

ENVIRONMENTAL FRAMEWORK

**For Lending And Investing In Sustainable Intensification
Of Cattle Ranching In The Amazon And Cerrado**

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Executive Summary

The Nature
Conservancy 

Brazil is the largest exporter of beef in the world, representing 28% of global exports in 2019¹, and ranks as the second largest producer of beef after the US. Brazil also has the largest commercial cattle herd in the world with 215 million heads², of which 69% are raised in the Amazon and Cerrado biomes of Brazil. However, Brazil's global market leadership in this sector has come at the cost of losing large areas of natural habitat that have been converted for livestock production.

Cattle ranching is the largest driver of deforestation and conversion of natural habitat in Brazil, causing an estimated 93% of deforestation in the Amazon and 70% in the Cerrado³. The recent increase in fires and deforestation in the Amazon (34.4% increase of deforested area from August 2018 to July 2019 and 9.5% increase for the same period between 2019 and 2020⁴) are caused largely by expansion of cattle ranching. Almost 19%⁵ of the Brazilian Amazon has been cleared, nearing what scientists consider a potential "tipping point" of 20-25% clearance⁶ when the Amazon could rapidly transition to a non-forest ecosystem. The Cerrado is now half converted⁷.

The ongoing clearing of natural vegetation in these biomes has devastating implications for carbon emissions, water availability, biodiversity and the people who live and work in these areas. Moreover, demand for Brazilian beef is expected to grow approximately 35% over the next two decades⁸, with exports to China being the fastest growing segment of the market, placing increasing pressure on conversion of natural habitat in these biomes⁹.

Fortunately, there are clear pathways to meet the growing global demand for beef, while avoiding future conversion of natural habitat. Cattle production in the Amazon and Cerrado is currently very low productivity, and with already-demonstrated practices cattle yields can be increased by three to five times the current level while maintaining a largely grass-fed, pasture-based system, including systems that integrate cattle, crops and forestry¹⁰. Even moderate productivity increases can not only enable Brazil to meet future demand without further habitat conversion, but also allow for a reduction in the cattle footprint, thereby freeing up pastureland for production of soy and other agricultural products.

The cattle intensification process described above requires upfront capital but has an attractive return on investment - estimated to be greater than 10% over an eight-to ten-year period¹¹.

Even moderate productivity increases can enable Brazil to meet future demand without further habitat conversion

1 CEPEA (2019)

2 IBGE 2019

3 If we consider what was mapped as native by MapBiomias (<https://plataforma.brasil.mapbiomas.org/>) in the year 2008 and as pastures in the year 2019.

4 Prodes/Inpe (2020)

5 INPE/Prodes

6 Lovejoy & Nobre (2018)

7 MMA (2015)

8 Mulder (2019), OECD-FAO (2018)

9 ABIEC (2020)

10 Latawiec et al. (2014)

11 TNC (2016)

However, most ranchers lack access to credit to make the initial investments (exacerbated by the lack of land tenure in some key parts of the Amazon) while also needing technical assistance to implement an intensified system. Furthermore, some rancher segments are not driven by ROI considerations and can be slow to change behavior even if the economic case is strong.

Expanding rancher access to long-term credit is a critical component needed to close the yield gap described above, but it needs to target farmer segments that are receptive to change, be bundled with the required technical assistance, and manage key risks in a way that makes financial sense for the lender while also offering attractive terms to the rancher. There are some existing models for doing this – for example, recent loans

made by Bradesco with &Green¹², Rabobank with the Agri3 Fund¹³, and the innovative business model pioneered by PEC-SA¹⁴ to deliver finance and technical assistance to farmers. The Government of Brazil's low-carbon agriculture (ABC) program also offers examples for financing cattle intensification.

As the pressure for deforestation-free supply chains grows, both internationally and in Brazil, increasing the capital committed to DCF financial mechanisms can generate benefits for stakeholders across the beef value chain

In spite of these promising examples, lending and investment for cattle intensification is far below the USD \$35-41 billion¹⁵ that will be required through 2030 to satisfy future market demand without further habitat conversion. However, the momentum is growing for expanding lending and investment in the cattle sector. The largest slaughterhouses (as well as major retailers and restaurant chains), have recently committed to Deforestation and Conversion-Free (“DCF”) sourcing beyond their immediate direct suppliers, and the beef supply chain is actively seeking solutions including ranch financing structures to grow production without deforestation. The increasingly important China market requires animals that are no more than 30 months old, which can only be achieved in an intensified system. Growing concerns about deforestation and climate

change from investors and the general public are causing companies, financial institutions and government to more proactively address emissions from the cattle sector. For example, Santander, Itaú and Bradesco banks announced a partnership which includes creating more financing solutions for sustainable cattle production. Concessional capital groups – which will be critical to managing risk and allowing longer loan terms – are increasing their interest in cattle intensification, including the Agri3 Fund, the &Green Fund, FMO, and IDB.

