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Amazon deforestation linked to European imports via specially licensed ranches and their suppliers

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Brazil's growing role in the global market for beef has created an increasing need for traceability in the country's cattle sector. The Brazilian System for Individual Identification of Bovines and Buffalos, known by its Portuguese acronym SISBOV, was implemented in 2002 to provide an official, but voluntary, system for the identification of individual animals destined for slaughter for beef. Administered by Brazil's Ministry of Agriculture, Ranching, and Provisions (Portuguese acronym, MAPA), SISBOV goes much beyond typical cattle monitoring/traceability in Brazil.¹ Among other requirements, SISBOV requires more frequent inspections than other cattle produced in Brazil along with commitments to ensure that all documentation about animals and their movements are error-free.²

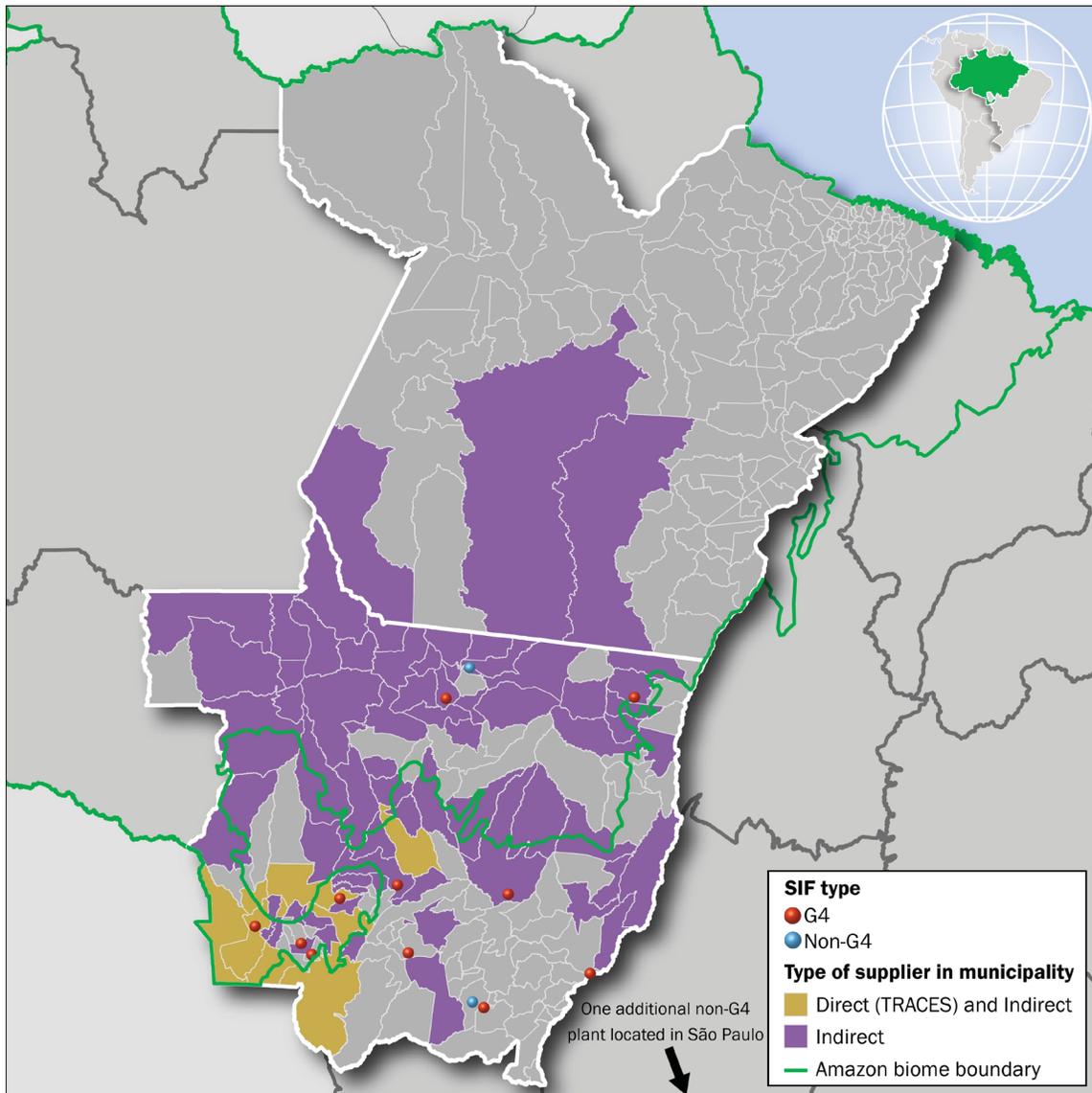
SISBOV certifies less than 1% of Brazil's cattle ranches.³ Farms registered in SISBOV are eligible for inclusion on a list of properties that are compliant with the requirements in EU's Trade Control and Expert System (TRACES).⁴ TRACES farms can provide cattle to certain Federally Inspected Slaughterhouses, known by their Portuguese acronym, SIFs, for specially authorized processing of beef for export to the EU, which can generate a premium for the producer.⁵

Here we provide the first assessment of deforestation on properties on the TRACES list. SISBOV and TRACES emphasize animal health and quality, though neither sets out any requirements that properties refrain from deforestation. However, given growing concern within the EU about the role of imported beef on its deforestation footprint,⁶ and given the high visibility of TRACES properties to regulators and the limited number of these properties, we propose that expanding TRACES requirements to include commitments to maintain listed properties as deforestation-free could be a relatively simple and quick way to ensure that beef imported to the EU is free from deforestation.

