier farms through which the cattle migrate from birth to slaughterhouse (sometimes giving rise to so-called cattle washing, which several times has attracted negative publicity in the mainstream press).

The main questions to ask of one's supplier/meatpacker, as per FPC-CFG guidance, are the following:

- Do the plants and abattoirs in the supply chain of this product monitor the purchase of cattle sourced from the Amazon in compliance with the Term of Adjustments of Conduct (TACs) agreed in 2009?
- How many percent of the total cattle heads in the supply chain of this product is purchased in a traceable way to a) direct and b) indirect suppliers?
- How many percent of the total cattle heads in the supply chain of this product comply with the Monitoring Protocols for Cattle Suppliers in the [Amazon](#) respectively the [Cerrado](#)?
- Do you have a procedure in place to individually respond and act (both positively and negatively) to producers' performance with clear consequences at procurement level?
- Have you implemented the [unified audit protocol](#) for cattle commitments in the Amazon? (The TACs and Protocols mentioned above)?

DIALOGUE WITH BUSINESS PARTNERS ON DEFORESTATION: THE DEVIL IN THE DETAIL

The above standards of the monitoring and audit protocols have essentially been taken on board by some of the main meatpackers themselves as parameters for the commodity implementation plans foreseen in the [Agriculture Roadmap](#) put forward by 14 of the world's largest agro-commodity traders and processors at COP 27 in Egypt, cf. p. 29.

It therefore seems logical to put them at the center of business dialogue with upstream suppliers from Brazil keeping in mind that effective implementation and roll-out is key. For example, only partial coverage in

terms of deforestation free products traceable to indirect suppliers will not be sufficient once the central provisions of the aforementioned EU due diligence regulation on deforestation become applicable.

One central question to engage upstream suppliers on is if they apply traceability and monitoring systems that cross-reference farms (the property polygon in the corporate jargon) and animal transportation systems generated by their monitoring systems (or certified geo-referencing) with up-to-date public deforestation databases and how they apply that to their procurement systems:

- Is the entire supply chain of the slaughterhouse in question covered both in terms of geographical scope and in terms of indirect suppliers to avoid contamination by deforestation?
- Are internal procurement and blocking systems up to date and effectively applied across that same spectrum?
- Is a third party verification by a recognized certification body in place to vouch for the above?

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DUE DILIGENCE STRATEGIES

A good starting point, when considering procuring beef from Brazil, is the [guide](#) published by Preferred by Nature and financed by Danida. In the risk mitigation guide, the sections on illegal labor practices, land tenure rights, environmental issues, conversion and traceability are especially relevant for the issues covered in this note.

TRASE

A supplement to or first step in a due diligence check on one's supplier could be to employ sustainable sourcing filter techniques to steer clear of or be extra careful with suppliers or areas with bad deforestation records. To give an example of the relevance of such an approach: According to a recent [background document](#) prepared by Mekon Ecology to the Amsterdam Declarations Partnership (ADP) the 'cattle supply range' of Brazilian Amazon slaughterhouses coincide with 88% of all deforestation between 2010-2015.

[Trase](#) is a sustainable supply chain mapping tool based on production, trade and customs data that allows you to rank traders and sourcing areas (in Brazil: municipalities).¹¹ Trase shows trade flows from municipality of origin, exporter group, importer to destination country and the associated sustainability risks.¹²

¹¹ In its standard version, Trase follows the trade flow of the commodity with its starting point in the exporting country. It therefore cannot capture complex re-export (say, when beef is processed in another European country and if it thereby changes HS-code before re-export to Denmark).

¹² Below follow just a few general examples of what Trase can do. Professional users can go more in-depth. Questions to info@trase.earth.

Trase allows you to identify very significant differences in exposure to deforestation between traders and sourcing areas thus making it a useful transparency tool for a first-level due diligence check.

