



LAND STUDY OF THE SUGAR SUPPLY CHAIN IN BRAZIL

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Report prepared by Landesa and UNICAMP
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GLOSSARY

CAR: Rural Environmental Cadaster

CCIR: Certificate of Registration of Rural Property

CNIR: National Cadaster of Rural Property

CPT: Pastoral Land Commission

Corporate groups: The group level company within the supply chain; a corporate group may own multiple mills.

FPIC: Free, Prior and Informed Consent.

FUNAI: National Indian Foundation

INCRA: National Institute for Colonization and Agrarian Reform

MST: Landless Workers' Movement

Quilombo: A traditional settlement founded by quilombolas

Quilombolas: Descendants of Afro-Brazilian slaves who have rights to their traditional lands under Brazilian law

SICAR: National Rural Environmental Cadaster

SIGEF: Land Management System

SINTER: National System of Territorial Information Management

SNCI: National Property Certification System

Spot purchases: Purchases made "on the spot" by a mill without a contract in place

EXECUTIVE SUMMARY

Study Background

Brazil is historically the largest producer of sugar in the world. The sugarcane industry, specifically in Brazil's Southeast region, is sophisticated with high levels of efficiency and good compliance management systems in place. Many actors operating within Brazil's sugarcane sector assert Brazil's sugarcane is sustainable due to the country's strict environmental laws and anticipate that this can be recognized as a market advantage. Alongside this perspective, however, Brazil nationally continues to face challenges in realizing the protections outlined in laws for all citizens, particularly those of indigenous communities and quilombolas, and continues to struggle with land inequality. Land rights are frequently cited at the heart of indigenous struggles and rural land conflict in the country by a variety of actors including indigenous peoples, civil society, academics, and journalists.

Given this context, PepsiCo commissioned a study of its Brazilian sugar supply chain to identify the current land practices of its sugar suppliers in Brazil to better understand both land tenure risks and good practices. This is part of PepsiCo's global effort to better understand the implementation status of its [Land Policy](#) by identifying parts of its operations and supply chains where it is achieving its policy goals as well as areas that require further support. This report will directly contribute to PepsiCo's understanding and approach in implementing and monitoring its Land Policy in the sugar supply chain in Brazil and aims to provide lessons that can inform PepsiCo's approaches for monitoring and supporting good land practices in other commodities and geographies.

This report presents the findings of a study conducted by Landesa, an international non-profit organization specializing in identifying and addressing rural land rights issues, in collaboration with land experts from the Land Governance Group of the Institute of Economics at the University of Campinas (UNICAMP), São Paulo, Brazil and Kadaster in the Netherlands. The study included a desk review of Brazil's land governance framework followed by a field study of 11 mills from 6 of the 8 corporate groups in Brazil currently supplying sugar to PepsiCo. The study covers over 99 percent of PepsiCo's current supply.

The field study included mill staff responses to a written questionnaire as well as site visits to the mills to conduct semi-structured interviews with key personnel, sugarcane growers who supply the mill, and representatives of other key institutional stakeholders in the areas. The methodology covered the following thematic areas: mapping mills' sugarcane supply bases; land compliance (legal, cadastral, and environmental); land acquisition and utilization practices and protocols; social and environmental responsibility practices, including grower monitoring; land disputes and resolution mechanisms; and land policies, including awareness of PepsiCo's Land Policy.

Study Findings

The study identified many good land practices being implemented by mills. Study findings indicate a stable land tenure situation in sugarcane areas with minimal conflicts. The study also identified several risks to monitor and areas for improvement, both for PepsiCo's engagement with its Brazilian sugar suppliers on its Land Policy and for land practices at the mill level. The following table summarizes the key findings.

Table 1. Key Findings

Land Practice Compliance (for Both the Mills' Own and Mill Supplier Holdings)	The research team observed that all mills largely meet national requirements for land compliance. The great majority of landholdings are in compliance, although gaps include some pending processes for the System of Land Management (SIGEF) and some incomplete Rural Environmental Cadaster (CAR) coverage. These specific Brazilian land instruments are discussed in more detail in the full report.
	Within the last decade, most changes to the mills' supply bases have resulted from new leases and supply contracts; the majority of mills in the study reported they have no immediate plans to purchase new land and instead will focus on increasing productivity in existing areas, leasing, and/or contracting with third party suppliers.

	<p>The majority of mills have strong due diligence protocols in place to verify supplier documents related to land rights prior to contracting; one mill had markedly weak/absent due diligence protocols. While physical checklists exist outlining the required documents, the majority of mills do <i>not</i> have policies or Codes of Conduct that affirm commitment to respecting land rights throughout their supply chain. Only one group presented the research team with a written policy outlining its leasing protocol for its mills.</p>
	<p>Environmental assessments are a regular component of land acquisition, including leasing and utilization. However, all mills but one do <i>not</i> assess social risks or conditions during due diligence prior to contracting.</p>
	<p>All mills but one require all individuals listed on a deed to participate in and consent to contracts. There is one mill that is an exception to this; in engaging with sugarcane growers, this mill does not ask for a document demonstrating rights over the land and does not have written contracts directly with its suppliers.</p>
	<p>Mills rely on deeds to identify land rights for a parcel. The majority of mills within PepsiCo’s sugar supply chain operate in São Paulo state, in areas where agricultural land is formalized and deeds yield a good picture of the land rights situation of a particular parcel.</p>
	<p>The multitude of land registration systems and legal requirements in Brazil can place unnecessary administrative burdens on smaller operators. Growers seek support from associations to navigate complex processes and bureaucracies; a number of mills also offer assistance and advice to their growers.</p>
<p>Certifications and Mill Supplier Monitoring</p>	<p>No mills reported ongoing monitoring of land rights of suppliers, as the situation is viewed as resolved prior to contracting.</p>
	<p>Given that PepsiCo sources 100 percent Bonsucro certified sugarcane in Brazil, all mills in the study are Bonsucro certified. However, each of the mills has a different proportion of the agricultural land on which its supply is grown (whether mill-controlled or third party supplier land) that is certified. Multiple mills do not have any of their third-party suppliers included within their Bonsucro certification scope. Although PepsiCo sources up to the proportion of Bonsucro-certified volume from each mill, these mills also source from non-certified land, which, in the absence of other monitoring, presents some risk that the mill may be associated with land issues.</p>
<p>Land Disputes and Resolution Mechanisms</p>	<p>In the researched areas, overlapping rural land rights are reported as very rare and land conflict as low. Land is regularized and multiple observers (including mill staff, sugarcane growers, and representatives from land registries and civil society) described their region’s land climate as “peaceful.”</p>
	<p>As self-declaratory documents, the CAR of one sugarcane grower can overlap with that of another. This is not a cause of conflict and is reported to be peacefully resolved once identified. Given that, the SIGEF requires geo-referencing of parcel information by a qualified professional, it will serve as a superior control mechanism that will avoid such overlaps. These specific Brazilian land instruments are discussed in more detail in the full report.</p>
	<p>While relatively rare in the researched areas, land irregularities due to the activity of the Landless Workers’ Movement (Movimento dos Trabalhadores Sem Terra, or MST) and rights claims of quilombolas (descendants of Afro-Brazilian slaves who have rights to their traditional lands under Brazilian law) are still possible and examples of this were observed in this study. When these occur, they pose risks that could quickly escalate given the politicization of land movements in Brazil.</p>
	<p>Most mills have some sort of grievance mechanism or communication channel to receive comments and concerns from interested parties, including growers and local communities.</p>

PepsiCo's Land Policy and Supplier Land Policies	Mills are largely unfamiliar with PepsiCo's Land Policy and PepsiCo's expectations for its suppliers on the topic.
	While physical checklists exist outlining the required land documents for verification of rights, mills do not have policies or Codes of Conduct that affirm commitment to respecting land rights throughout their supply chain.
	The majority of mills do not have provisions to identify if free, prior, and informed consent (FPIC) is required and implement it if required. ¹

Recommended Actions

The report concludes with recommendations for PepsiCo to ensure good practice and compliance with its Land Policy in its sugar supply chain in Brazil, as well as other commodities and geographies. Table 2 lists the top 3 recommended actions for PepsiCo and Brazilian mills. See [Section 5](#) of the report for a complete list.

Table 2. Top Recommended Actions

Top 3 Recommended Actions for PepsiCo	
Raise Awareness of Land Policy	PepsiCo should improve its suppliers' understanding of its Land Policy in Brazil, and the research team expects this is likely a relevant action for other supply chains and geographies. Avenues for awareness-raising include: a webinar training and/or a guidance document outlining good land practices for suppliers, explaining why it is important, and comparing PepsiCo's Land Policy with national legislation and PepsiCo's Land Policy with Bonsucro Standards.
Provide Guidance on Land Policy	Efforts to raise awareness on the Land Policy could be complemented with guidance to suppliers on specific issues related to good land practice. Example topics could include: use of social assessments prior to contracting; what is FPIC and when and how should it be applied; how to develop a land policy; identification of encroachment risks and duty to report expectations; and how to respond to encroachment. The research team observed that Brazilian mills supply a number of buyers who share similar commitments on land. PepsiCo could collaborate with other buyers where possible to develop common guidance (or protocol) to help maximize resources, improve clarity for mills and growers, and reduce inefficiencies and conflicting expectations.
Continue Monitoring Implementation	PepsiCo should continue monitoring suppliers' land practices through regular supplier self-assessment, specifically through new tools being piloted such as the ACRE Framework. ²
Top 3 Recommended Actions for Brazilian Mills	
Continue/Start due diligence and monitoring	All mills should ensure mechanisms are established for initial due diligence and ongoing monitoring of land rights across the supply base. Ongoing monitoring may be realized through duty to report clauses in contracts or inclusion of an indicator in annual monitoring programs. Areas of particular risk to assess and monitor include areas of MST occupation (or potentially "unproductive" areas that may be subject to future MST occupation), quilombola land claims, indigenous land claims, and lands claimed for conservation purposes.

¹ PepsiCo summarizes FPIC in its Land Policy as: "Free - Consent to the sale of land is given voluntarily and absent of 'coercion, intimidation or manipulation.' Prior - Consent is sought sufficiently in advance of any authorization or commencement of activities from an existing land owner. Informed - Ensures that information is provided prior to seeking consent to acquire and that information is provided as the acquisition process proceeds. Consent - Refers to the collective decision made by the land rights-holders and reached through the customary decision-making processes of the affected peoples or communities." For a more detailed resource on applying FPIC, see FAO, *Respecting Free, Prior, and Informed Consent: Practical guidance for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition* (2014), available at <http://www.fao.org/3/ai3496e.pdf>

² PepsiCo is currently developing a new framework for tracking the implementation of its land tenure-related commitments called ACRE. Findings from this study will help inform the development of ACRE and accompanying guidance.

Adopt Land Policies	All mills should adopt land policies that affirm respect for land rights and ensure procedures align with PepsiCo's Land Policy and the policies of other customers. Mills should pass land standards down to suppliers (i.e., codes of conduct or partnership or supplier agreements).
Assess Social Conditions	All mills should assess social conditions and risks during due diligence prior to contracting (few mills were observed to have this practice), in addition to assessing environmental risks (all mills reported this practice).

INTRODUCTION

Globally, across all agricultural supply chains, PepsiCo seeks to better understand the implementation of its [Land Policy](#) by identifying parts of its operations and supply chains where it is achieving its policy goals as well as areas that require further support. This study, which focuses on PepsiCo's sugar supply chain in Brazil, is part of that larger effort. PepsiCo has commissioned similar reports on sustainability issues in the sugarcane sector in Thailand and Mexico, and had previously commissioned a sustainability audit on several of its suppliers in the sugarcane sector in Brazil.

PepsiCo commissioned Landesa, an international non-profit organization specializing in identifying and addressing rural land rights issues, to conduct this study. The objective of the study is to identify the current land practices in PepsiCo's sugar supply chain in Brazil so as to better understand both land tenure risks and good practices. With this information, PepsiCo will be better positioned to support its suppliers to meet PepsiCo Land Policy standards. The study is about understanding the overall situation of PepsiCo's sugar supply chain in Brazil, as well as informing how PepsiCo implements and monitors its land policy in Brazil and throughout the world. It is not an audit of specific suppliers. Further, this study only addresses current suppliers (crop 2019-2020) in PepsiCo's value chain with a coverage of over 99 percent of PepsiCo's total sugar volume sourced in Brazil. Two groups that together contribute less than 1 percent of PepsiCo's total volume (crop 2019-2020) declined to participate in the study and therefore they and any land issues associated with their operations are not included in this report.

This report is divided into five major sections:

- **Section 1:** The report begins with a description of the methodology employed in the study. The methodology discusses the approach employed by the research team, including the thematic areas assessed and types of stakeholders consulted. It also describes the composition of the research team. The study coverage (e.g., percent of PepsiCo volume covered by study) and limitations of the study are also included in this section.
- **Section 2:** An overview of the land tenure and sugarcane industry landscape in Brazil follows in Section 2. This section provides an overview of how land is governed in Brazil, including the key laws, institutions, and land databases/instruments. It discusses ongoing land governance challenges in the country including the realization of rights for indigenous peoples and traditional communities, as well as progress to improve the accuracy of the country's land register and cadaster. In addition to providing context on land governance in the country, the section provides background information about the sugarcane sector in Brazil, including a regional comparison between the Southeast and Northeast.
- **Section 3:** The third section provides an overview of PepsiCo's sugar supply chain in Brazil and maps the different business models of PepsiCo's suppliers according to the degree of verticalization of the supply chain (examining composition of mill supply bases through a lens of (1) mill-owned land, mill-leased land, and third party grower land and (2) sugarcane area operated by mill and operated by third party growers). An understanding of the supply base is important context for understanding the land practices expected of mills.
- **Section 4:** The fourth section presents the main findings of the study. Findings are grouped into four topic areas: (1) Land practice compliance for both the mill's own and mill supplier holdings; (2) Certifications and mill supplier monitoring; (3) Land disputes and resolution mechanisms; and (4) PepsiCo's Land Policy and mill land policies. The section describes the practices the research team observed in each topic area followed by a table summarizing the recommended best practices.
- **Section 5:** The final section provides recommendations for PepsiCo for its sugar supply chain in Brazil, as well as lessons learned through the study that may inform how PepsiCo implements and monitors its Land Policy in other commodities and geographies.

SECTION 1: METHODOLOGY

This section describes the methodology employed by the research team, including the thematic areas assessed and types of stakeholders consulted. It also describes the composition of the research team. The study coverage (e.g., percent of PepsiCo volume covered by study) and limitations of the study are also included in this section.

Approach

The research team conducted a desk review of Brazil's land governance framework, including a comparative analysis of Brazilian laws and policies against the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests in the Context of National Food Security* (VGGTs). The desk review considered trends in Brazilian land governance with a specific focus on the intersection of land with Brazil's sugarcane industry. Researchers also reviewed reports to deepen understanding of the sugarcane sector in Brazil, including reports focused on socio-environmental practices and risks within the sector. Specific documents reviewed include but are not limited to: Sustainable Farming Initiative (SFI) audits commissioned by PepsiCo on several of its Brazilian sugar suppliers in 2014 and 2015; a study on labor and land in Brazil's sugar industry commissioned by The Coca-Cola Company in 2014;³ an independent evaluation of a summary report of the PepsiCo audits and Coca-Cola commissioned study;⁴ and the Bonsucro Production Standard.⁵

The team subsequently prepared written questionnaires to assess the land practices of sugar mills in PepsiCo's sugar supply chain in Brazil. The written questionnaires covered the following thematic areas:

- **Sugarcane supply base:** The composition of the mill's supply base, considering sugarcane grown on mill-owned land, mill-leased land, and third party growers' farms.
- **Land compliance:** The legal, cadastral, and environmental aspects of landholdings.
- **Land acquisition and utilization practices and protocols:** The practices and protocols for the mill to acquire new holdings (ownership and lease) and contract with third party growers of sugarcane. Additionally, the strategies for maintaining and expanding production, as it pertains to land acquisition, leasing, and utilization.
- **Social and Environmental Responsibility Practices:** Including third-party activity monitoring and involvement in certification schemes, such as Bonsucro.
- **Land Disputes and Resolution Mechanisms:** Including (1) the presence of conflicting land claims within the sugar supply chain and in surrounding areas and (2) the protocols mills have in place to receive and resolve potential issues.
- **Land Policies:** Presence of policies or commitments to respect land rights in all company operations (including in land acquisition, leasing, and utilization) as well as supplier awareness of and compliance with PepsiCo's Land Policy.