As the pressure for deforestation-free supply chains grows, both internationally and in Brazil, increasing the capital committed to DCF financial mechanisms can generate benefits for stakeholders across the beef value chain. Lenders and investors can gain reputational benefits and new business opportunities from better serving cattle ranchers. Slaughterhouses can benefit from a growing supply of DCF cattle to achieve their commitments, meet the needs of the growing China market and secure access to markets with stricter environmental requirements, including domestic retailers with corporate ties to Europe. Cattle ranchers can gain access to improved lending terms to expand their businesses' size and profitability, while maintaining sales to slaughterhouses that are increasingly seeking DCF cattle.

12 <https://www.andgreen.fund/portfolio/>

13 <https://rabobankbrasil.medium.com/rabobank-anuncia-novas-opera%C3%A7%C3%B5es-com-o-fundo-agri3-para-agricultura-sustent%C3%A1vel-no-brasil-e-china-7ddd4b299334>

14 <https://pecsa.com.br/en/>

15 Sitawi (2020)



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The Nature Conservancy's Environmental Framework was created to guide lenders and investors in successfully expanding their environmental finance programs or adapting existing products to a DCF approach. It contains a consistent set of requirements and monitoring approaches that is effective in ensuring DCF production while also practical for producers and investors to implement.

The Environmental Framework is intended to support more rapid scaling of DCF mechanisms by lenders and investors seeking to promote sustainable cattle ranching intensification in the Amazon and the Cerrado, while also benefiting ranchers with practical, streamlined compliance requirements. The Nature Conservancy developed the framework through extensive engagement of nearly 60 knowledgeable individuals from more than 25 institutions representing key stakeholders throughout the beef value chain, including slaughterhouses, banks, producers, development finance institutions, academia and NGOs.

The Environmental Framework defines cattle intensification for purposes of this document as a process that has been demonstrated to produce a significant yield increase; employs a primarily grass-fed, pasture-based system with any animal confinement limited to the last 15% of the animals' lifespan; is located on existing pastureland or other already cleared areas; and follows one or more recognized practices for sustainable pasture intensification, which are further described in the full report. Practices which are not recognized as part of this Environmental Framework include, for example, business as usual expansion of ranches with no significant yield increase, conversion of natural habitat to create new grazing areas, and feedlots which involve long periods of animal confinement.

Core Requirements

The Environmental Framework requires lenders and investors to incorporate the following core environmental requirements in their financial instruments:

- **Legal compliance:** A rancher must comply with the applicable laws and regulations on all properties it owns and operates, not just the farm being financed. These include valid legal property documentation (title, lease, or proof of possession), compliance with the Forest Code, specific labor and environmental regulations, and the criteria for legal compliance defined by the Federal Prosecutor as part of the Terms of Adjusted Conduct (TAC) agreements. The Framework offers a checklist of relevant documents and online registries to assess legal compliance.

- **Conversion-free reference date:**
 - o The framework sets January 2018 as the reference date from which there can be no additional deforestation or conversion on the financed farm. The reference date represents a practical balance - ensuring that recent deforestation is not rewarded with better financing terms, while avoiding a more restrictive date that would limit the adoption by lenders and ranchers.

 - o Ranchers in the Amazon with legal deforestation between October 2009 and January 2018 must also demonstrate fulfillment of market re-entry requirements under the Public Beef Commitment, regardless of who they sell their cattle to. This requirement may be fulfilled during the loan term and loan proceeds could potentially be used to finance the re-entry requirements. TNC analysis using Mapbiomas indicates that this requirement would only apply to a small share of the area in the priority municipalities of the Amazon for sustainable intensification¹⁶.

 - o To address deforestation risk among a borrower or investee's suppliers, the Framework prohibits conversion on farms that directly supply the financed property with unfinished cattle as of the start date of the loan or investment agreement. Given that DCF financial mechanisms generally target ranchers that sell directly to slaughterhouses, this provision means that the core requirements address the first two levels of suppliers to slaughterhouses which represent approximately 84% of deforestation¹⁷, and will reach a step further down the supply chain compared to current mainstream monitoring practices. As technology and data availability advance, applying the reference date to indirect suppliers of the borrowers/investees will be considered in future versions of the Framework.

¹⁶ TNC analysis using Mapbiomas indicates that 16% of the pastureland in the priority areas of the Amazon for intensification was converted between 2009 and 2018. This includes legal and illegal deforestation, and we expect the share that is from legal deforestation is substantially lower than 16%.

¹⁷ Rausch & Munger (2020)

Additional Elements

The Environmental Framework sets out seven additional elements that lenders and investors can choose to incorporate into their DCF financial mechanisms to enhance conservation impact but are not considered essential to achieve the most critical environmental results. This customization beyond the core requirements allows lenders and investors to manage their portfolios to meet even greater institutional ambitions for positive environmental impact or apply a more conservative approach to minimizing exposure to environmental risks.