A new feature in Trase supply chain called [data explorer](#) allows you to compare the deforestation exposure of various exporting or importing companies or of various states or municipalities visualized on a map in both absolute and relative terms (relative to production volume thus providing a direct comparison of the intensity of the deforestation exposure). For example, you can pick an exporting company and compare its exposure to deforestation in various municipalities visualized on a map.

Reportedly, Trase is also preparing a dedicated explainer expected in April 2023 with updated numbers from 2018-2020 containing an easy-to-consult visualization of the absolute and relative deforestation exposure of various meatpackers as well as information on the municipalities responsible for 95% of cattle driven deforestation risk in Brazil. Such information can also be found (with more effort) on Trase supply chain, and with ease you will find information there on, for example, the top 50 municipalities and logistics hubs in terms of cattle deforestation exposure.

TRASE LIMITS AND COMPLEMENTARY MONITORING AND TRACEABILITY TOOLS

Trase typically operates with a time-lag of some three years, and should be updated with numbers from 2018 to 2020 by April 2023. As a supplement, Trase is reportedly preparing a forward-looking sourcing tool, whereby one can estimate the likelihood that areas deforested after a recent cut-off date will eventually be turned into cattle pasture.

In addition, Trase does not directly attribute responsibility for deforestation to producers, as it (typically) does not have access to data on precise sourcing patterns back to individual farms.

On this background, the Accountability Framework Initiative has developed a [risk assessment tool](#) to manage deforestation risk in supply chains combining Trase and [Global Forest Watch Pro](#).

The purpose is to create a complementary traceability and monitoring tool as GFW Pro can go back to either jurisdiction, supply shed or farm level and uses geospatial data to monitor forests in near real time. In addition, it can assist with reporting (benchmarking and assessing progress over time). In short, the risk assessment tool provides a way to map supply chains, assess risk, manage suppliers, and monitor and report results.

SELOVERDE

Selo Verde (green label) is the first public, transparent, universal and free traceability platform in Brazil to assess deforestation in the soy, cattle and other agricultural supply chains.

The [Selo Verde](#) platform provides evidence-based information on the cattle and soy supply chains by integrating various governmental datasets to enable full traceability, including direct and, importantly, indirect cattle supply: the platform thus brings together datasets such as satellite-based deforestation monitoring, analysis of compliance of the Brazilian Forest Code (limiting how much you may legally deforest on a given farm area); environmental embargoes (fines in the shape of an interdiction to produce on land used in violation of the Forest Code), registries on cattle movement throughout the life-cycle (known as **GTA**), as well as data on indigenous and conservation areas and labor practices analogous to slavery. It is universal meaning it does so for each rural property in the state of Pará.

Selo Verde works by introducing the mandatory number each rural property needs to have in the Rural Environmental Registry (the CAR number). By requiring the CAR number from one's trading partner, economic actors with an exposure to the cattle industry in Pará such as banks, slaughterhouses, and retailers can independently access via Selo Verde the environmental status of the rural properties providing the cattle products you intend to buy. The environmental status is expressed by each rural property receiving a label according to its level of environmental compliance and cattle traceability status.

So far, Selo Verde is only implemented in Pará. Pará is a significant frontline state in the Amazon with some 11% of Brazil's heads of cattle. There are discussions to extend the Selo Verde system to other states in the Amazon. Importantly, a political commitment has been made to introduce the system in Minas Gerais. Unlike Pará, Minas Gerais has farms approved to export to the EU from a veterinary-sanitary point of view (the so-called Traces list).

AN EXAMPLE OF PRIVATE TRACEABILITY PROVIDERS: SAFE TRACE/CONECTA

A possible course of action is to draw upon a private geo-monitoring company to assist you with monitoring your supply chain and compliance with your procurement protocol¹³. There are several such companies in the Brazilian market (make sure to check for absence of conflict of interest). One example with clients in the consumer goods sector is called [Safe Trace](#).

Safe Trace only covers the first tier, but has developed a platform called Conecta, which is a traceability and transparency tool with full coverage of the beef production chain including indirect suppliers. Conecta aims

¹³ NB: This cannot, however, be expected to release operators of their responsibilities under the incoming EU-regulation on due diligence and deforestation.

to facilitate the secure exchange of data between the different links in the beef chain using block chain technology.