³ Arche Advisors, "Child Labor, Forced Labor, and Land Use in Brazil's Sugar Industry," Prepared for The Coca-Cola Company, 2015, Authors: Rachele Jackson, Tamar Koosed and Carlos Giacomozzi.

⁴ Wilkinson, John. "Independent Evaluation of Land Issues in TCCC's baseline study: Child Labor, Forced Labor and Land Use in Brazil's Sugar Industry and in PepsiCo's summary report: The Social, Environmental and Human Rights Aspects of PepsiCo's Sugarcane Supply Chain in Brazil Based on Third Party Audits," 2016, <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/620110/rr-independent-evaluation-land-issues-brazil-201016-en.pdf?sequence=1&isAllowed=y>.

⁵ Bonsucro, "Bonsucro Production Standard v4.2," December 2016, http://www.bonsucro.com/tools_resources/bonsucro-production-standard-v4-2-english/.

For the land compliance pillar of the methodology, the research team drew upon the framework outlined in the Cadastre 2014⁶ report from the International Federation of Surveyors (FIG), which defines good land practices over three main aspects: (1) legal recognition of rights over land; (2) spatial identification of the plots/areas; and (3) compliance with land use/occupation regulations. For the case of Brazil, these aspects are: (1) matrículas (deeds) registered at the Registry Office; (2) the geospatial certification (SIGEF) from the National Institute for Colonization and Agrarian Reform (INCRA); and (3) compliance with environmental legislation related to the Rural Environmental Cadaster (CAR). These instruments are further detailed in [Section 2](#).

Following an introduction to the questionnaires through remote meetings, the mills submitted the completed questionnaires to the research team. The research team subsequently coordinated site visits with the mills to clarify and solicit further detail on questionnaire responses, verify documents, and conduct visits with a sample of the mills' growers. The team spoke with key mill personnel representing departments such as: legal, suppliers, agricultural partnerships, commercial, social and environmental sustainability, and community relations. Where possible, the team compared the sample land documents provided by the mill with databases regarding quilombola land, officially recognized indigenous areas, and lands used for conservation purposes. As noted in the limitations section below, this review was limited to a sample of documents.

In most cases (4 corporate groups), the growers interviewed as part of this study were selected by the mills (see study limitations below for additional discussion). Sugarcane grower interviews were guided by a questionnaire covering the following topics:

- Growers' landholdings and uses
- Growers' relationship with the land (such as owner or lessor) and when and how they obtained the land
- Growers' documentation of rights to the land
- Growers' relationships with the mill (what types of arrangements they have in place)
- Growers' participation in Bonsucro or the Sustainable Agriculture Initiative (SAI) platform and reporting of any land-related sustainability information to the mills
- Existence of any disputes related to land in the region
- Growers' plans for future expansion, if any
- Generally, any challenges the growers face as producers operating in the region and how land may (or may not) be a challenge

To complement site visits with mills and sugarcane growers, the research team conducted stakeholder interviews at the national and local levels. A semi-structured questionnaire to guide interviews was tailored according to each stakeholder's area of focus. At the national level, the team interviewed NGOs working in the area of responsible sourcing (including sugarcane) and representatives from INCRA. At the local level, the team interviewed representatives from the following institutions for each corporate group visited:

- Regional Registry Office
- Municipal Secretariat of the Environment
- Commercial Agricultural Association / Association of Sugarcane Growers
- Rural Workers Union
- Community Association⁷

Considering all of the stakeholder groups, the research team consulted with over 65 individuals to inform the study. Stakeholders agreed to participate in this study with the understanding that their contributions would be compiled with others and reported anonymously.

Study Coverage

This study covers the land practices of a total of 11 mills from 6 corporate groups in Brazil. The study covers over 99 percent of PepsiCo's current supply (crop 2019-2020). PepsiCo currently sources over 90 percent of its sugar

⁶ Jürg Kaufmann and Daniel Steudler, "Cadastre 2014," International Federation of Surveyors, 1998, <https://www.fig.net/resources/publications/figpub/cadastre2014/index.asp>.

⁷ Visits with community associations were conducted in the Northeast region.

from Brazil's Southeastern region (predominantly from the state of São Paulo) and less than 10 percent from the Northeastern region. The study includes mills operating in both regions. [Section 3](#) provides more information about PepsiCo's sugar supply chain in Brazil.

Research Team

Landesa is an international non-profit organization that works with governments, communities, civil society, and companies to secure land rights for the rural poor. Landesa has a cross-disciplinary team of corporate social responsibility experts, land tenure and gender specialists, economists, social scientists, and attorneys who work on land tenure issues within global supply chains. To support this study, Landesa contracted land experts from the Land Governance Group, from the Institute of Economics at the University of Campinas (UNICAMP), São Paulo, Brazil and from Kadaster International, an agency based in the Netherlands that offers consultancy on land registration, mapping, and land use.

Limitations

The research team was unable to map, analyze, and verify all landholdings comprising the entire supply chain of each mill. Instead, the team: (1) viewed databases controlling land information, sample contracts and contracting templates, protocols and policies related to land utilization, and a sample of the land documentation available for mill landholdings and third party growers; (2) interviewed mill staff with roles related to these functions; and (3) interviewed a sample of sugarcane growers. As previously noted, consultations with external stakeholders were conducted to complement these activities.

In most cases (four corporate groups), the growers interviewed as part of this study were selected by the mills, and mill staff accompanied the researchers on site visits. Due to the competitive market in Brazil's sugarcane sector, not all mills were willing to provide the research team with a complete list of growers from which to select a random, stratified sample. Where this was possible (2 corporate groups), the research team selected growers with the objective of identifying growers of different sizes and supply arrangements. For these visits, mill staff still arranged and accompanied researchers on the visits. Some mills only provided access to growers covered under the Bonsucro certification, while other mills opted to also provide access to growers who are not Bonsucro certified.

Given the scope and resources of this study, the team conducted an average of four grower visits per corporate group. This is not a sufficient number of visits to be considered a representative sample, but these visits were sufficient to provide some context to complement information gathered from mills, giving a picture of the different types of growers within a region. Additionally, the research team held interviews with community leaders and civil society organizations to gather information about land rights challenges within the area and potential impacts to people. Ideally, the team would have also consulted with a representative sample of community members to gather additional information, but this was beyond the scope of this study.

Given the information and individuals to which the team had access, the study is additionally limited in its exploration of gender dynamics within the supply chain. Mills do not have readily available data on the gender of their growers and lessors (% female / % male); mills reported they make no distinction on the gender of their growers, and their policy is to act in a gender-neutral approach. All but one of the growers interviewed as part of this study were men. In consultations with growers, the team predominantly engaged with the principal supply contract holder and not with others within the grower's business group or household.

SECTION 2: LANDSCAPE OF LAND AND SUGARCANE IN BRAZIL

This section provides an overview of how land is governed in Brazil, including the key laws, institutions, and land databases/instruments, with more detail referenced in [Appendix 1](#). It discusses ongoing land governance challenges in the country including the realization of rights for indigenous peoples and traditional communities, as well as progress to improve the accuracy of the country's land register and cadaster. In addition to providing context on land governance in the country, the section provides background information about the sugarcane sector in Brazil, including a regional comparison between the Southeast and Northeast and sector trends.

Brazil's Land Governance

Land Tenure and Key Institutions

The rules and practices established by society that concern how land can be owned, accessed, used, controlled, and transferred are collectively referred to as land tenure. Within land tenure systems, people have land rights, which are claims people have to the land and what they can do with the land. Brazil's land tenure system guarantees land ownership as a fundamental right for all citizens, including recognizing the customary land rights of indigenous groups.

Rural land can be owned individually or collectively (freehold tenure) and formally or informally leased (leasehold tenure); use rights also exist in Brazil. Land can be acquired through purchase, transfer of ownership, government allocations, and adverse possession. The right to the acquisition of land through long occupation (adverse possession - usucapião) has existed in rural Brazil since 1916.⁸ While recognizing property as a fundamental right, the Constitution also determines that property must serve a social function. This concept of the social function of property has provided the basis for Brazilian agrarian reform policies.

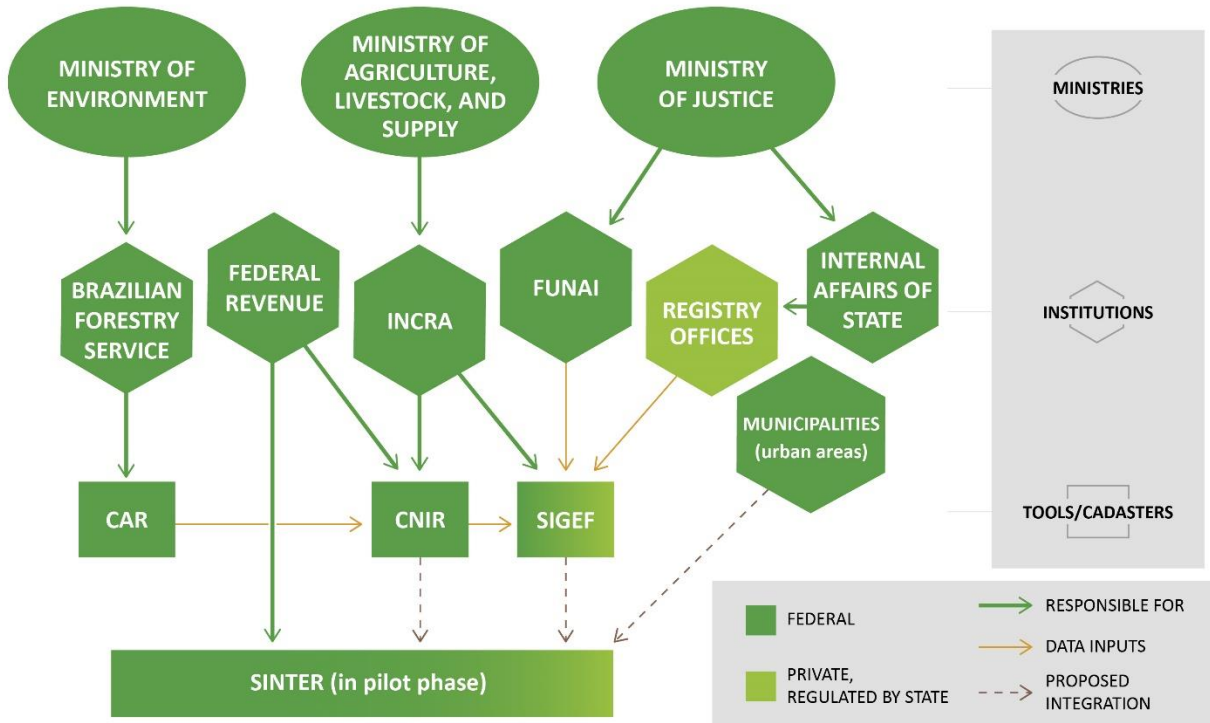
Land in Brazil is governed by a large body of constitutional law, land law, civil property law, environmental law, and planning law operating at the federal, state, and municipal levels. There is also a multitude of government institutions, which can result in overlapping mandates and disconnected programs, such as the development of parallel registries with limited integration. [Appendix 1](#) outlines some of the key laws relevant to this research, including the Constitution, Land Statute, and Forest Code.

The federal government and its agencies play the leading role in the administration of land regularization in Brazil, while states and municipalities aid in enforcing the federal framework. Figure 1 illustrates the federal institutions with responsibilities relevant to this research and how each relates to the land instruments covered in this study: CAR, SIGEF, and the land registries.⁹ [Appendix 1](#) provides more information about these land instruments.

⁸ The property title should be afforded when the claimant/occupant has lived in a parcel of up to 250m², for five years uninterruptedly and unopposed, alone or with family, if the claimant does not own another urban or rural property.

⁹ Notably, this diagram does not cover the full landscape of land administration in Brazil and rather focuses on elements within the scope of this study (e.g., items less relevant to this research, like institutions with responsibilities over public land, are not displayed).

Figure 1. Relevant Land Instruments and Institutions



Land Governance in Brazil: Progress and Challenges¹⁰

Historically, wealth and power have been concentrated in the hands of a few privileged landowners. The government continues efforts to redistribute land through agrarian land reform programming, but it continues to be a source of conflict in Brazil. The Pastoral Land Commission (CPT)¹¹ reports that for the period 2014 through 2018 an average of 602,313 people were involved directly or indirectly in rural land conflicts each year. In that same time period, there was an average of 920 occurrences of land conflict involving an average of 25.9 million hectares of land each year.¹²

While the legal framework recognizes the land rights of indigenous peoples and traditional communities, the realization of land rights for both indigenous and quilombolas remains a complex issue marked by a high level of tension and conflict. The government’s slowness to demarcate and regularize indigenous and quilombo lands in Brazil is a source of tension. The following figures display the status of the regularization of indigenous areas (these maps do not include quilombola claims). Figure 2 on the left displays areas that are officially demarcated or in an advanced process of regularization. Figure 3 on the right pinpoints areas of official claims of indigenous territories that are not yet regularized; they are in the initial phase of the process of anthropological studies to determine the claim and define the territory.

¹⁰ For more information see: FAO/SEAD. 2017. Governança de terras: da teoria à realidade brasileira, Brasília. http://governancadeteras.com.br/2017/wp-content/uploads/2017/10/GOVERNAN%C3%87A_DE_TERRAS.pdf. Note that this resource is in Portuguese.

¹¹ The CPT is an NGO that has been gathering data on land conflicts since the 1970s.

¹² CPT, Conflitos no Campo Brasil 2018, 2018. <https://www.cptnacional.org.br/publicacoes-2/destaque/4687-conflitos-no-campo-brasil-2018>.

This is a serious issue for land governance in Brazil that has garnered international attention.¹³ Because sugarcane production is concentrated in the Northeast and Southeast of the country, where there are fewer indigenous lands, the risk to the sugarcane sector is not as high as the national risk, but does raise issues about the steps companies should take under the U.N. Guiding Principles and their own policies, as discussed later in this report.

Figure 2. Indigenous Lands



Figure 3. Indigenous Land Claims



Source: FUNAI, December 2019

An additional gap in Brazil’s land governance system is an inaccurate land register and cadaster. Historically Brazil has created land registers based on poor property descriptions, creating insecure rights and making it impossible for the public administration to know the territory as a whole. The result is fragile land tenure governance with overlapping claims for the same parcels in some situations. To address this gap, in recent decades the government has been investing in improved land management systems. [Appendix 1](#) provides more information about these land management systems, specifically:

- The National Cadaster of Rural Property (CNIR), which is being realized through the tools of the National Property Certification System (SNCI) and the Land Management System (SIGEF)
- The National Rural Environmental Cadaster System (SICAR) and the Rural Environmental Cadaster (CAR)
- The National System of Territorial Information Management (SINTER)

As a result of these efforts, improved land management can be found in some regions and sectors in the country, such as for sugarcane producers in the state of São Paulo.

Brazil’s Sugarcane Industry

Context

Brazil is one of the largest sugar producers in the world, representing approximately 20 percent of global sugar production.¹⁴ In the 2018-2019 season, Brazil produced approximately 620 million tons of sugarcane grown on just over 10 million hectares, which was utilized to produce 29 million tons of sugar, 33 billion liters of ethanol, and

¹³ See United Nations Working Group on Business and Human Rights, “Statement at the end of visit to Brazil by the United Nations Working Group on Business and Human Rights,” Dec. 16, 2015, <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16891&LangID=E>.

¹⁴ ÚNICA, “Açúcar - Importante Fonte de Energia,” 2019, <https://www.unica.com.br/setor-sucroenergetico/acucar/>.