Major findings:

- In October 2019, the TRACES list included 1,699 properties in 8 states; Mato Grosso was the only state in the Legal Amazon with TRACES properties and it had the most properties out of all of the states (476).
- A small portion of Mato Grosso TRACES properties (19, or 4%) that sold to SIFs authorized to export to the EU had Amazon deforestation recorded by Brazil's official monitoring system, PRODES-Am, between 2010-2018. This deforestation totaled 518 ha across the 19 properties. We did not assess clearing of Cerrado vegetation that fell outside of PRODES-Am's extent.
 - Brazil's 3 major meatpacking companies - JBS, Marfrig, and Minerva, know as the 'G4 companies' for their decade-old commitments to monitor their suppliers for deforestation and to purchase only from deforestation-free properties, were the only 2019 EU-exporting slaughterhouses that bought from the TRACES properties with Amazon deforestation.
- The TRACES farms routinely purchase young cattle, or cattle ready to be fattened, from other ranches before selling these cattle for slaughter and potential export to the EU. 138 TRACES farms that sold for slaughter to EU-export certified SIFs in 2019 had recently purchased cattle from 301 indirect suppliers (properties that sold cattle to TRACES farms), with a total of 12,907 ha of 2010-2017 deforestation on their farms.

- Among EU exporter slaughterhouses, the G4 companies bought from nearly all (134; 97%) of the TRACES farms with indirect suppliers with deforestation. These 296 indirect suppliers to G4 companies accounted for 99% of the deforestation (12,740 ha) on all TRACES farm indirect suppliers.
- Deforestation can easily enter supply chains that provide beef to the EU via these indirect suppliers. However, there is currently no active system in place at any slaughterhouse to detect deforestation on indirect suppliers.⁷



Map of municipalities where TRACES properties with deforestation and indirect suppliers in TRACES supply chains with deforestation were located.

Methods:

Data Acquisition and preparation: We downloaded the TRACES property list from MAPA on October 24, 2019. We downloaded a list of federal slaughterhouses certified to export beef to the EU on September 16, 2019. Guide to Animal Transit (GTA) data were previously downloaded from Mato Grosso's state sanitation agency and included the period of January 2017-May 2019. Rural property boundaries from the federal SiCAR, state CAR, INCRA, and Terra Legal systems were downloaded between 2011-2019. The PRODES-Am map of annual deforestation up through 2018 was used to assess deforestation of Amazon forests for the period of 2010-2018.

Identification of properties that supplied to TRACES list properties and sales by TRACES properties to SIFs:

We assessed supply chains involving TRACES list properties based on analysis of GTAs from Jan 2017 – May 2019. We first identified the participating EU-export certified SIF slaughterhouses that each TRACES list property sold to in 2019. We then identified properties that sold cattle to those TRACES list properties in 2017 or 2018; these properties were considered to be indirect suppliers to the slaughterhouse via the TRACES list property.

Identification of properties with deforestation: We tried to match all properties (TRACES list properties and indirect suppliers) to SICAR, state CAR, INCRA, and Terra Legal property boundary maps. In some cases, no matching property boundary could be identified. We then overlaid the PRODES-Am deforestation map to assess annual deforestation 2010-2018 on each property.

Limitations: Our analysis likely underestimates the role of deforestation in TRACES supply chains for multiple reasons. First, we did not include deforestation in Cerrado areas outside of the area of PRODES-Am coverage. Second, additional SISBOV properties with deforestation may have sold to EU-export certified SIFs later in 2019, but we did not have transactions for this time period. Third, we could not identify property boundaries for all SISBOV properties nor all properties that SISBOV properties purchased from; we could not assess potential deforestation on any of the properties for which we did not have boundaries.

¹ <http://www.agricultura.gov.br/assuntos/sanidade-animal-e-vegetal/saude-animal/rastreabilidade-animal>

² Cattle that are born on a SISBOV farm must be registered and ear tagged by 10 months of age and cattle purchased from a non-SISBOV farm must be registered and ear tagged within 30 days of arrival on the SISBOV farm. No cattle may be moved off of a SISBOV farm without being registered and ear tagged; http://www.in.gov.br/web/guest/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/44306336/do1-2018-10-08-instrucao-normativa-n-51-de-1-de-outubro-de-2018-44306204

³ <https://chainreactionresearch.com/report/cattle-driven-deforestation-a-major-risk-to-brazilian-retailers/>

⁴ https://ec.europa.eu/food/animals/traces_en

⁵ <https://www.scotconsultoria.com.br/noticias/artigos/47889/o-que-e-cota-hilton-e-como-nela-se-enquadrar.htm>

⁶ <https://www.thebureauinvestigates.com/blog/2019-09-30/eu-imported-3bn-worth-of-brazilian-beef-from-companies-linked-to-deforestation>; <https://www.irishtimes.com/news/environment/europe-is-contributing-to-widespread-deforestation-in-brazil-say-scientists-1.3871714>

⁷ <https://www.visipe.com/>