Environmental and Social Review Summary (ESRS)
Project 14200-01 – Usina Cerradão

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1. General Information of the Project and Overview of Scope of IDB Invest's Review

Usina Cerradão ("Cerradão," "Company," or "Project") is a company that operates in sugar and ethanol production and electric power cogeneration, headquartered in the City of Frutal, State of Minas Gerais, Brazil. The company operates a mill with a combined sugarcane crushing capacity of approximately 4.2 million tons. On an annual basis, the company produces approximately 332,000 tons of very high polarity (VHP) sugar, 120,000 m³ of ethanol (sold mainly as fuel for light vehicles) and 84 MWh of electricity from cogeneration of bagasse, sold mostly to third parties.

The proposed loan operation ("Operation" or "Financing") will be used to increase the Company's current crushing capacity to 7 million tons, as well as the production and storage of sugarcane. Toward this end, the project involves the acquisition of equipment and the renovation and expansion of crop areas.

The Environmental and Social Due Diligence ("ESDD") process included on-site technical visits by the IDB Invest team, interviews and meetings with employees, managers, and upper management, as well as representatives from the Association of Sugarcane Producers of the Rio Grande Valley ("Aprovale"). The ESDD process also included a review of pertinent environmental, social, and health and safety information provided by the company, covering mainly: i) business strategy; ii) policies and procedures related to environmental and social management; iii) management of workplace health, safety, and security programs; iv) management of suppliers; v) management of solid waste and effluents; vi) air emissions (from bagasse cogeneration and dust from transportation vehicles); and vii) potential safety risks to the local communities due to the movement of sugarcane transportation vehicles. In addition, other social and environmental aspects were addressed in accordance with Brazilian legal requirements and international good practices.

2. Environmental and Social Categorization and Rationale

In accordance with IDB Invest's Environmental and Social Sustainability Policy (ESSP), the Project was classified under Category B as it presents low to medium intensity risks and impacts, which may be mitigated through available and feasible measures in the context of the proposed operation. The main risks and impacts identified include: i) the potential for industrial and agricultural fires (the latter related to third parties); ii) risk of work accidents, both in agricultural activities and industrial facilities; iii) loss of biodiversity related mainly to the chain of suppliers and compliance with the Brazilian forestry code; iv) work conditions for employees involved in the manual planting of sugarcane (own employees and those of suppliers); v) management of waste, effluents (particularly vinasse), and hazardous products; vi) air emissions; and vii) traffic risks related to the transportation of sugarcane.

The Performance Standards ("PSs") applicable to the Project are: PS1: Assessment and Management of Environmental and Social Risks and Impacts; PS2: Labor and Working Conditions; PS3: Resource Efficiency and Pollution Prevention; PS4: Community Health, Safety, and Security; and PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

3. Environmental and Social Context

3.1 General Characteristics of the Project Site

The mill is located in the City of Frutal, and most of their crop areas are in the same city. Frutal is in Southeast Brazil, in the Intermediary Geographical Region of Uberaba. According to the Brazilian Geography and Statistics Institute ("IBGE"), the City of Frutal has a population of 60,508 and is located in the Rio Grande basin, where the Cerrado Biome is predominant.

Also according to IBGE, the Mineiro Triangle has been a landscape of anthropic occupation since the 1960's, with a predominance of urban centers, agriculture, and ranching. Even though the vegetation cover is very altered, information obtained through the *Integrated Biodiversity Assessment Tool ("*IBAT*")*[1] indicates the potential occurrence of threatened species in the region.

Cerradão's industrial facilities may be reached via the MG-255 Highway, which has good road conditions. The area is occupied by agricultural crops, particularly sugarcane, and extensive ranching. The nearest urban center is the City of Frutal, approximately 42km from the Project.

3.2 Contextual Risks

With respect to social topics, the company's area of operation is relatively quiet and no records of public demonstrations against the company or similar projects have been found.

Data made available by the Ministries of Labor and Social Security and of the Economy indicate that evidence of the use of forced and child labor can still be found in the sugarcane industry in Brazil. Harvest activities in the project area are already 100% mechanized but it is understood that some farms still rely on manual activities during the sowing stage, and additional steps should be taken to avoid related risks.

With respect to environmental topics, the risks related to the effects of climate changes stand out, particularly rainfall variability, which can impact sugarcane production in the area. Further details are discussed later in this document.

[1] Available at https://www.ibat-alliance.org/

4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental Risks and Impacts

4.1.a Environmental and Social Assessment and Management System

Cerradão manages environmental, social and health, safety, and security issues in their operations with a focus on compliance with Brazilian legal and regulatory requirements. The company has procedures that cover specific subjects related to operational, monitoring, and legal compliance issues. Environmental requirements are managed by a dedicated team with the support of specialized external consulting firms.