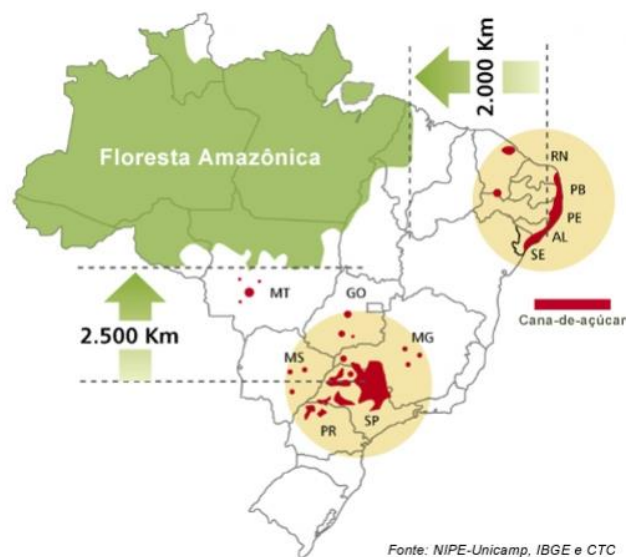
21.5 terawatt-hours of energy.¹⁵ In the 2013-14 season, the sugarcane industry directly accounted for USD 43.4 billion, which is roughly 2 percent of Brazil's GDP, and indirectly contributed USD 107.7 billion to the economy. During the same period, the industry was responsible for nearly 182,000 direct jobs and 190,000 indirect jobs, with 378 active mills in the country.¹⁶

Sugarcane has a long history in Brazil as one of the first agricultural expansion systems utilized for occupying territory during colonization. Initially concentrated in the Northeast coast, sugarcane later found fertile lands and a favorable environment in Brazil's Southeast region. Today, the industry remains mostly concentrated in these regions, although there has been some expansion to the west, such as to southern Mato Grosso and Goiás, eastern Mato Grosso do Sul, and northern Paraná. Over the past decade, the South-Central region of Brazil has accounted for 91 percent of the country's total production, while the Northern and Northeast regions have comprised the remaining 9 percent. The state of São Paulo alone has contributed 56 percent of production over the past decade.¹⁷

Considering its early history in Brazil's colonial occupation, the Brazilian sugarcane industry is mostly located in regions of dense and older cultivation with generally more stable land use and more widespread registration of property rights; this is the case for the land tenure noted in the Southeast and Northeast covered in this study. On the other hand, Sparovek et al.¹⁸ found that there is "widespread uncertainty that characterizes land tenure in the Amazon biome," which is still an agricultural frontier, with a completely different land tenure situation and history of cultivation than the Southeast of Brazil. While the industry is currently located in the Southeast, South-Central, and Northeast regions of Brazil, there are some trends that may push sugarcane to agricultural frontier regions in the future. These trends are further detailed in the upcoming section.

Mills often have diverse business models and sugarcane supply arrangements that are common to the areas where the mills are located. These can vary within a state (as is the case in São Paulo) but often have more significant variance when compared across states and regions (such as between the Southeast and Northeast). Table 3 presents the analytical perspective used by the study to represent the types of supply strategies a mill may utilize to access sugarcane; this model was adapted from Reydon and Postal¹⁹ and tailored to the PepsiCo supply chain and the purposes of this study. These supply strategies as they relate to the landholdings of mills within PepsiCo's supply chain will be further detailed in the next section of this report.

Figure 4. Sugarcane Cultivation in Brazil



Source: UNICA, citing NIPE-UNICAMP, IBGE, and CTC

¹⁵ UNICA, "ÚNICA Data," 2019, <http://unicadata.com.br/>.

¹⁶ Confederação Nacional da Indústria (CNI), "O Setor Sucroenergético em 2030," 2017, https://edisciplinas.usp.br/pluginfile.php/4318463/mod_resource/content/1/Livro-A-Cana-em-2030-Marcos-Fava-Neves-et-al-CNI-2017.

¹⁷ UNICA, "ÚNICA Data - Cana-de-açúcar - 2009/2010 até 2018/2019," 2019, <http://unicadata.com.br/historico-de-producao-e-moagem.php?idMn=32&tipoHistorico=4>.

¹⁸ Sparovek et. al., "Who owns Brazilian Lands?", Land Use Policy, Vol 87, 2019.

¹⁹ Bastiaan Reydon e Andreia Marques Postal, "Agronegócio sucroenergético: acesso à terra ou acesso à cana? Os diferentes modelos de negócio e os impactos na gestão empresarial", *Agriculturas empresariais e espaços rurais na globalização: abordagens a partir da América do Sul*, Chapter 9, 2016.

Table 3. Access to Sugarcane for Mill Processing

Mill	Total Approx. Sugarcane Area Operated (ha)					
	Approx. Sugarcane Area Operated Directly by Mill (ha)			Approx. Sugarcane Area Operated by Third Party Suppliers (ha)		
	Mill-Owned	Mill-Leased	Sub Total	With Mill Lease	Other (Supplier + Spot purchases) ²⁰	Sub-Total

Regional Comparison

Although sugarcane has been established in both the Southeast and Northeast regions for many generations, there is regional variation in land use practices, mill strategies for accessing sugarcane, and grower demographics observed in the researched areas of each region.²¹

In the Northeast region, many growers are still involved in agricultural operations; lease arrangements are often offered to those who are less specialized and have challenges achieving peak productivity. In the Southeast region, it is much more common to find entrepreneurial landowners, meaning those who see land ownership and participation in the industry as a business opportunity. These individuals and/or companies might purchase land with the intent of entering a lease agreement with the closest mill.

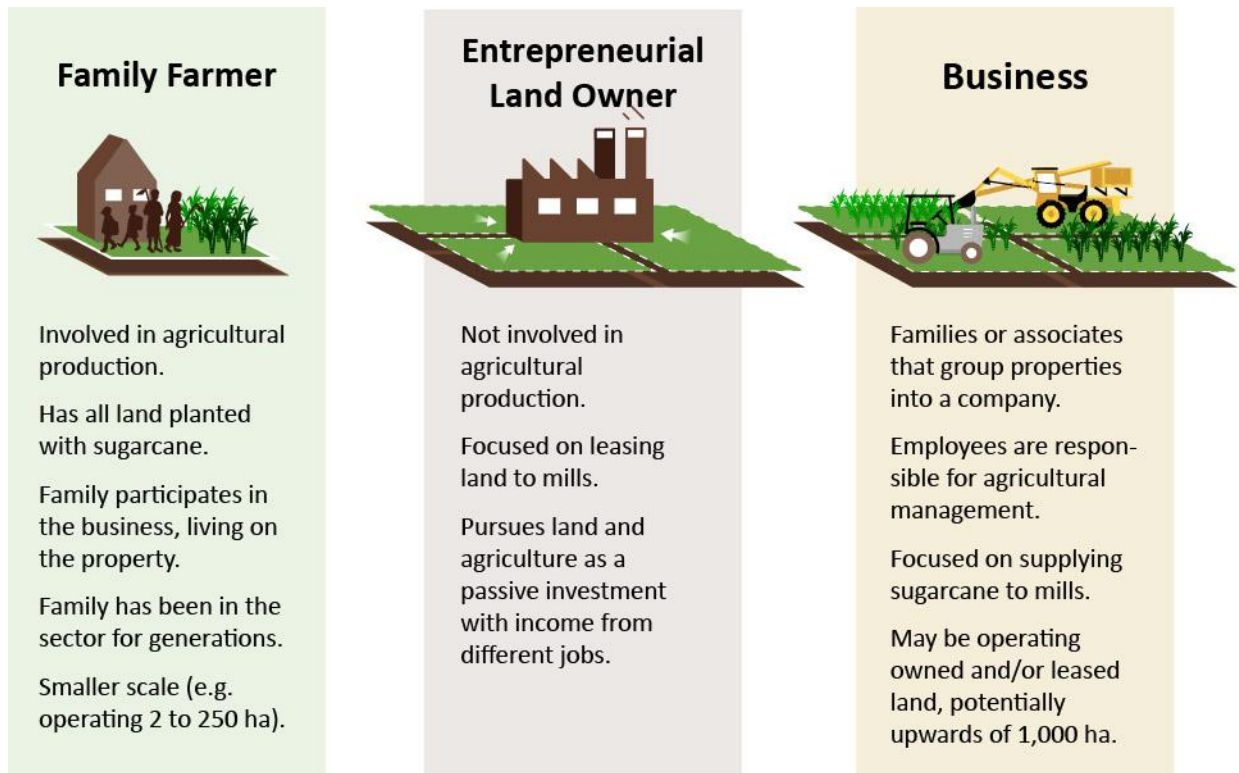
Similarly, the contractual relationships between parties vary in both visited regions. In researched areas in the Southeast, relationships could be characterized as more commercial engagements between growers (and/or land owner) and mills, while in the researched areas of the Northeast, the team observed strong trust relationships, where parties have known each other for generations and trust that their terms and contracting will remain the same because of that. In the Southeast, the team observed that contracting is formalized via physical, signed copies for both sides, while in the researched areas in the Northeast, many growers have never had any formal contract signed and those consulted by the team shared they do not feel the need for it, because of the strength of the trust bond. This trust is built through frequent social visits to farms, different from the practice of technical inspections observed in some Southeast mills.

Across both regions, the research team observed that most growers supplying to the mills are men, with the grower name registered with mills most frequently seen as “Male Name + Other(s).” However, the team did observe growers listed as “Female Name + Other(s),” particularly for the growers of one corporate group. As the team did not have access to all growers of all mills, this should be viewed as an observation. Further research is needed to better understand the gender dynamics of the supply chain. Mills reported they make no distinction on the gender of their growers, and their policy is to act in a gender-neutral approach. No mills reported precise figures on the percentage of male vs. female growers, but one mill employee anecdotally shared that her impression is very few of the mill’s growers are women. An employee at a different mill shared his observation that spouses are often partners in the business, perhaps with the wife primarily responsible for the paperwork and the husband responsible for the agricultural production. All but one of the growers interviewed as part of this study were men.

²⁰ Spot purchases are purchases made “on the spot” by a mill without a contract in place. Mills may access the spot market when they are unable to fulfill their production requirements with their own sugarcane and the sugarcane produced by their contracted growers.

²¹ This regional comparison is based on the findings of this study, which notably does not cover all sugarcane growing states in each region or regions within a state. Particularly in the Northeast, the sample covered in this study is small given the nature of PepsiCo’s supply. The reader should keep in mind there is quite certainly nuances across growing regions and the findings observed from participating mills in each region are not representative of all mills in the region.

Figure 5. Sample Profiles of Sugarcane Growers in Researched Areas



In addition to the variation in supply strategies, there are also differences related to the production of sugarcane in the two areas. In the Northeast, the sugarcane sector still very much relies on manual harvest and crop burning. In these states, sugarcane burning is still legally permitted, as long a Burning Plan²² is supplied to the state environmental agency. Stakeholders in the Northeast reported that mechanization in their region is very difficult due to the soil type (a thick mud that makes it difficult to operate heavy machinery) and the topography (presence of hills and stones that prevent machines from cutting close to the base of the plant). For those reasons, less than 30 percent of the visited growers in the region use mechanical harvesters. But some improvements are being done, and this scenario might change in a few years. The limited mechanization in the region means there are fewer external inputs and less technology usage, and high dependence on human (and, in some cases, animal) labor.

Even within São Paulo state there are differences in the sector's organization and strategies. For example, the level of competitiveness in the region is an important factor when contracting a grower or leasing land. Due to heavy competition between mills, some are focusing on more rigorous markets, such as organic, or changing business strategies to focus less on agricultural production and more on technology innovation. These are more mature and competitive markets, which limits industry participation to larger and/or more specialized companies.

Trends and New Policies

Mechanization and Land Concentration

Over the past 50 years, the sector has dramatically transformed with the modernization of the industry, particularly in the Southeast region. The sector faced significant pressure in the late 1990s to limit sugarcane burning, reduce greenhouse gas emissions, and promote better working conditions for sugarcane cutters. As of 2006, approximately 30 percent of Brazil's sugarcane production was mechanized; within seven years, it jumped to

²² The burning plan must include the CAR, dates, plots, and management of the areas being burned.

over 90 percent. This drastically reduced the negative effects of sugarcane burning, but also significantly reduced the workforce. Today, in the South-Central region, 98 percent of the harvesting is mechanized.²³ As noted above, in the Northeast the industry still heavily relies on manual harvesting.

This modernization has turned the sector into a complex supply chain and industrial agribusiness, which is relatively concentrated to a few large corporate groups that set the standards for the industry. In the mechanized regions, the capital needed to operate large areas started to increase sharply, as did the dependence on imported inputs such as pesticides. Considering the amount of capital needed for machinery and inputs, many smaller sugarcane producers could not continue in the sector, because they could not keep up with the price of the technological package required. These producers were pushed to lease or sell their lands to larger corporate groups or enter into a new agricultural business. Considering the risks associated with agriculture, many left their agricultural activities to become lessors and the sector became more specialized and concentrated as larger groups took control over the agricultural production aspects of the industry. Nowadays, in the Southeast region of Brazil where sugarcane is dominant, there is virtually no subsistence agriculture, producers are highly commercialized, and those who are in the business need to be minimally large enough to deal with high capital inputs every season.

It is important to highlight that this transition was not smooth, and it resulted in the loss of jobs for many workers and bankruptcy of a number of mills in the sector. Challenges included: pressure to consolidate landholdings; less area suitable for sugarcane growing, as the machines are limited in certain topographies; rise of pests and diseases that were no longer killed during the burning process; and a drop in the productivity (and total recoverable sugars, or ATR) per hectare, which led many industrial mills to a sudden shortage of supply. It took some time for the sector to re-establish itself, but after a few challenging years, cooperatives and industry associations started to develop more suitable varieties of sugarcane, better in-field practices, and technical support for the growers to regain productivity. Today, the industry has advanced with good productivity levels, but the prices are not corresponding, either due to extensive supply in the external market or due to currency fluctuations (BRL vs. USD) that increase the price of the required machinery and imported inputs.

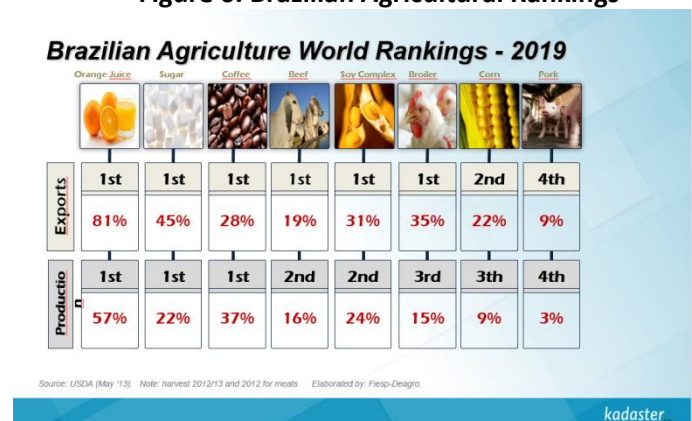
While mechanization (and the resulting business model that requires high capital purchases subject to currency fluctuations) may be viewed as one contributing factor to the recent struggles of the sugarcane sector in Brazil, there are additional factors that should be noted. Global commodity prices are of course a factor; the sector in Brazil also faced additional pressure due to macroeconomic policies to control gasoline prices to reduce inflation, therefore restraining the ethanol prices and compromising many mills. Silva (2018:19) summarizes the conditions into three key factors: “the volatility of commodity prices, financing of intensive investments required by the new rural standard and, at the end, macroeconomic policies. It was noted that the main axis for the current crisis was a joint effect of those three forces in action.”²⁴

Re-igniting the Sugarcane Industry with the RenovaBio Program

Currently, Brazil is the largest producer and exporter of raw sugar in the world accounting for about 20 percent of global production and 45 percent of all sugar exported globally, yet the domestic market consumes three times more sugarcane than Brazil exports, as the majority of sugarcane produced in Brazil is destined for ethanol production for the domestic market. When considering the leverage of global buyers of sugar, it is important to keep in mind the strong domestic ethanol market in Brazil.

Many stakeholders are looking to new policy incentives for biofuels to re-ignite the stagnant sugarcane market in

Figure 6. Brazilian Agricultural Rankings



²³ ÚNICA, “Mapa da Produção,” 2019, <https://www.unica.com.br/setor-sucroenergetico/mapa-da-producao/>.

²⁴ Silva, Felipe Pinto da, 2018. “O setor sucroalcooleiro no Brasil: Características, Perspectivas e Crise”. 56^o Congresso da SOBER – Sociedade Brasileira de Economia Administração e Sociologia. 29 de julho a 1 de agosto de 2018 – UNICAMP.

Brazil, which will only further the importance of the domestic ethanol market for Brazil's sugarcane industry. The sector is placing all bets on the RenovaBio policy that sets decarbonization targets for fuel distributors and offers credits to producers and mills that are certified for achieving low greenhouse gas emissions. The program, set to launch next year, is designed to support Brazil's goals from the Paris 2015 Climate Conference by contributing to greener energy consumption while generating job opportunities and boosting Brazil's ethanol sector.