By voluntarily joining the Conecta platform, ranchers authorize the system to access the environmental data of their property and the health data of their herd in the official databases of the Federal states and the Union. The platform is able to aggregate existing information on direct suppliers, identify related indirect suppliers and conduct analyzes in order to expand the monitoring of the socio-environmental situation for the entire supply chain.

Retailers, the financial market and other clients can establish their socio-environmental regularity protocols at Conecta, so that they are known by meatpackers and producers, including meatpackers and their direct and indirect suppliers. In practical terms, the system works by the importer stating his direct supplier and procurement protocol (requirements). The Platform will then check the socio-environmental credentials of the indirect suppliers.

Safe Trace/Conecta can help define a protocol/what to ask of the supply chain but the most obvious things to ask to be checked are the following:

- No deforestation in the whole supply chain including indirect suppliers based on GTA, spatial images, geolocation and data on property (CAR) and deforestation;
- no environmental embargoes at either State or Federal level, cf. the monitoring protocols for Amazon and Cerrado;
- no production on indigenous land and in (bio-)conservation units;
- no labor practices analogous to slavery, and
- a productivity check (no more than 3 heads pr. hectare as a backstop indicator against cattle washing loop holes in the shape of undocumented cattle having made its way through the farm).

Safe Trace has historically focused on Pará, and indeed relies on Selo Verde, but is spreading into other Brazilian states specifically Mato Grosso and Rondônia checking the socio-environmental credentials of the several thousands of direct suppliers of Marfrig.

According to Safe Trace, the gaps in the first tier have already been checked in Mato Grosso and the company can vouch for full cycle producers of Marfrig in that state (some 50% of Marfrig's total). The next step in both states is to focus on indirect suppliers in non-consolidated areas (meaning excluding consolidated agricultural areas deforested before 2009 and therefore considered low risk today).

Because of these geographic limits to traceability checks on indirect suppliers an alternative in areas not covered by Safe Trace could be to develop and implement a procurement protocol based on a geographic approach. Central to such an approach would be criteria to avoid sourcing from abattoirs and slaughterhouses whose cattle supply range overlap with deforestation hotspots. A cattle supply range usually covers a

300km radius (100km should cover about 70% of suppliers creating possible loopholes). This is only a rough filter as slaughterhouses do to some extent source indirectly from far away, and therefore not a substitute for drawing on Trase data and thereby on the cattle movement registry data.

For the definition of such hotspots one could build on [Imazon's mapping](#) of current deforestation risk areas: This could be combined with the work done by Brazilian NGO [IPAM](#) that ascribes 32 % of deforestation in the Amazon biome to land grabbing in undesignated public forests with the potential to reach half of the annual forest destruction in the Amazon.

While not exhaustive, such an approach would be a clear market signal to at least the jurisdictions concerned of a zero-tolerance policy for some of the worst socio-environmental irregularities.

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LOOKING AHEAD

The [Agriculture Roadmap](#) put forward by 14 of the world's largest agro-commodity traders and processors at COP 27 in Egypt contains some interesting pointers and commitments among which:

- to provide support to the Beef on Track platform to ensure expansion to cover indirect suppliers.
- to work with other stakeholders to scale up Selo Verde to other Brazilian states.

In the context of an incoming Brazilian Government in 2023 with a high environmental profile, it shall be interesting to see if a universal and transparent traceability platform will be extended to a significantly larger number of Brazilian states. This could become (the beginning of) a game changer in terms of allowing the supply chain to identify deforestation compliant beef products.

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OUR CONTACTS

The Trade Council in Brazil stands ready to help companies and institutions with an interest in understanding sustainability risks related to the Brazilian beef sector. We can help you reach out to relevant partners but also assist on ground with concrete due diligence activities based on our many years of experience in the food and agro sector and vast local network within sustainable value chains.



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