The additional elements may be integrated as mandatory requirements of a lending or investment program or can be strongly encouraged through preferential access to the program for ranchers who will follow them, or through producer incentives such as lower interest rates or other more favorable financing terms. The additional elements include:

1. **Cross-farm Applicability:** Applying the conversion-free reference date requirement to all properties owned or operated by the borrower/investee, not just the property being financed, is highly encouraged. While this requirement is difficult for many ranchers to accept and is therefore not included in the core requirements, it is the most important of the additional elements for enhancing environmental impact and should be incorporated into DCF mechanisms whenever possible.
2. **Spatial Prioritization:** DCF financial mechanisms can encourage investment and loan deployment in areas of the Amazon and the Cerrado where sustainable intensification is most feasible. The Framework includes a TNC list of municipalities with “high potential for sustainable intensification” and a tool to help users access the prioritized list, based on key economic, logistical, soil, climate, and production criteria.
3. **Good Agricultural Practices:** DCF financial mechanisms are encouraged to require and monitor the adoption of recognized management practices that improve environmental and social outcomes while reducing risk to the lender. Examples of good practices are contained in standards such as GTPS-MPPS and EMBRAPA.
4. **Lower GHG/kg of production:** Projected net GHG emissions from implementing sustainable intensification ranching practices must be equal or lower to pre-intensification emissions projections (BAU emissions) that would have occurred without accessing a DCF financial mechanism. This calculation¹⁸ must take into account, among other factors, the balance of methane processes, pasture management and potential soil carbon sequestration.
5. **Land Conflict:** In addition to the legal requirements governing land conflict (i.e. valid legal property documentation), and that no property overlaps with Conservation Units or Indigenous or Quilombola Lands), DCF financial mechanisms may screen for land conflict controversies, which can be monitored through the Pastoral Land Commission (CPT) database, ongoing legal procedures and media reports.
6. **IFC Performance Standards (PS):** Many IFC PS components are already embedded in the Environmental Framework. Mandating full compliance with the IFC standards is at the discretion of the institutions designing the finance mechanism.
7. **Good supplier sourcing practices:** To achieve greater environmental impact through its suppliers, DCF financial mechanisms can require the borrower/investee to apply the GTFI (Indirect Suppliers Working Group) guidance on Good Monitoring Practices¹⁹. This industry agreement includes a simple set of supplier criteria that currently includes a reference date for zero conversion of August 2019 for suppliers to ranchers that sell directly to slaughterhouses.

¹⁸ See Carbon Calculator for TNC’s best estimates for on-farm emissions calculations

¹⁹ <https://gtfi.org.br/boas-praticas/>

Monitoring and Performance

The Framework offers guidance on monitoring the environmental requirements to assist lenders and investors in understanding capacity needs and adapting internal procedures to ensure producer compliance. The guidance outlines five steps (active origination, eligibility assessment, preparation for monitoring, annual monitoring and ongoing oversight) and includes suggested documentation and information needed for meeting each environmental requirement.

The Framework also provides specific metrics and practical measurement methodologies that lenders and investors can use to evaluate their portfolio's performance. These metrics include observable outcomes such as hectares of intensified pastureland, as well as metrics for off-farm impacts such as avoided deforestation.

The Environmental Framework includes two new public tools to assist in designing high-impact lending and investment programs and measuring results:

- The TNC Dashboard is a dynamic mapping tool that allows the user to review intensification potential, identify their own high-impact geographic priorities for lending and investing, and estimate a farm's potential for adopting integrated crop-livestock systems.
- The TNC Cattle Ranching Carbon Calculator estimates the GHG balance within the financed property from intensification, and the avoided habitat conversion and avoided carbon dioxide emissions from any surplus legal reserve on the financed property.



A Final Note

The Brazilian beef industry is one of the main pillars of Brazil's agribusiness sector, making up 8.5% of the country's GDP in 2019. Brazil is well-positioned to take advantage of global growth in the beef market, particularly in China, and indeed Brazil's beef exports grew by almost 17% from 2018 to 2019. The industry's role in the ongoing deforestation and conversion of natural habitat in the Amazon and Cerrado not only threatens the survival of these critical biomes but puts at risk Brazil's opportunity to benefit from the growing global market.

Intensification of cattle ranching in Brazil is a tremendous opportunity to grow production, meet the needs of key markets including in China, improve the income of ranchers, free up land for the production of soy and other agricultural products, conserve native vegetation and restore pasture lands and soils, and ultimately contribute to the global effort to control greenhouse gas emissions. A substantial expansion in lending and investment to Brazilian ranchers will be needed to realize this transition, and this Environmental Framework offers a practical guide to help financial institutions design and implement the innovative financial products necessary to achieve this. This cattle paper complements our Environmental Framework for Lending and Investing in Soy in the Cerrado. Together, these two frameworks provide a reference guide for financing agricultural production that is both environmentally and economically sustainable.

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