Multiple stakeholders consulted as part of this study relayed the perception that they expect the RenovaBio program will re-shape the face of sugarcane in Brazil over the next decade. One potential outcome noted is the geographic expansion of sugarcane into "frontier areas," which is something to monitor from a land tenure risk perspective.

From the interviews, the research team also formed the impression that many mills and independent producers are anticipating an increase in sugar prices due to the quality of the Brazilian sugar compared to other countries. While there is still not formal market recognition of better quality of Brazilian sugar, these stakeholders viewed Brazilian sugar as more sustainable (due to strict environmental laws and regulations) compared to the sugar produced by competing developing countries. Brazil has opposed national subsidies for the sugar sectors in other countries. In July 2019, the Brazilian government opposed countries that are supporting their sugar sectors in a way that is not WTO compatible and is compromising the international sugar market and prices.²⁵ Other countries, such as Guatemala and Australia, have joined Brazil in its opposition.

Threats to Indigenous Rights and Environmental Protections

The current Brazilian federal administration has been criticized by many for its anti-environmental and anti-indigenous rhetoric and for the weakening of public institutions and agencies that protect indigenous/vulnerable communities and the environment.²⁶

President Jair Bolsonaro has publicly stated that indigenous land will not be demarcated during his time in office.²⁷ As an indicator of the fragile context for indigenous communities, increases in hate speech and threats against indigenous people and murders of leaders and invasions of their land have been reported.²⁸ The CPT reports a rise in violence against indigenous leaders: the CPT is preliminarily reporting that seven indigenous leaders were murdered in 2019 (up from an average of 2.4 per year for the previous five years).²⁹ In addition, invasions of

²⁵ Nota Conjunta do Ministério das Relações Exteriores e do Ministério da Agricultura, Pecuária e Abastecimento - Contencioso na OMC entre Brasil e Índia sobre subsídios ao setor açucareiro – Pedido de estabelecimento de painel, 2019, <http://www.itamaraty.gov.br/pt-BR/notas-a-imprensa/20617-contencioso-na-omc-entre-brasil-e-india-sobre-subsidios-ao-setor-acucareiro-pedido-de-estabelecimento-de-painel-2>).

²⁶ See, for example: Boadle, Anthony. "Brazil's indigenous to sue Bolsonaro for saying they're 'evolving'," Reuters, January 24, 2020. Available at: <https://www.reuters.com/article/us-brazil-indigenous/brazils-indigenous-to-sue-bolsonaro-for-saying-theyre-evolving-idUSKBN1Z1TD>; Spring, Jake and Eisenhammer, Stephen. "Exclusive: As fires race through Amazon, Brazil's Bolsonaro weakens environment agency," Reuters, August 28, 2019. Available at: <https://www.reuters.com/article/us-brazil-environment-ibama-exclusive/exclusive-as-fires-race-through-amazon-brazils-bolsonaro-weakens-environment-agency-idUSKCN1VI14I>; and Mariana Simões. "Brazil's Bolsonaro on the Environment, in His Own Words," New York Times, August 27, 2019. Available at: <https://www.nytimes.com/2019/08/27/world/americas/bolsonaro-brazil-environment.html>

²⁷ Verdélio, Andreia. "Bolsonaro says he will not allow the demarcation of indigenous lands," Agência Brasil, August 16, 2019. Available at: <https://agenciabrasil.ebc.com.br/politica/noticia/2019-08/bolsonaro-diz-que-nao-fara-demarcacao-de-terras-indigenas>. Accessed: 03/20/2020.

²⁸ Fellet, João. "The 5 main points of conflict between Bolsonaro's government and indigenous peoples," BBC, January 29, 2020. Available at: < <https://www.bbc.com/portuguese/brasil-51229884>>. Accessed: 03/20/2020.

²⁹ G1, citing preliminary data from CPT, 2019, <https://g1.globo.com/natureza/noticia/2019/12/10/mortes-de-liderancas-indigenas-batem-recorde-em-2019-diz-pastoral-da-terra.ghtml>.

indigenous land increased in 2019, totaling 160 up until September, compared to 96 and 109 in 2017 and 2018, respectively.³⁰

On November 5, 2019, President Jair Bolsonaro revoked the 2009 decree³¹ that prevents sugarcane plantations in sensitive biomes, such as the Amazon Forest and Brazilian Wetlands (Pantanal). The government argues that the strict control that will be promoted by the RenovaBio Program and use of the CAR will prevent illegal deforestation associated in the industry, yet there are concerns that permitting the expansion of sugarcane in these areas will negatively affect biodiversity and ecosystems.

Currently, sugarcane is not grown in the Amazon region of Brazil, and there are some barriers in terms of logistics and environmental conditions for sugarcane to grow in this region. Therefore, the impacts of the revocation of the decree are yet to be fully understood. That said, it will be something to monitor from a land tenure and environmental risk perspective in the future. It is possible the geography of sugarcane will change in Brazil over the coming decade if the RenovaBio program is successful and incentivizes expansion to “frontier areas.” This trend will also be something important to note for assessing other Brazilian agricultural supply chains across the country as well. Under the Bolsonaro administration, there are increased risks in these regions with a number of conflicts emerging, particularly in the Amazon region.

³⁰ Faleiros, Gustavo and Nascimento, Fábio. “Under Bolsonaro, Invasions of Indigenous Land Overtake 2019.” Published: October 1, 2019. Available at: < <https://piaui.folha.uol.com.br/sob-bolsonaro-invasoes-de-terras-indigenas-superam-2018/>>. Accessed: March 20, 2020.

³¹ The Decree 6.961 of 2009 was designed to prevent deforestation caused by biofuels/ethanol production in Brazil, and represented a negotiated agreement between environmental interests, the Ministry of Agriculture, and sugar/energy industry representatives from ÚNICA.

SECTION 3: PEPSICO'S SUGAR SUPPLY CHAIN IN BRAZIL

This section introduces PepsiCo's sugar supply chain in Brazil and the different production models of the mills (examining composition of mill supply from a lens of (1) mill-owned land, mill-leased land, and third party grower land and (2) sugarcane area operated by mill and operated by third party growers). An understanding of the supply base is important context for understanding the land practices expected of mills.

PepsiCo's Suppliers

PepsiCo's sugar supply chain in Brazil currently consists of 8 corporate groups and 11 mills. In some cases PepsiCo purchases from intermediaries and in some cases the company has contracts directly with the corporate groups. As one would expect, PepsiCo's supply chain in Brazil is not static; from the time the study was designed to when the study commenced, there were changes in suppliers, and relatedly, the geographic footprint of PepsiCo's supply chain. This speaks to the need for due diligence on land tenure that is integrated into regular supplier engagement, as assessments such as this one are limited to a snapshot in time. That said, currently PepsiCo predominantly sources from mills located in Southeast Brazil (principally from the state of São Paulo), with a much smaller percentage originating from the Northeast. Figure 7 provides a snapshot of the general footprint³² of PepsiCo's sugar supply in Brazil.

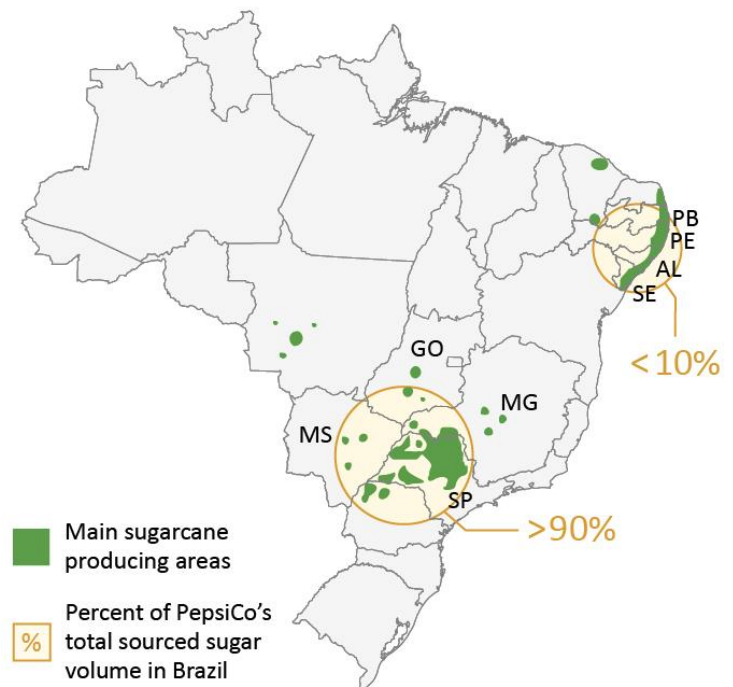
The study covers the land practices of 9 out of the 11 mills and 6 out of the 8 corporate groups and from which PepsiCo currently sources sugar in Brazil. Two groups that supply less than 1 percent of PepsiCo's total volume in Brazil declined to participate in the study. Although the study covers 9 out of the 11 actively supplying mills, the study actually incorporates findings from 11 total mills. The study incorporates findings from two additional mills that have supplied PepsiCo in the recent past and belong to a currently active corporate group, although these particular mills were not actively supplying PepsiCo at the time of this research.³³

Sugarcane Production Business Models

Given the various business models across mills, there are different understandings for many of the same terms used in the sector, such as 'partner', 'partnership agreements', and 'supplier,' among others.

For one mill, a 'partner' may be a third-party who manages sugarcane production on land that the mill has leased to the partner; for another mill, a 'partner' may be a third-party who leases land to the mill and the mill completely manages the sugarcane production. For 'supplier contracts', there are many different arrangements that can be made with different degrees of participation in the process, such as planting, treatment,

FIGURE 7. GEOGRAPHY OF PEPSICO'S SUGAR SUPPLY IN BRAZIL



³² This image is intended to provide an overview of PepsiCo's regional sourcing. It does not correspond to exact locations of mills within the supply chain.

³³ One corporate group provided information about three of its mills to be included in the study. Two of these mills were suppliers in the previous season and one mill is an active supplier. The research team completed a site visit to the active mill.

harvest, transport, and logistics, whose obligations must be detailed via contract. Greater participation in the production process means a higher share of value.

Even the concept of ‘owned land’ is complicated: many of the mills refer to their ‘own land’ as the areas they are fully responsible for managing, which is a category that includes both areas of legal ownership and leased areas.

Considering these different arrangements and specificities, it was important to set some standard definitions, which will be used for the purpose of this study to analyze patterns of land holding and use. These may not be the same terms used within the industry (or correspond to the definitions of Decree 59.566/66) but are based on the praxis observed during the visits to group landholdings.

- **Mill-Owned Land:** Landholdings owned by the mill or a company affiliated with the mill (such as a parent company or subsidiary).
- **Mill-Leased Land:** Landholdings of a third-party that the mill receives use rights to manage. *This category encompasses partnership agreements when those agreements are designed to give the mills full responsibility for sugarcane operation (e.g., there is no participation by the partner/lessor in the sugarcane operation).*
- **Mill’s Sugarcane Suppliers:** A third party who is involved, in full or in part, in the sugarcane production and supply to the mill. There is a variety of kinds of contracts in this category, from the producer who is responsible for 100 percent of the process up to those who are responsible just for one stage of it, such as planting or treatment of the crop. The third party may be operating on landholdings that they own or lease. *This category will include partnership agreements when those agreements are designed to give a third party involvement in the production of sugarcane.*

Considering the mills and corporate groups within the study scope, Table 4 summarizes the different arrangements employed by the groups to access sugarcane. This information was collected via questionnaires and mill visits, and it is important to underscore these are approximations intended to yield an overall picture. Nuances in the supply models have been simplified to protect commercially sensitive information.

While important for all mills, it is particularly critical that mills that rely heavily on third party sugarcane have strong due diligence and monitoring systems in place and fair contracting and negotiation procedures. Equally it is particularly important that mills that rely heavily on leasing have clear procedures for assessing land rights for land leases. The observed practices of the mills will be explored in the following section.

TABLE 4 - ACCESS TO SUGARCANE FOR MILL PROCESSING

Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers			
	Mill-Owned	Mill-Leased	Sub Total	With Lease	Mill	Other Supplier + SPOT	Total
1	42%	25%	67%	-		33%	33%
<p>Notes: This group reported about 30% of its supply originates from suppliers, with spot purchases fluctuating between 1 to 5%. A 3% spot has been used as an estimate. The information reported is only for mill(s) within the group that are within the study scope.</p>							
Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers			
	Mill-Owned	Mill-Leased	Sub Total	With Lease	Mill	Other Supplier + SPOT	Total
2	-	-	-		98%	2%	100%
<p>Notes: This group both owns its own sugarcane land and leases sugarcane land from others, which it then leases to third parties to operate. In addition to its leases with third parties, it sources from other suppliers; no spot purchases were reported. The information reported is only for mill(s) within the group that are within the study scope.</p>							

Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers		
	Mill-Owned	Mill-Leased	Sub Total	With Mill Lease	Other Supplier + SPOT	Total
3	2%	55%	57%	-	43%	43%

Notes: Data reported for this group’s entire Brazil operations, which includes additional mills beyond those supplying PepsiCo. 1% of the volume is typically comprised of spot sugarcane.

Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers		
	Mill-Owned	Mill-Leased	Sub Total	With Mill Lease	Other Supplier + SPOT	Total
4	24%	11%	35%	-	65%	65%

Notes: Approximately 65% is operated by suppliers; no spot purchases were reported. The information reported is only for mill(s) within the group that are within the study scope.

Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers		
	Mill-Owned	Mill-Leased	Sub Total	With Mill Lease	Other Supplier + SPOT	Total
5	-	47%	47%	-	53%	53%

Notes: This group does not own any agricultural property directly for the mills in the study scope. No spot purchases were reported.

Group	Approx. Sugarcane Area Operated Directly by Mill			Approx. Sugarcane Area Operated by Third Party Suppliers		
	Mill-Owned	Mill-Leased	Sub Total	With Mill Lease	Other Supplier + SPOT	Total
6	32%	9%	41%	27%	32%	59%

Notes: This group obtains some volume on the spot market based on seasonal need but did not provide an estimate. The information reported is only for mill(s) within the group that are within the study scope

SECTION 4: STUDY FINDINGS

This section presents the main findings of the study grouped into the four topic areas listed below. Information was collected from 11 mills from 6 corporate groups operating in Brazil’s Southeastern and Northeastern regions. The study covers over 99 percent of PepsiCo suppliers from crop 2019-2020.

The section describes the practices the research team observed for these mills in each topic area followed by a table summarizing the recommended best practices.

1. [Topic Area 1](#) - Land Practice Compliance for Both the Mill’s Own and Mill Supplier Holdings

This section explores the land documentation mills record for their own holdings as well as mill supplier holdings. The research team’s review of land documentation focused on the legal, cadastral, and environmental aspects of landholdings. The section also overviews the internal land tenure data management systems employed by mills to track this data and the procedures employed by mills for assessing land rights in land purchases, leases, and sugarcane supplier contracting.

2. [Topic Area 2](#) – Certifications and Mill Supplier Monitoring

This section explores mills’ involvement in the Bonsucro certification scheme and third-party activity monitoring. Given PepsiCo sources 100 percent Bonsucro certified sugarcane in Brazil, all mills in the study are Bonsucro certified. This section outlines the approximate percentage of sugarcane areas for each mill that mill staff reported is within the Bonsucro scope. This topic links closely with Topic Area 4, which provides analysis of the Bonsucro Production Standard vis-à-vis PepsiCo’s Land Policy. In addition to overviewing the Bonsucro certification, Topic Area 2 examines the mills’ approaches to supplier monitoring and the extent to which land tenure considerations are included in those monitoring approaches.

3. [Topic Area 3](#) – Land Disputes and Resolution Mechanisms

This section examines the prevalence of land disputes within the sugar supply chain and in surrounding areas and the protocols mills have in place to receive and resolve potential issues. Findings highlighted include risks posed by encroachment by the Landless Workers’ Movement (MST) and the presence of quilombo claims that have yet to be regularized, leading to conflicting claims and tenure insecurity.

4. [Topic Area 4](#) – PepsiCo’s Land Policy and Supplier Land Policies

This section highlights key elements of PepsiCo’s Land Policy and provides an analysis of how these align with the Bonsucro Production Standard, which to date has been an important tool used by PepsiCo for ensuring it sources responsible sugar. The section reports the research team’s findings on supplier awareness of PepsiCo’s Land Policy and the presence of supplier land policies.

Topic Area 1 - Land Practice Compliance for Both the Mill’s Own and Mill Supplier Holdings

Land Documentation

To understand compliance with national land tenure requirements, the team evaluated each mill’s documentation for three key areas.



Legal Rights to Use Land: Deed or lease agreement



Environmental Compliance of Land Use: CAR



Spatial Recognition of Land Rights: SIGEF

In some global contexts, land rights are not formalized, and reliance on registration documents will fail to yield a complete picture of legitimate land rights in an area. For example, registration documents can be incomplete or outdated. This is true in some parts of Brazil, such as in Pará, where experts estimated in 2014 that less than 50 percent of individual rural properties are formally registered.³⁴ However, in the state of São Paulo where PepsiCo sources over 90 percent of its sugar, these same experts estimated that more than 90 percent of individual rural properties are formally registered. This figure is consistent with reports from land registry officials consulted in the researched areas in São Paulo state as part of this study who consistently reported formally registered rural rights.³⁵ Officials noted that the land market in these sugarcane areas is well-established and documented, and that overlapping rights are quite rare. Some officials noted there can sometimes be irregularities if families fail to properly register a subdivision, such as in the event of a family member's death, to avoid paying the fee, so in these instances documents may be outdated.

In São Paulo state, there are relatively few indigenous lands and, for those that exist, experts in 2014 reported that the more than 70 percent of the areas with communal rights or indigenous land had boundaries demarcated and surveyed and associated claims registered. Again, this is in contrast to other regions in Brazil, where experts report substantially less progress in recognizing these rights.³⁶ On the recognition of women's land rights, the same experts reported that the situation in Brazil is encouraging. On the indicator "women's rights have been fully regularized," the experts rated Brazil with the highest score possible on the assessment; the state of São Paulo equally received the highest score.³⁷ This is consistent with the research team's review of deeds within the course of the study, which were observed to include multiple names of both men and women. One deed observed included 15 individuals with rights to the land. While there is recent progress on the regularization of women's land rights, the administration of justice is often not as efficient and accessible as desired for women, indigenous, and traditional populations.³⁸

Given the context of rural, agricultural land in the sugarcane regions of São Paulo, the research team contends that mill databases and policies that rely on the national legal documentation will yield a good picture of the land rights situation in the area.



Legal Rights to Use Land: Deed or lease agreement

All mills in the study - including and beyond those operating in São Paulo -- self-report that 100 percent of their owned and leased land has the proper registration documents (deed or lease agreement). At each mill, the research team verified a sample of mill land documents. Given some of the larger mills have thousands of deeds and leases, it was not feasible to verify each document. As an example, in the case of one corporate group studied, the documents shown to the research team represent less than 1 percent of the total area owned. Of those sampled, the team was able to verify the overwhelming majority. One irregularity was identified with a property of one corporate group that did not have proper documentation. The land in question was sold to the group, but the land document was not updated and was still in the name of the seller. The seller is a current agricultural partner of the group, with whom the group leased back the land, but the group could not locate the contract. The situation appears to be an issue of document recordation, and the group planned to investigate. Given this irregularity, the team characterizes the mills of this group as less than total compliance.

All but one mill requires land rights documentation (deed or lease) as part of establishing supplier contracts. While one mill reported its suppliers were in compliance, this mill does not actually ask suppliers to provide a land rights document in order to supply to the mill. In fact, this particular mill does not have written contracts directly with its suppliers (only for its leases), which is discussed in more detail below.

³⁴ World Bank, "Brazil Land Governance Assessment," June 2014, p. 42.

³⁵ While these officials reported strong registration of rural rights, they noted gaps in urban land registration, but this is outside of the study scope.

³⁶ World Bank, "Brazil Land Governance Assessment," June 2014, p. 42.

³⁷ World Bank, "Brazil Land Governance Assessment," June 2014, p. 41.

³⁸ World Bank, "Brazil Land Governance Assessment," June 2014, p. 3.



Environmental Compliance of Land Use: CAR

Seven out of the 11 mills report that 100 percent of their owned property has the proper CAR registration. One group reported 96 percent compliance for its mills, while another group reported 90 percent coverage. All but one mill reported over 90 percent of the areas leased to the mill and the areas of suppliers had active CARs. One mill has a less robust information database (discussed further below) and so was not able to provide a percentage for this question. This mill reports that they request a CAR for leases, although not everyone has it yet; they do not require it for suppliers.

As CAR is a self-declaratory system, required for bank financing,³⁹ and in the Northeast required for a burning license, it is unsurprising that the vast majority have the document. Notably, at the national level, only 3 to 6 percent of the CARs have been verified by the government, so while the document is an important element of compliance, particularly for environmental issues, there are known weaknesses. As self-declaratory documents, the boundaries listed in one CAR will with some frequency overlap with the boundaries listed in another CAR. Employees from several different mills reported this issue and noted that when they identify the issue, they inform each affected party and it is resolved easily.



Spatial Recognition of Land Rights: SIGEF

Given the gaps in the CAR documentation, from a land tenure perspective, the SIGEF will offer stronger georeferenced property information. The SIGEF is a relatively new system, and it is not yet legally required for all properties (as the law outlines different deadlines for different farm sizes, see [Appendix 1](#) for more information). Therefore, mills had the least progress in this area. No mills have all of their land registered in SIGEF. Most mills have less than 20 percent of their own land completed, with the exception of one mill, which reported a higher percentage. Some mills reported that their outstanding parcels not yet in SIGEF are still within the deadlines of the law; other mills have parcels of land that should legally be completed based on their size, but which were not yet finished by the time of this research. These mills reported that the process for the parcels in question had been started but not yet finalized. In one group's case, the process is finished on their side and only pending verification from the Registry Office.

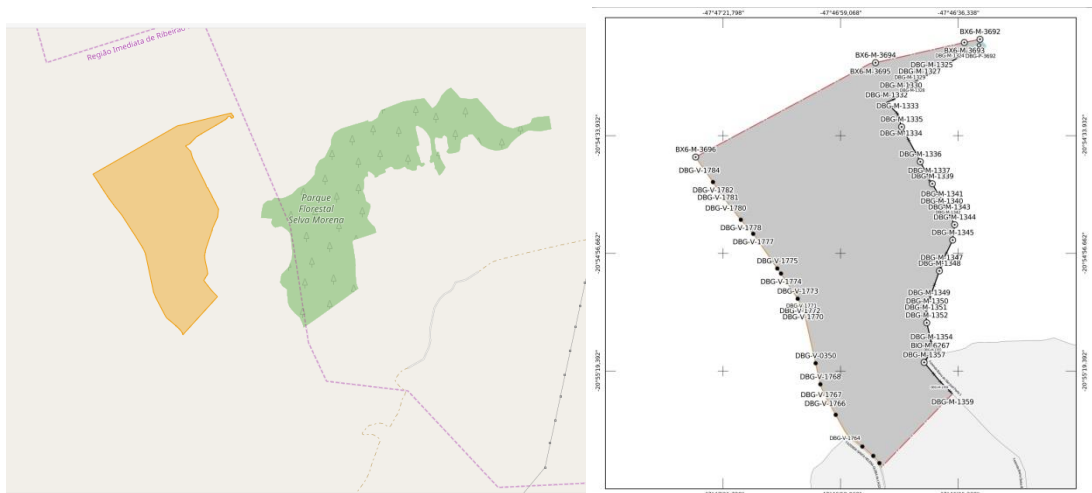
Mills do not ask growers to supply SIGEF documentation. Just like mills, there is diversity in grower participation in SIGEF. The majority of growers (approximately 58 percent) reported that some or all of their properties are certified or in the process of being certified in SIGEF and those that are not are still within the legal deadlines. The outstanding suppliers that did not report any parcels with SIGEF in progress could be classified as: aware of the law with plans to pursue SIGEF in accordance with the legal deadline for their property size, unaware of the SIGEF system, or no desire to pursue certification.

Stakeholder Perceptions on the Value of SIGEF

- A registry official consulted shared the following perspective: The benefit (of SIGEF) is perfect identification of the property, which is needed for sale either in full or in part; there is a market requirement for legal certainty in the transaction of real estate in this region.
- A mill employee shared the following perspective: There is not an operational advantage in having this information; rather it is viewed as a legal requirement that must be fulfilled. In practice, we only need the georeferenced data of the areas under sugarcane contract and not the whole property. From the national perspective, there is value in having precise information about property ownership and boundaries.
- Another mill employee shared the following perspective: Everything that promotes control of what is being worked on, as seen by georeferenced information, is good. If a partner or a supplier has a SIGEF, the mill is secured for other operations, such as capitalization of funds. SIGEF is a tool that helps us control and monitor the supply. To obtain SIGEF certification, it passes through a technician, through the registry office, is systematized in a database and, therefore, gives a great security and organization of the status of a land.

³⁹ Brazilian banks require CAR compliance for releasing credit for a parcel, but only the parcel part of the application must be within CAR, not the whole legal property.

Figure 8. Sample landholding of a mill, as publicly available in SIGEF



Source: SIGEF, <https://sigef.inra.gov.br/>

Control of Land Information

Mills have different levels of sophistication for tracking land tenure data. Two mills utilize Excel spreadsheets to track land tenure data. The first mill's spreadsheet had a number of relevant data points related to the mill's own landholdings, although the system did not cover its suppliers. Suppliers' land documents are collected and recorded but are stored in physical folders organized by each supplier. The second mill's sophisticated Excel spreadsheet also included information about supplier's landholdings, with land details including: farm name, property name, the deed number, the municipality, the land area registered (deed, map, and Certificate of Registration of Rural Property (CCIR)) and the land area georeferenced (deed, map, and CCIR), CCIR number, CAR area, and CAR number.

One mill had relatively weak land tenure data management systems in comparison to the other studied mills, relying on physical archives of documents, including old, hand-written deeds. This mill currently does not have an instrument to readily organize and provide the land information of its properties. The deed, CAR, and any georeferenced information that exist are scattered across physical files. Another group's mills currently have land information scattered across different departments (predominantly as scanned versions saved in computer folders), but this group is in the process of building a new digitized system to integrate information across departments for its mills.

Other mills have digital databases with their owned, leased, and supplier landholdings and relevant land data points. One group's system enables the centralization of all the supplier information; a supplier to this group can enter this system (only viewing its information and not the information of other suppliers) and input information from its suppliers into the system (with consent from suppliers in the contract). This system gives this group full supply chain monitoring. Mills with these more advanced systems were able to report precise numbers to the research team, such as one respondent's report that it has 100 percent of its properties with CAR and its direct and indirect suppliers have 91.8 percent coverage.

Procedures and Policies for Land Acquisition and Mill Supplier Contracting

The majority of mills in the study reported they had no immediate plans to purchase new land and instead will focus on increasing productivity in existing areas; some noted if the opportunity presented itself, they would lease new lands. For most mills, the last significant expansion occurred in the mid-2000s, with most activity in the last decade relating to new lease and supply contracts to maintain current supply levels.

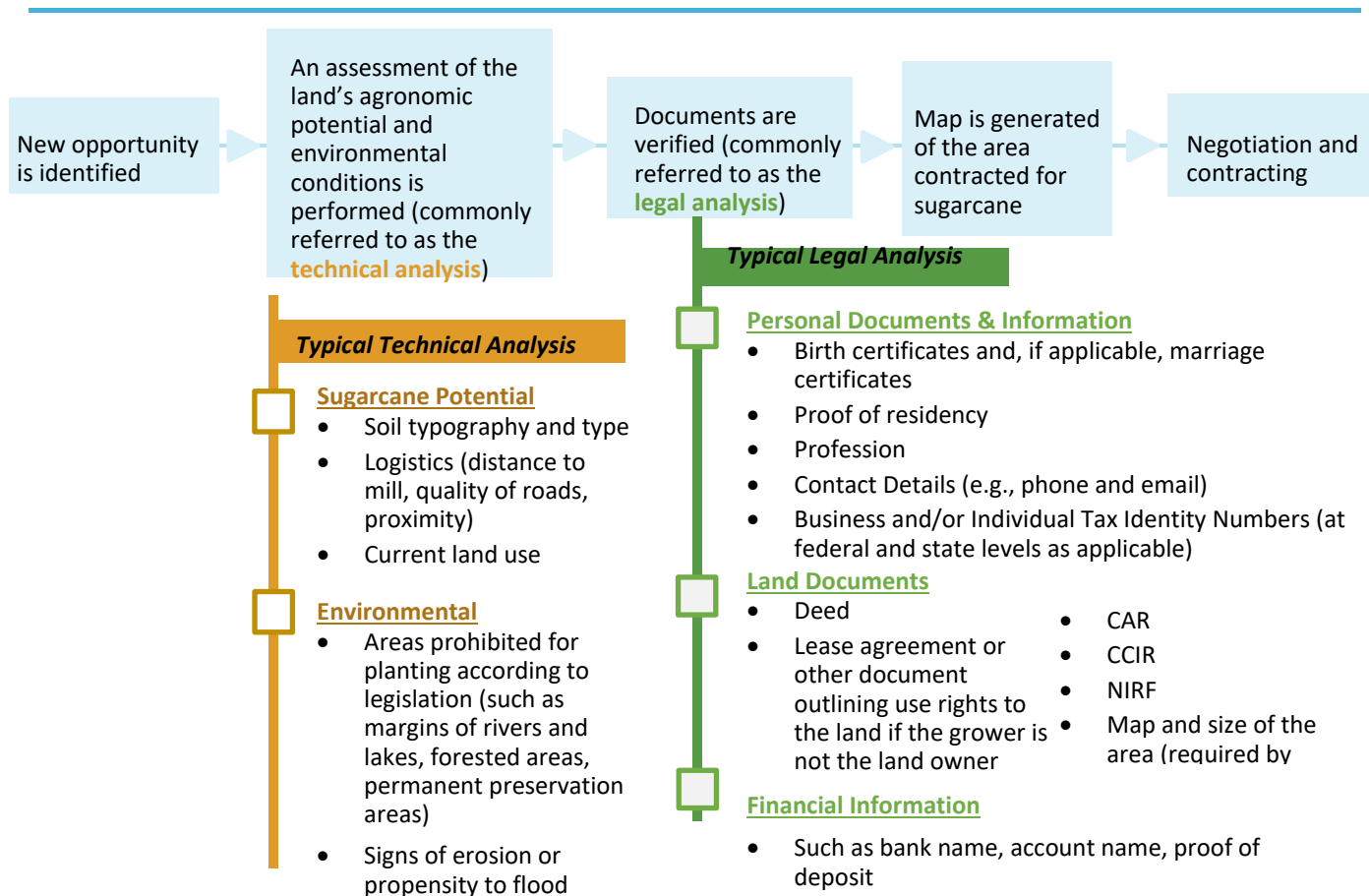
In contrast to the mills, the majority of sugarcane growers consulted expressed desire to acquire new land, either through purchase or lease. Given the diverse profiles of sugarcane growers consulted in the study — with some

being smaller family operations and some being large businesses — they had different views on expansion. Illustratively, one grower reported he would not consider buying land, but would be very interested in leasing from his neighbor to maximize the investment they have made in machinery. Another grower shared that their group is always looking for new land purchase opportunities, so much that the group had just made a land purchase the week prior to the team’s visit.

Given that mills are not actively acquiring new lands and focusing on vertical expansion, lease, and supply contracts, the presence of strong leasing and supply contracting procedures for assessing land rights is an important indicator of good land practice. Additionally, mills should have policies and contract language in place to require good land practices of their growers, who in the current climate are the actors actively involved in land acquisition.

For leases, all mills follow a similar protocol, delineated in Figure 9 below. For supplier contracts, all mills apart from one follow this same protocol (although specific contract terms will vary). Of note, no mills reported having any land due diligence in place for sugarcane spot purchases. In spot purchases, there is no formal relationship with the trader and minimal to no knowledge of where the sugarcane came from.

Figure 9. Typical Mill Leasing Protocol



For most mills, this process involves different departments (such as the agricultural department, business/commercial department, and legal department). Most mills realize this process through printed checklists that outline the required information, for reference by both mill employees and suppliers. One group has integrated the checklist into a phone app for suppliers that lists all of the required documents. A different group has a more robust, formal leasing policy with key definitions, references to relevant national legislation, steps for

leasing the land, the process for renewal or return of land at the end of the lease agreement, and the responsibilities summarized for both the lessor and the lessee.

Notably, only one group's mills reported that their technical analysis also included some social assessment. This group's assessment includes the addition of factors such as proximity to villages, settlements, and places of social use (areas of leisure and rural tourism), and presence of buildings and homes on the property.

As part of negotiation and contracting steps, all mills except one reported that they consulted all parties with an interest in the land as identified on the deed and required all affected parties to sign the contract. The team observed that the contracts and reference to property ownership is primarily associated with a man, such as "[Male name] and Others," but all contracts reviewed as part of the study had signatures that matched the rights listed on the deed. Contracting models were consistent across all São Paulo mills aligned with industry standards set by the Organization of Sugarcane, Sugar, and Ethanol Producers (CONSECANA). Of course, there were variances in contract terms, including the length of contract and the grower's share of responsibility during production (planting, chemical application, harvesting, and transport to the mill). Some mills include in their contracts agreed-upon premiums for achieving excellent social, environmental, and labor performance in their internal auditing program (e.g., if the grower achieves a score higher than 85 percent).

The mill that diverges from the protocol summarized in Figure 9 for its supplier arrangements only requires environmental documents from its suppliers. This mill does not ask for a document demonstrating rights over the land, because the mill reports knowing and having good relationships with every supplier for generations. Additionally, they do not have individual supply contracts with their suppliers; rather, the mill has an agreement with the state's association of sugarcane growers to set the pricing and general terms of supply. All of the suppliers must be association members.

Recommended Good Practices for Mills

- Compliance with relevant national laws for owned, leased, and supplier landholdings
- Digitized control of land information for all types of landholdings: mill-owned, mill-leased, and supplier
- Minimization of spot purchases, as there is no control over the socio-environmental performance including due diligence on land concerns
- Identification and verification of all rights to land in acquisition, including leasing and utilization. This should occur prior to the acquisition, leasing, and/or utilization process and should be repeated for agreement renewals, as applicable.
- An assessment of environmental and social risks occurs prior to land acquisition, including leasing and utilization
- Inclusion of all persons with rights to the land in negotiation and contracting. If the mill's operations will affect indigenous peoples and local communities (IP/LCs), the mill must specifically adhere to the principles of FPIC.⁴⁰
- Support offered to growers to navigate legal, bureaucratic processes to ensure proper practices aligned with national and international standards
- Brazil's new land management tool, SIGEF, is a good practice for mills to incorporate in their land management and due diligence processes; within the next few years it will become a legal requirement for all landholdings

⁴⁰ PepsiCo summarizes FPIC in its Land Policy as: "Free - Consent to the sale of land is given voluntarily and absent of 'coercion, intimidation or manipulation.' Prior - Consent is sought sufficiently in advance of any authorization or commencement of activities from an existing land owner. Informed - Ensures that information is provided prior to seeking consent to acquire and that information is provided as the acquisition process proceeds. Consent - Refers to the collective decision made by the land rights-holders and reached through the customary decision-making processes of the affected peoples or communities." For a more detailed resource on applying FPIC, see FAO, *Respecting Free, Prior, and Informed Consent: Practical guidance for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition* (2014), available at <http://www.fao.org/3/ai3496e.pdf>

Topic Area 2 – Certifications and Mill Supplier Monitoring

Bonsucro Certification

Bonsucro is a global, multi-stakeholder certification body dedicated to responsible sugarcane production and is the global standard for sustainable sugarcane. Bonsucro defines a set of principles, criteria, and indicators in its Bonsucro Production Standard to assess performance of sugarcane operators against three pillars of sustainability: economic, social, and environmental. Bonsucro certification adopts a mass balance approach, defined as “a system for administratively monitoring the inputs and outputs of certified material/product throughout the supply chain. It allows for mixing of these materials/products at any stage in the supply chain, provided that the outputs of certified material/product do not exceed the inputs of certified material/products.”⁴¹

PepsiCo uses Bonsucro certification as a tool to monitor that its sugar suppliers are meeting sustainability standards. In Brazil, PepsiCo sources 100 percent Bonsucro certified sugarcane. Thus, all mills in the study are Bonsucro certified. Table 5 outlines the percentage of sugarcane areas for each mill that mill staff reported is within the Bonsucro scope.

Table 5 – Bonsucro Participation by Mill

Group	Bonsucro Participation
1	The majority of the group’s owned land is certified Bonsucro. No suppliers are included in the Bonsucro certification scope. The estimate provided to the team is approximately 30 percent of total volume is certified. The staff interviewed expressed the opinion that it is costly and not worthwhile to certify suppliers as Bonsucro, but through their internal audit program, they are able to monitor many of the same criteria as Bonsucro.
2	Mill staff reported that 100 percent of the group’s owned areas are certified production and chain of custody. Some of the group’s suppliers are certified. The local sugarcane growers association reported a commitment to work with all growers to certify them under the Bonsucro scope.
3	The group’s owned area and partner/leased areas are covered under the certification. Suppliers are not within the scope.
4	The group reported that approximately 25 percent of the operated area is certified.
5	Some land is Bonsucro certified, but the research team did not receive an estimated percentage.
6	A portion of this group’s owned land is within Bonsucro certification (the largest of its farms is certified).

As identified in the table, not all of the growers supplying to mills are Bonsucro certified. Each of the mills has a different proportion of the agricultural land on which its supply is grown certified. Some may only have their own landholdings or a portion of their holdings certified; third-party suppliers may or may not be certified as well.

PepsiCo sources only up to the proportion of Bonsucro-certified volume from each mill. However, these mills also source from non-certified land, which, in the absence of other monitoring by the mills, presents some risk that a mill may be associated with land issues. [Topic Area 4](#) discusses this further and presents more information about Bonsucro criteria related to land and an analysis of the criteria compared to PepsiCo’s Land Policy.

Mill Supplier Monitoring

All of the mills have some level of supplier monitoring, although none of the monitoring relates to land tenure concerns. For the studied mills, the question of land tenure is important during the contracting process, but afterwards, the information is recorded and stored and not actively monitored. Supplier engagement and monitoring

⁴¹ Bonsucro, “Guidance for the Bonsucro Mass Balance CoC Standard v4.1,” 2016, p. 9.

programs range from visits and educational programs that offer technical recommendations on good agricultural practices to robust internal audits evaluating agricultural, environmental, and social criteria.

In the competitive sugarcane areas of São Paulo where one mill operates, for example, special care is given to ensure strong relationships are maintained; thus, this mill's monitoring is not an internal audit but rather use of the SAI platform to encourage good agricultural practices to engage with suppliers and yearly visits. One mill operating in Brazil's Northeast frames monitoring around social visits to maintain good relationships with its suppliers. This mill offers technical assistance but there is no internal audit process.

On the other side, some mills implement robust internal auditing programs that evaluate social, environmental, and labor criteria (some with upwards of 70 indicators). These programs frequently set standards that go beyond current Brazilian legislation with a scope that can be adapted to client demand, changes in legislation, or industry trends. The annual process of one such program involves: a checklist of indicators; a workshop to outline expectations and timelines; site visits; development of a plan of action; surprise visit and audit; and feedback and action plan for improvements.

Recommended Good Practices for Mills

- Mills engage with growers on social-environmental performance, monitor practices, and provide opportunities for education and advancement as appropriate.
- Mills require suppliers to notify the mill if there is a change in the status of land rights on the property. This could be incorporated into supplier contracts and/or existing supplier monitoring programs.
- Although imperfect, Bonsucro certification is the prominent certification in the sugarcane sector that includes an assessment of land tenure related practices. As Bonsucro members, Bonsucro certified mills should aim to produce and/or source an incrementally increasing percentage of Bonsucro certified sugarcane. Progressively increasing certification of the supply bases can, alongside continued advancements by Bonsucro in the quality and transparency of audits, help give greater assurances to the quality of land practices within mill supply chains.

Topic Area 3 – Land Disputes and Resolution Mechanisms

Prevalence of Land Disputes

For the most part, mill staff, sugarcane growers, and representatives of the local institutions who were interviewed reported a low incidence of land disputes and conflicting claims both within the sugar supply chain and more generally in the areas around the mills and farms. Of the six corporate groups in the study, five reported no significant land disputes or conflicts involving their mills. These accounts were corroborated by the sugarcane growers as well as the institutional representatives interviewed by the study team.

The remaining corporate group reported one issue involving a former grower's land as an encroachment on that land by the Landless Workers' Movement (Movimento dos Trabalhadores Sem Terra, or MST). This issue is described in more detail below. This group reported no other land conflicts involving the mill(s) or their other sugarcane growers, and this was supported by the grower and stakeholder interviews conducted.

Several of the mills did report that there are incidences in which CARs overlap. Staff of three of the six corporate groups (representing 7 of the 11 mills) reported that overlapping CARs do occur within their supply chains, but that these do not generate conflict and are resolved quickly once identified. Staff of two of the remaining groups did not mention this as an issue,⁴² and the third group affirmatively said that it did not occur in the area. Those reporting incidences of overlapping CARs also said that it is mill staff that sometimes notices the overlap. Generally, if this issue is identified, they would notify the parties and/or the local government of the discrepancy

⁴² Note that the representatives of the sugarcane suppliers association proximate to one of these groups did say that overlapping CARs do occur in the region, but that these are not a great source of conflict.

(who would then notify the parties), and the government would resolve the discrepancy in the records. The staff of one group also specifically stated that they are available to support this process as the government resolves.

Multiple stakeholders also identified animals encroaching on sugarcane land, generally as a result of broken fencing, as a minor land-related issue that comes up but is quickly resolved.

All of the growers interviewed said that land was not a problem in their particular areas, but several did mention some land related issues such as the slow bureaucracy around land documentation, the increased fragmentation of landholdings as it is subdivided among children upon inheritance, the difficulties in gathering multiple consents for georeferencing, and the increasing demand for and resulting limited availability of land for sale.

Landless Workers' Movement (MST)

Having emerged around 1995, MST is currently a movement of about 350,000 families organized in 24 of Brazil's 26 states dedicated to realizing a sustainable way of life for the rural poor workers of Brazil, largely by providing them access to land through agrarian land reform. One of their main strategies is to occupy land that it has identified as unproductive, claiming that such occupation is legal under the Constitution of Brazil, which says that land should fulfill a social function. Only after occupying do the MST members assert a legal claim over the land, with either the occupying families or the landowner taking the issue to court. The court may find in favor of the landowners and issue a warrant of eviction to the occupying parties or may deny the landowners petition allowing the occupying parties to stay provisionally until INCRA makes a determination on whether the land was unproductive.

The land dispute reported by one group involved an MST occupation of one of its sugarcane grower's lands. The mill staff reported that the government mistakenly identified the area as unproductive, and MST occupied the area. The mill staff reported that they ceased commercial relations with that supplier, as she was unable to meet her contractual obligations to deliver sugarcane due to the occupation. Mill staff reported that the grower's case against the MST is still unresolved and pending in court. Two of the four growers interviewed also knew of this incident, one of whom said that it led to some insecurity among the landowners.

While other mills did not report MST occupation of sugarcane land, stakeholders interviewed from three of the other corporate groups involved in the study did know of MST occupations in their areas, generally involving public lands not used for sugarcane cultivation.

While MST occupations may not be immediately affecting PepsiCo's supply chain in Brazil, this is a risk factor that should be monitored. Land viewed as unproductive may be occupied, at which point the land owner would potentially endure a lengthy court proceeding. Even if the claim is found to be illegitimate, the situation could end with someone being forcefully removed. It is likely the landowner has a legal right, but given the unequal distribution of land this can be a political issue and can get escalated into news cycles.

Quilombo Claims

Quilombola, or descendants of Afro-Brazilian, former slaves who had escaped and who reside in quilombo settlements, have rights to the lands they inhabit under Article 68 of the Constitution. Around 16 million quilombolas live in approximately 5,000 rural settlements across Brazil, and as of March 2018, only about 250 of these communities (with around 31,000 total residents) had deeds for the settlements.⁴³ An INCRA expert specializing in this topic corroborated this information; the expert reported that to her knowledge, less than 20 percent have been officially recognized.

In order to expropriate the land to allocate it for a quilombo claim, the government must conduct a study to verify the legitimacy of the quilombola community's claim and the extent of their territory. If the quilombo claim overlaps with existing property claims, the government performs a technical evaluation to assess the value of the land and then pays the previous right holders compensation for the established land value. The previous right

⁴³ Mendes, Karla. "Slaves' descendants in Brazil braced for land titles' fight," Reuters, 2018, <https://www.reuters.com/article/us-brazil-landrights-slaves/slaves-descendants-in-brazil-braced-for-land-titles-fight-idUSKCN1GI204>.

holders have the opportunity to appeal the established value of the land in court, although it is rare that these appeals are successful in revising the assessed value.

Though not reported as an issue by the mill staff, the researchers identified through the document review and analysis that a portion of one grower's sugarcane lands located in Brazil's Northeast region had been claimed by a quilombola community. When the team inquired about this topic, the grower expressed the opinion that there is a low likelihood that the claim would succeed. He said that the claim did not matter, because if it were to be granted to the quilombola by the government, the government would need to pay the landowner compensation for the land, which would be too expensive to support his eviction.

If the land claim is verified as legitimate by the government, it is likely this particular grower's land will be expropriated by the government. However, given the track record of slow regularization of the quilombo claims in Brazil, it is possible this will remain a situation of outstanding, conflicting claims for the medium to long term.

Quilombola land claims around and affecting sugarcane suppliers land is a risk that should be monitored. These may be legitimate claims under the law that may lead to additional land disputes within the supply chain. The claim and the possibility of other future claims raises the issue of how PepsiCo's "zero tolerance" policy applies to instances where a dispute is in a formal government process, as well as actions PepsiCo and its suppliers should take to identify and address claims that would be brought if the government process were working optimally. It is not the responsibility of PepsiCo to improve the process, but it may be worthwhile to discuss in more detail how the U.N. Guiding Principles apply in this instance.

Receiving grievances and engaging with community on potential issues

Most mills have some sort of grievance mechanism or communication channel to receive comments and concerns from interested parties, including growers and local communities.

For example, one group has both an open communication channel to receive complaints and a periodic community consultation. The first takes the form of a hotline operated by a third party through which anyone can report any issue anonymously. One external stakeholder familiar with using this particular group's hotline reported that the hotline transitioned to an outside company about a year ago after it had been not effective for some time. The stakeholder reported that the system is working better now, but the anonymous nature means that there is no feedback or transparency about how the complaints are handled. This same group also facilitates consultations with the community as part of sustainability reporting once every two years, during which time they get stakeholder feedback on what they are doing well and how to improve. Mill staff reported that this feedback guides programming for the next two years. The research team interviewed several external stakeholders who have participated in the sustainability meeting, and stakeholders interviewed reported that they feel that it is a free and open forum for people from various backgrounds to give their opinion. This approach was unique among the studied mills.

Other groups reported having similar anonymous dial lines as noted above, the number for which is available on their public websites. One such group shared that their line is operated in house, with staff monitoring every contact and directing complaints to the committee that receives and evaluates them. Another group has a multi-method communication channel (post, email, phone) that anyone can access for all issues. If a land issue is raised, it is referred to this group's Department of Properties and the Legal Department. There is another department responsible for engaging with the community. Labor issues tend to be channeled separately through the rural workers union.

In addition to the anonymous dial-lines, there are additional channels of communication open specifically to suppliers and employees (and not necessarily other stakeholders). Growers associations, unions, and direct engagement are available to many mill employees and sugarcane growers.

There is one group that reported having a communication mechanism for its suppliers but did not report the presence of a mechanism for engaging with communities. This group noted reliance on their close relationships of trust with everyone in the area, given their long time in operation.

Recommended Good Practices for Mills

- Monitor encroachment or other competing claims on own and supplier lands.
- Evaluate the potential for rights claims from quilombolas, indigenous groups, and other traditional forms of occupation on own and supplier lands. An INCRA expert recommended that companies incorporate into their land due diligence a consultation with the institutions responsible for regularization of quilombolas, indigenous groups, and other traditional forms of land occupation to seek information about possible overlaps with areas of interest.⁴⁴ In the future, mills should be able to utilize a platform currently under development by the public ministry that will present an idea of where communities are located, even if the claims have yet to be regularized.⁴⁵
- Notify concerned parties and/or local government to resolve overlapping CARs.
- Have clear channels for communication between the company and growers and the company and the surrounding community. Channels should be accessible for all community members, be able to receive complaints or grievances, and have a clear process to refer complaints to those who can resolve them.

Topic Area 4 – PepsiCo’s Land Policy and Suppliers’ Land Policies

Applicable Land Policies

PepsiCo’s Land Policy articulates “zero tolerance for illegal activities in our supply chain and land displacements of any legitimate land tenure holders which are contrary to the IFC Performance Standards.”

In regards to suppliers, the Policy requires that they: (1) adhere to the legal requirements of the country; (2) meet IFC Performance Standards, including FPIC, in their land acquisitions (including leasing and utilization); and (3) utilize appropriate grievance mechanisms, such as the PepsiCo Speak Up! Hotline, to provide reporting of suspected breaches of the policy.

With regard to land, the IFC Performance Standards referenced in the PepsiCo Land Policy require several steps in case of a project or business activity that generates risks and impacts, including implementing environmental and social assessment and management systems, conducting stakeholder engagement, conducting informed consultation and participation with affected communities, designing and implementing measures to avoid and minimize negative social and environmental impacts, establishing grievance mechanisms available to affected communities, and a having process for free, prior and informed consent (FPIC) for certain projects with adverse impacts on Indigenous Peoples.

As described in [Topic Area 2](#), PepsiCo uses Bonsucro certification as a tool to monitor that its sugar suppliers are meeting sustainability standards. In Brazil, PepsiCo procures sugar only from mills that are Bonsucro certified. Bonsucro certification is a positive step in ensuring more responsible investments in land in the sector. However, there are some gaps between PepsiCo’s commitments and the Bonsucro certification criteria, and thus, Bonsucro certification does not ensure full compliance with or implementation of PepsiCo’s Land Policy. Relying solely on Bonsucro certification to ensure that suppliers comply with PepsiCo’s Land Policy creates some risk that suppliers will miss significant pieces of the PepsiCo Land Policy, as discussed below.

The Bonsucro Production Standard includes several criteria with regards to land, including the following Core Indicators: (1) compliance with national laws; (2) demonstration of the right to use land and water; and (3) all greenfield expansion or new sugarcane project be covered by an ESIA process that involves independent third-party experts, starts prior the formulation phase of the project, focuses on significant issues and involves key stakeholders to identify them, provides information on possible alternative or appropriate mitigation measures for

⁴⁴The official recommended submitting a request for information through the 'Ouvidoria', citing the Law of Public Information Access.

⁴⁵ MPF. “MPF lança plataforma digital com informações sobre territórios e comunidades tradicionais.” Published: August 28, 2019. Available at: <<http://www.mpf.mp.br/pgr/noticias-pgr/mpf-lanca-plataforma-digital-com-informacoes-sobre-territorios-e-comunidades-tradicionais>>.

making decision based on a free, prior, and informed consent process, and a plan to monitor and evaluate implemented measures. The Production Standard also includes non-core indicators related to land: (1) land or water is not legitimately contested by other users (“legitimate” meaning that the contest is registered and accepted by a recognized judicial system); (2) existence and usage of a recognized and accessible grievance and dispute resolution mechanism for all stakeholders; and (3) that more than 90 percent of projects involve multi stakeholders where agreement has been reached by consensus driven process based on Free, Prior and Informed Consent.

While Bonsucro’s land-related indicators are similar to PepsiCo’s, being Bonsucro certified does not require full compliance with all the indicators. Bonsucro certification requires a minimum of 80 percent compliance with its full list of Production Standard indicators, including full compliance with its 16 core indicators, as found through a Bonsucro Licensed Certification Body. Audits are performed in order to obtain initial certification and then periodically thereafter to maintain certification. Information obtained through audits and reporting to Bonsucro is confidential, so, information about which non-core indicators a particular supplier met is not available. Thus, although a supplier is Bonsucro certified, the buyer has no idea whether that supplier has met the criteria on grievance mechanisms or FPIC, criteria that if met, would keep that supplier in compliance with PepsiCo’s Land Policy. Further, the buyer has no idea about that supplier’s land disputes, an area that could be of particular risk for the buyer if not informed and monitored.

In addition, while PepsiCo only sources from Bonsucro certified mills, not all the suppliers to those mills are Bonsucro certified. As discussed in [Topic Area 2](#), each of the mills has a different proportion of the agricultural land on which its supply is grown certified: some may only have their own landholdings or a portion of their holdings certified; and the sugarcane growers may or may not be certified as well. Only one of the six corporate groups interviewed had a stated goal of getting all of its growers certified. PepsiCo only purchases from a supplier up to the volume that is Bonsucro certified. For example, if a mill has 30 percent of its total volume certified, PepsiCo can only purchase up to 30 percent volume from that mill. However, this is a mass balance approach, and the sugar itself is not molecularly traceable to ascertain whether that sugar came from a Bonsucro certified grower. From a reputational risk perspective, if a mill’s non-certified supply is associated with a land issue, this issue would likely also be associated with PepsiCo’s supply chain.

Supplier Knowledge of PepsiCo Land Policy and International Best Practice

The mills have little knowledge of PepsiCo’s Land Policy and international best practices, such as the IFC Performance Standards and FPIC. Staff interviewed at one of the corporate groups did know about FPIC, which came from standards presented a few years ago by another of the group’s buyers.

Mill staff suggested several next steps for dissemination of PepsiCo’s Land Policy that would help the suppliers to comply: improved communication about the policy from PepsiCo; training on the policy and how it relates to Brazilian law and the Bonsucro standards; and support for training and communication for third-party suppliers, so that the mills can pass the standards down through their supply chains effectively.

Supplier Land Policies

Mills tend to not have a written land policy (only one group has a written land policy and it applies only to leasing). That said, they do tend to have clear procedures and checklists for acquiring land through purchase or lease and in contracting with partners and suppliers. These processes, discussed in more detail in [Topic Area 1](#) above, tend to include a technical evaluation of the land in question, land document and registry verification (among other documentation), and require signatures of all interested parties. These procedures seem in line with Brazilian law.

Recommended Good Practices for Mills

- Have understanding of PepsiCo’s Land Policy and expectations for suppliers
- Adopt land policies or procedures to implement PepsiCo Land Policy
- Pass land standards down to suppliers through existing mechanisms (i.e., codes of conduct or partnership or supplier agreements)

SECTION 5: RECOMMENDATIONS

The final section provides recommendations for PepsiCo for its sugar supply chain in Brazil, as well as lessons learned through the study that may inform how PepsiCo implements and monitors its Land Policy in other commodities and geographies.

Recommended Actions for PepsiCo in Brazil

Table 6 outlines recommended actions for both PepsiCo and its sugar suppliers in Brazil. As described in the table below, the research team recommends that PepsiCo collaborate with other buyers where possible to implement a number of these recommendations. While raising awareness of PepsiCo’s Land Policy is specific to PepsiCo, providing guidance on how to identify encroachment risks and establish duty to report protocols is an element that can (and indeed should) be standardized for the industry. It is the research team’s impression that there are other buyers with an even larger supply chain in Brazil that would provide wider coverage. Collaboration on appropriate issues can reduce inefficiencies and improve clarity of expectations.

Table 6. Recommendations for PepsiCo in the Brazilian Sugar Supply Chain

Recommended Actions at Mill Level	Recommended Actions for PepsiCo
<ul style="list-style-type: none"> • Continue progressing on SIGEF certification and offer supports to growers to meet legal deadlines. If possible, promote certification sooner than the legal deadlines as a best land practice. • Begin or continue efforts to improve data management of land rights indicators. • Begin or continue due diligence protocols to verify growers have a legitimate right to use the land (one mill participating in the study currently does not have such due diligence in place for its entire supply base). • Assess social risks or conditions during due diligence prior to contracting (few mills were observed to have this practice), in addition to assessing environmental risks (all mills reported this practice). • Establish mechanisms for the ongoing monitoring of land rights; this may be realized through duty to report clauses in contracts or inclusion of an indicator in annual monitoring programs. Areas of particular risk to monitor include areas of MST occupation (or potentially “unproductive” areas that may be subject to future MST occupation), quilombo land claims, indigenous land claims, and lands claimed for conservation uses. 	<ul style="list-style-type: none"> • Raise awareness of its Land Policy with suppliers. Avenues for awareness-raising include: a webinar training and/or a guidance document outlining good land practices for Brazilian suppliers and outlining the differences between PepsiCo’s Land Policy and Brazilian legislation and PepsiCo’s Land Policy and Bonsucro Standards. • Offer guidance to suppliers on specific issues related to good land practice, perhaps best developed in collaboration with other buyers. Topics could include: <ul style="list-style-type: none"> ○ Use of social assessments prior to contracting; ○ What is FPIC and when and how should it be applied; ○ Development of a land policy; ○ Identification of encroachment risks and duty to report expectations; ○ How to respond to encroachment; ○ Development of grievance mechanisms; and ○ Overview of newer land management instruments, such as SIGEF and SINTER. • Provide common guidance with peer companies to help maximize resources, improve clarity for mills and growers, and reduce inefficiencies and conflicting expectations. The research team observed that mills supply a number of buyers who share similar commitments on land. In addition to working with mills, there is opportunity to disseminate information to growers through the regional sugarcane

<ul style="list-style-type: none"> • Understand PepsiCo’s Land Policy and expectations for suppliers. • Adopt land policies that affirm a respect for land rights and ensure procedures align with PepsiCo’s Land Policy. • Pass land standards down to suppliers through existing mechanisms (i.e., codes of conduct or partnership or supplier agreements). • Produce and/or source an incrementally increasing percentage of Bonsucro certified sugarcane. • Assess existing grievance mechanisms to ensure that they are well-functioning, legitimate, accessible, predictable, equitable, transparent, rights-compatible, sources of continuous learning and based on dialogue and engagement.⁴⁶ 	<p>associations, who currently provide significant support and resources to growers.</p> <ul style="list-style-type: none"> • Engage with Bonsucro to continue improving the certification. Advocate for improved transparency of reports and improved training for auditors conducting land rights assessments. • Gain better understanding of claims from marginalized groups, such as quilombola communities, support mills to proactively identify potential overlaps with their supply bases, and provide guidance on expected actions that suppliers should take when such overlaps are identified. An INCRA expert recommended that companies incorporate into their land due diligence procedures a consultation with the institutions responsible for regularization of quilombolas, indigenous groups, and other traditional forms of land occupation to seek information about possible overlapping claims with areas of interest. This expert reported that less than 20 percent of the quilombola lands are officially identified and are thus unavailable in official systems. In the future, mills should be able to utilize a platform currently under development by the public ministry that will present an idea of where communities are located, even if the claims have yet to be formalized. • Continue monitoring suppliers’ land practices through regular supplier self-assessment, specifically through new tools being piloted such as the ACRE Framework⁴⁷. Pay particular attention to potential medium to long-term patterns of geographic expansion to agricultural frontier areas.
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Recommended Actions for PepsiCo Beyond Brazilian Sugar

The results of this assessment appear to have been driven in large part by the extensive work of the Brazilian government to implement modern, computerized land regularization and implement environmental regulations nationally, with particularly advanced progress in the agricultural regions of São Paulo. Because these factors are not present in many of PepsiCo’s other supply chains, the lessons to be drawn from this assessment applicable to other country contexts may be limited.

⁴⁶ For more on the elements of a well-functioning grievance mechanism, see Landesa’s Grievance Mechanism Primer, available at http://ripl.stage.s3.amazonaws.com/uploads/ckeditor/attachments/87/RIPL_Grievance_Mechanism_Primer_-_Final.pdf and the UN Guiding Principles on Business and Human Rights, no. 31.

⁴⁷ PepsiCo is currently developing a new framework for tracking the implementation of its land tenure-related commitments called ACRE. Findings from this study will help inform the development of ACRE and accompanying guidance.

In the researched areas, consulted land registry officials reported that individual, rural properties are formally registered and the registration is updated to include the names of all right holders. The rights of women over land were reported to be regularized in these areas, and all but one mill use these documents to inform who is involved in the contracting process. The information available to the research team suggests that it is standard procedure for these mills to involve all right holders, both men and women, in decisions to lease and/or supply sugarcane to mills.⁴⁸ The majority of mills do not conduct additional due diligence on the social context prior land acquisition, including leasing and utilization.

While there are many strong practices in place, there are still some areas for improvement. One such area is around proactive assessment of social conditions as part of land practices. Particularly, given the delay in the Brazilian government's regularization of the claims of quilombola communities, PepsiCo suppliers need to take action beyond investigating deeds as part of land tenure due diligence. Although Brazilian laws recognize the rights of these communities, limited capacity and lack of political will has resulted in slow implementation of laws. PepsiCo suppliers who are producing on or sourcing from lands likely to be claimed by these and other groups need guidance on how to approach these claims, rather than remaining reactive. There is an opportunity for corporate leadership, in partnership with government and civil society, to address these issues before they come to a head. It offers PepsiCo suppliers and the company an opportunity to address long simmering issues in a constructive manner.

Indeed, assessing social conditions to identify rights to land and natural resources that may not be captured within formal systems is an important part of land due diligence in any geography. Despite land being critical, as much as 70 percent of people in developing economies lack formal documentation of their land rights. Much of this undocumented land is customary land, meaning land rights and uses operate outside of the formal legal system; instead, rights are established based on the norms and practices specific to a community. Land may also be held communally, meaning members of the group have recognized rights to use (but not own in a Western sense) land within the group's territory. Families and individuals hold these rights based on a customary or traditional authority. Assessments should consider groups often excluded from or disadvantaged by the mainstream political, economic, and societal processes within a community. These groups - which vary by context but may include women, youth, migrants, and ethnic minorities - particularly face barriers to realizing equitable rights and access to land and property.

In addition to ensuring the land rights of all individuals are respected in land acquisition, including leasing and utilization, across its supply chains, PepsiCo also has opportunity to increase the participation of disadvantaged groups in its supply chains. As an example, in West Bengal, India, PepsiCo is supporting efforts to promote women's empowerment within its potato value chain. PepsiCo funded an assessment of women's economic empowerment and equality, land rights, and agricultural engagement in the potato supply chain and is now supporting, along with USAID, activities that provide resources and opportunities for women to engage in productive practices; substantive roles for women in agricultural leadership and decision making; and access to and control over agricultural products and income by women. PepsiCo has opportunity to demonstrate its leadership in this area in other supply chains.

Finally, PepsiCo's Brazilian sugar suppliers' almost complete lack of familiarity with the PepsiCo Land Policy suggest the need for broader familiarization of PepsiCo staff and suppliers with the policy, most likely globally, not just in Brazil. Further, the gaps between the Land Policy and Bonsucro standards should be considered as PepsiCo works with Bonsucro and reviews its Land Policy to seek harmonization across the sector. The ACRE Framework offers an important opportunity to engage other stakeholders on a sectoral or even multisectoral (i.e., multicrop/commodity) approach to land rights.

⁴⁸ Notably, due to the scope of the study and persons available to interview, the team did not explore intrahousehold dynamics nor corroborate with all right holders the negotiation process. The team reviewed protocols and a sample of supplier contracts and leases vis-à-vis corresponding land deeds.

As PepsiCo considers how to approach monitoring its suppliers (including and beyond Brazil), it will be important to consider the role that assessments can play in that monitoring. As a first step, defining the objectives of such assessments and the appropriate orientation is critical. For example, if a company has identified some land issues in a particular area and wants to understand it better, an in-depth assessment of that issue by a third party may be appropriate. If a company wants to incorporate new criteria into its ongoing monitoring of suppliers, a different sort of assessment, perhaps a periodic self-assessment by written questionnaire or simply incorporating new questions into the existing internal monitoring processes, may be more appropriate. Other sorts of assessments, such as proactive assessment being conducted prior to new market entry or new supply agreement as part of due diligence or assessments to identify progress on a new policies or initiatives may also be appropriate at various points in time.

There could be good reason to perform any or all of the aforementioned assessments at different points, and the methods for executing each assessment would vary based upon the objective. Proactive and regular assessments as part of a holistic monitoring strategy could help to identify and address potential land issues sooner and expectations with suppliers can be set ahead of time, lowering the burden on them to respond quickly to ad-hoc reactive assessments. Such assessments may also be less onerous, by incorporating them into existing processes. While there may also be a role for stand-alone land assessments (such as monitoring of a new policy or in a reactive environment to assess an identified issue), in many situations, it is likely more efficient to incorporate land assessments into analysis of other socio-environmental topics, as long as the research team has a qualifications to assess land issues. It may also be beneficial to explore land assessments conducted for multiple commodities within the same country. In Landesa's experience, there tends to be more variation across and within countries on land topics due to geography rather than commodity. If buyers can help suppliers develop a "gold standard" package of information that is regularly needed that can be sent to their different buyers, this would also lessen the burden on suppliers to provide different information to different buyers.

With these points in mind, the research team has developed Table 7 with opportunities for PepsiCo to implement and monitor its Land Policy in other commodities and geographies.

Lessons for Third-Party Conducted Land Assessments

- It may be more efficient to incorporate land assessments into analysis of other socio-environmental topics, as long as the research team has qualifications to assess land issues and the methodology is sound. Given the time and resources for mill staff and growers to participate in assessments and the overlap in some topic areas, this will support efficiencies if a multidisciplinary research team is selected.
- An alternative approach to gain efficiencies could be exploring land assessments conducted for multiple commodities within the same country. For this study, given the work that was developed for the methodology in Brazil, the inclusion of other commodities PepsiCo sources within the country into the study scope could have yielded a more complete picture of the land tenure situation in Brazil, which varies significantly between regions. Efficiencies in logistics could also have been leveraged, such as visits coordinated in the northeast for sugarcane suppliers and coconut growers.
- Discuss with suppliers if such assessments would be more valuable if they were accompanied with action plans for individual suppliers (that would be confidential to the research team, PepsiCo, and the supplier). The scope of this assessment was specifically not an audit. Would it have been more useful to suppliers if specific findings and action plans were prepared based on observations?
- The support of PepsiCo staff with close relationships to suppliers (e.g., procurement) is critical for success.
- Aligning study timelines with contracting timelines for suppliers is important. The study faced some delays and complications due to ongoing contract negotiations.
- The support of a credible, local university or expert with experience in action-oriented consulting assignments can be an asset to the research team.

Table 7. Recommendations for the Land Policy Beyond Brazilian Sugar

- PepsiCo should improve its suppliers' understanding of its Land Policy in Brazil. The research team expects this is likely a relevant action for other PepsiCo supply chains and geographies as well. Efforts to raise awareness on the Land Policy could be complemented with guidance to suppliers on specific issues related to good land practice (see example topics listed in Table 6 above). PepsiCo could identify if there are opportunities to lift and shift such training resources within PepsiCo (e.g., can training resources that have been developed to guide palm oil suppliers on how to develop social and environmental policies be adapted and shared with sugar suppliers) and between other actors in the supply chain, so there are clear and consistent expectations for suppliers.
- PepsiCo should clarify the Land Policy itself (such as the application of FPIC) and review its scope of application (e.g., applicability of the Land Policy to industrial partners -- Joint Ventures, Co-Manufacturers, and Franchise Bottlers -- and beyond agricultural commodities to paper, renewable energy, etc.).
- For ongoing assessment of the Land Policy, PepsiCo should continue to advance the ACRE Framework as a tool for supplier self-reporting on a periodic basis.
- Land claims of quilombolas, indigenous communities, and the MST present Brazil-specific risks that may mature into conflict. Indeed, these risks may even be more pronounced for other PepsiCo supply chains operating in different regions of Brazil. In other country contexts, there are similar land claims that may not be active conflicts, but that could become active in the near future. PepsiCo could consider a company policy to guide its actions and those of its suppliers in the face of such land tenure issues, such as implementation of social risk assessments, community engagement, and opportunities to defuse conflict before it starts. While global guidance may be achievable, such guidance would have to be tailored when implemented in each cultural context.
- PepsiCo has demonstrated interest in empowering disadvantaged groups within its supply chains to generate positive impacts to local people and communities in its sourcing countries. A topic PepsiCo has expressed interest in is supporting women's empowerment. This study had limited findings on the gender dynamics of the sugar supply chain in Brazil. PepsiCo could consider appropriate opportunities to research and develop programming to explore gender dynamics within its supply chains to reduce negative impacts to women, respect women's rights to land and natural resources, and improve women's economic engagement in supply chains.
- As noted above, PepsiCo should continue engaging with Bonsucro to improve the certification criteria and the auditing practice around land tenure considerations. In keeping with the philosophy of continuous improvement, PepsiCo could encourage mills as appropriate to increase their own sourcing of Bonsucro certified sugar and support their growers to achieve certification.
- PepsiCo could work with other companies with similar experiences to promote the findings of the study to highlight progress Brazil has made in land rights registration, particularly in rural, agricultural land in São Paulo, and how this enabled suppliers to meet a high level of compliance with land rights requirements. It could highlight to other governments the commercial and intangible benefits of investing in land governance, thus indirectly benefiting PepsiCo through more sustainable and secure supply chains. Jurisdictional approaches/landscape initiatives that include a land rights component could be a good starting point.

APPENDIX 1

This appendix accompanies [Section 2](#) of the report to provide more detailed information on the key land laws, institutions, and land management systems/tools pertinent to the scope of this research.

Key Land Laws

Land in Brazil is governed by a large body of constitutional law, land law, civil property law, environmental law, and planning law operating at the federal, state, and municipal levels. The below table outlines some of the key laws relevant to this research, including the Constitution, Land Statute, and Forest Code.

Table 8. Laws Relevant to the Research Scope

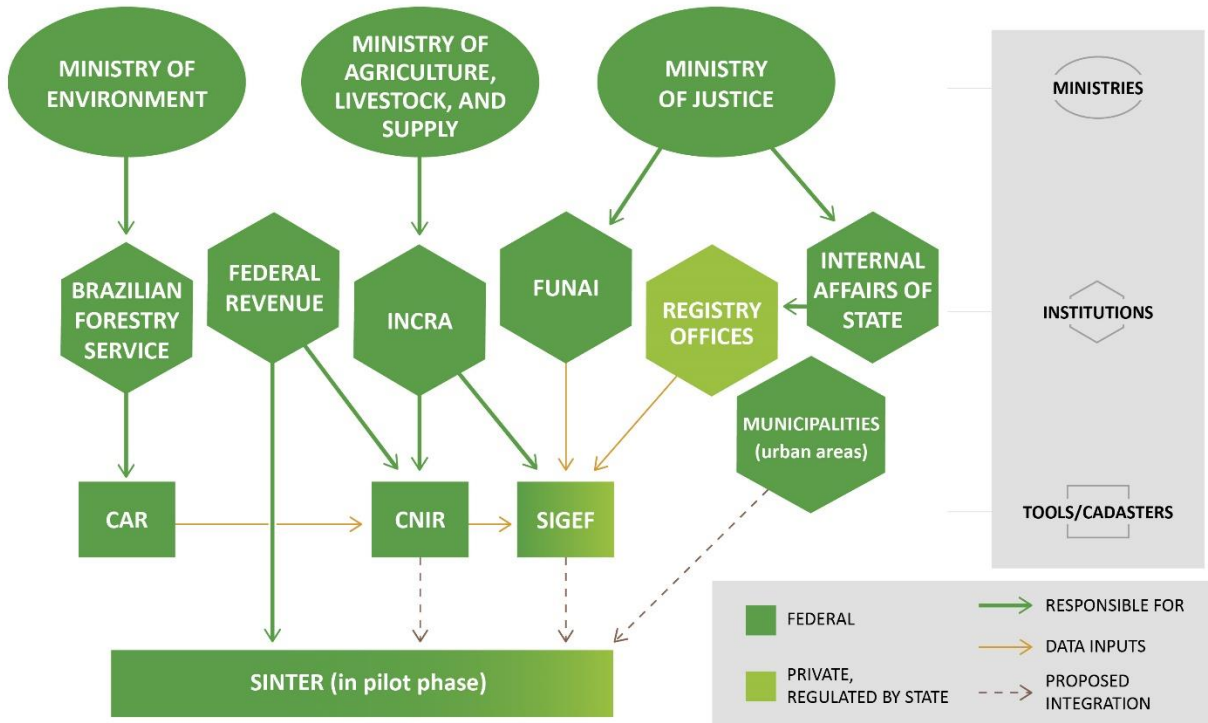
Law	Year	Property Relationship
Land Statute - Law No. 4,504, of November 30	1964	<ul style="list-style-type: none"> All private or public rural properties should be registered, including possessions by fair title and by simple occupation. Landowners and squatters should provide information on the status of documentation and land use (used to estimate productivity) in order to facilitate land reform as well as the collection of the Rural Land Tax (ITR). Rural property must fulfill social functions, such as supporting the well-being of owners and workers, satisfactory levels of land use productivity, conservation of natural resources, and compliance with labor laws.
Federal Constitution	1988	<ul style="list-style-type: none"> Guarantees the right to adequate housing and property as a fundamental right (Art. 5) Recognizes the equal rights of men and women (Art. 5) Affirms the concept of social function of land, which ultimately restricts the individual right to use and dispose of rural property (Art. 5) Provides for gender equality in obtaining titles to property; property rights or concessions under the agrarian reform program may be allocated to men and women either individually or as joint owners (Art. 189) Broadens the right of inheritance to partners in stable unions rather than limiting it to civil marriage and recognizes equal rights for children born inside and outside of wedlock, including adopted children (Art. 227 §6) Recognizes the rights of indigenous peoples and afro-Brazilians (<i>quilombolas</i>) to traditional lands <ul style="list-style-type: none"> The social organization, customs, languages, creeds, and traditions of Indigenous Peoples are recognized, as well as their original rights to the lands they traditionally occupy. The Union has the responsibility to delineate these lands and to protect and ensure respect for all their property (Art. 231) Final title shall be recognized for the remaining members of the former fugitive slave communities who are occupying their lands (<i>quilombolas</i>), and the Union shall grant them the respective deeds (Art. 68)
CNIR - Law 10,267, of August 28	2001	<ul style="list-style-type: none"> Landowners are required to submit a mandatory declaratory registration (for public and private real estate), with the geographical information of the

		<p>property that will make it possible to know the Brazilian rural land network and integrate the different cadastral databases with the Real Estate Registry Office.</p> <ul style="list-style-type: none"> • It is being developed and managed by INCRA and the Brazilian Federal Revenue (RFB) and aims to meet the need for a georeferenced land registry, serving as a common basis for the various public institutions that produce and use information about the rural environment.
Quilombolas - Decree nº 4,887	2003	<ul style="list-style-type: none"> • Remnants of the quilombo communities are considered, for the purposes of this Decree, ethnic-racial groups, according to self-attribution criteria. They are considered to have their own historical trajectory and are endowed with specific territorial relations, with presumption of black ancestry related to the resistance to historical oppression suffered.
Forest Code - Law nº 12.651	2012	<ul style="list-style-type: none"> • Establishes the minimum amount of preserved forests in private properties in Brazil, depending on their sizes and location/biome. For example, a property in the Amazonian region must have over 80% of its area with protected native forests while areas in the 'Mata Atlantica' (most of the Southeast and coastal areas) require a minimum of 20%. The Forest Code created the CAR and set its administration to the Brazilian Forestry Service.
CAR - Decree nº 7,8300	2012	<ul style="list-style-type: none"> • Managed by the Ministry of Environment, CAR is a national electronic public register, mandatory for all rural properties, with the purpose of integrating the environmental information of rural properties and possessions, composing a database for control, monitoring, environmental and economic planning, and combating deforestation.
SIGEF - Normative Instruction 37, August 23	2013	<ul style="list-style-type: none"> • The tool used to achieve property certification. It comprises a digital platform on which the reception, validation, organization, regularization and availability of georeferenced information from rural, public and private property boundaries are made.
SINTER - Decree nº 8.764	2016	<ul style="list-style-type: none"> • A spatial database under development that integrates legal data produced by public registry services with tax data. • It is a public management tool with cadastral and geospatial data of urban and rural properties registered in the Union, states, municipalities and the Federal District. The National System of Territorial Information Management (SINTER) will be administered by the Federal Revenue Secretariat of Brazil and its information will be updated with each registration act digitally signed by the Registry.

Key Land Institutions

The Federal Government and its agencies play the leading role in the administration of land regularization in Brazil, while states and municipalities aid in enforcing the federal framework. Important institutions with responsibilities relevant to this research include: the Ministry of Environment, Ministry of Agrarian Development, Ministry of Justice, Internal Federal Revenue Service, Forestry Service, Internal Affairs of State, INCRA, and the National Indian Foundation (FUNAI). The below diagram illustrates these institutions and how each relates to the land instruments covered in this research: CAR, SIGEF, and the land registries.

Figure 10. Key Land Instruments within Federal Administrative Structure



Land Management Systems

As noted in Section 2, in recent decades the government has been investing in improved land management systems to address historic challenges with land registers and cadasters. The following section describes in additional detail these new land management systems.

National Cadaster of Rural Property (CNIR)

The CNIR is being realized through the tools of the National Property Certification System (SNCI) and the Land Management System (SIGEF). SIGEF, an electronic tool developed by INCRA, permits the receipt, validation, organization, regularization, and provision of georeferenced information on rural public and private properties. The system has been operational since November 2013 and is interconnected with relevant institutions including FUNAI, the Chico Mendes Institute of Conservation and Biodiversity (ICMBio), and the Secretariat of the Brazilian Union Patrimony (SPU). The data in the system covers 61.3 percent of Brazil’s total area, a significant achievement over the course of six years.⁴⁹ The law sets deadlines for property owners to achieve SIGEF certification based on the size of the property listed in the deed; the law does not currently establish a fine for non-compliance with the deadline, but certifications are necessary in order to transact on the property.

⁴⁹ The raw data equates to 75.7 percent of the country’s total surface. After eliminating overlaps, mainly with government areas such as conservation units, settlements, etc., it equates to a total of 522.3 million hectares or 61.3 percent of the total area of Brazil. Information obtained from INCRA’s official website (<http://acervofundiario.incra.gov.br/acervo/acv.php>).

Table 9. Deadlines for SIGEF Compliance⁵⁰

Area (in hectares)	Deadlines
250 to 100	November 2018
100 to 25	November 2023
25 or less	November 2025

* Parcels larger than 250 ha had deadlines covered by earlier decrees (2003 – 2013). The most recent decree extended previously established deadlines for parcels 250 and below to the ones indicated in this table.

Source: Decree nº 9.311 from 2018

National Rural Environmental Cadaster (SICAR) and the Rural Environmental Cadaster (CAR)

Other important instruments to note are the Rural Environmental Cadaster (CAR) and the National Rural Environmental Cadaster (SICAR). The intention of these instruments is to assist with the process of environmental regularization of rural properties by plotting a digital map of the environmental protection areas on a property. It is a mandatory electronic registration. Although declarants are not obliged to submit supporting documents, the pertinent agency may at any time request the submission of documents.⁵¹ CAR declaration includes benefits to the landowner, including access to agricultural credit and insurance, possibility of the designation and possible tax deduction of the Areas of Permanent Preservation, Legal Reserve, or restricted use; and exemption from taxes for principal inputs and equipment. This is a self-declaratory system and, as such, Brazil currently has over 100 percent of the territory enrolled in the system due to overlaps.

National System of Territorial Information Management (SINTER)

In addition to these instruments, public institutions are developing an additional tool to unify all cadasters: the National System of Territorial Information Management (SINTER), under the responsibility of the Internal Federal Revenue Service of Brazil.⁵² This will bring together all cadastral and geospatial data of urban and rural properties registered in the Federal Union, the states, municipalities and the Federal District of Brasília—including urban information that is not captured in SIGEF.⁵³ All databases built by different institutions will be integrated with SINTER, including CAR, SIGEF, and the land registries. SINTER is currently being piloted in three cities.

⁵⁰Decree nº 9.311 from 2018 Art. 50 set the deadlines

<https://www2.camara.leg.br/legin/fed/decret/2018/decreto-9311-15-marco-2018-786320-publicacaooriginal-155039-pe.html>.

⁵¹ The CAR should be registered with the municipal or state environmental agency with the following information: identification of the rural owner or landholder; the identification of the property by the geographic coordinates with at least one definition point of the property perimeter; informing the location of native vegetation, the Areas of Permanent Preservation, Areas of Restricted Use, consolidated areas and, if available, also the location of the Legal Reserve. However, CAR registrations do not always include all of this information.

⁵² Decree no. 8.764, 2016.

⁵³ Article 1, Decree no. 8.764, 2016.