The company has the appropriate licenses and authorizations required for their operations (environmental license, water capture, fire safety, waste disposal, vinasse application, etc.). As noted during the due diligence process, though the company has some of the elements of an environmental and social management system (ESMS), this is not yet consolidated and structured. Thus, in the context of the proposed operation, the company will implement an ESMS in line with PS1 requirements. In addition, this system will be in line with the Bonsucro Standard[2] and cover the scope of their own sugarcane production in their operations, as well as that of their suppliers.

4.1.b Policy

Cerradão does not yet have a corporate policy that covers environmental and social topics. Thus, as part of the implementation of their ESMS, the company will develop and implement a policy that addresses social and environmental topics, including statements of mission, vision and values and the internalization of PS1 guidelines and requirements. In addition, Cerradão will disclose their sustainability policy to the public through the company's website, engagement activities with internal and external stakeholders, and in contracts with suppliers and providers.

4.1.c Identification of Risks and Impacts

The identification of risks and impacts, focused on preventing chemical and physical damages as well as biological risks in Cerradão's operations, is included in the Environmental Management Programs and in the Risk Management Program ("RMP") required under Brazilian regulations. During the year, Health, Safety, Security, and Environment ("HSSE") professionals inspect the workplace to assess safety and environmental conditions both in the industrial and agricultural areas. Environmental parameters in the workplace are measured, including noise, lighting, temperature, air quality, and humidity. In addition, the company performs environmental assessments of their sugarcane fields and develops programs to monitor biodiversity, soils, water quality, use of chemicals, among others. Cerradão also has procedures to identify occupational health, safety, and security risks both in the industrial and agricultural areas.

[2] Bonsucro is an association established for the purpose of reducing the environmental and social impacts of sugarcane production through the development of a standard and a certification program for the industry. More information is available at www.bonsucro.com

In the context of formalizing their ESMS, Cerradão will develop detailed social and environmental risk and impact assessment matrices, and will establish the procedures, timeline and technical team required to conduct, revise, and improve risk assessments, including both industrial facilities and agricultural areas. In addition, the company's board will monitor environmental and social indicators.

4.1.c.i Gender Risks

In general, Brazil has a high incidence of gender violence as compared to other countries in the region, with a significant increase in the number of domestic violence cases in recent years due to the degradation of social and economic conditions resulting from the COVID-19 pandemic.

According to IPEA,[3] femicides in Minas Gerais varied from 402 to 295 per year during the 2009-2019 period, respectively, with a 26.6% reduction during the period. Despite the reduction in this rate in recent years, the numbers continue to be significant and higher than those of many other countries in the region. In the City of Frutal (Project area), femicides per year during the same period varied from 6.72 to 35.24, and did not show a clear decline trend, in contrast to the state average. Thus, gender violence is an important issue the Project's area of influence.

Most of the workforce hired for the Project consists of local workers from Frutal and vicinities. Thus, there is no need for lodgings that overburden the host communities and no risk of external disease vectors.

However, considering the data collected in the area and in order to prevent gender violence cases in the communities in which it operates, Cerradão will develop specific educational content and will undertake internal informational campaigns for the workforce assigned to the Project.

4.1.c.ii Climate Change Exposure

The main physical risk in this project is associated with the production of sugarcane, as crop growth and yield may be affected by climate changes. Within a 25-km radius around the mill, where the main crop areas are located, there is potential exposure to droughts that may be intensified by climate changes. Some climate models[4] project that changes in rainfall patterns may be moderate until the end of the century under a conservative climate scenario.

In order to address such climate changes, the company has studied an increase in irrigation in the crop areas, not only using the mill's vinasse and wastewater but also capturing water in nearby areas.

[3] Data extracted from Atlas da Violência (2021), published by the Applied Economic Research Institute (IPEA). The document is available at https://www.ipea.gov.br/atlasviolencia/publicacoes.

[4] Such as the GFDL-CM3, for example, developed by the U.S. National Oceanic and Atmospheric Administration (NOAA).

An assessment of the project area conducted with the *Aqueduct*[5] tool reveals that the risk of water stress is low today and low to medium both by 2030 and 2040 in the irrigated production of sugarcane.

4.1.d Management Programs

Management programs currently implemented at Cerradão are mostly focused on meeting Brazilian legal requirements and the mill's and crop areas' environmental licensing conditions through environmental quality and Occupational Health, Safety, and Security ("OHSS") parameter management and monitoring practices.

Environmental management programs include, among others, management of effluents, monitoring of air emissions, vinasse application program, waste management and use of chemicals. Cerradão has also implemented environmental programs and procedures to reduce the amount of industrial waste and effluents, converting them into fertilizers for the sugarcane fields. As part of a broader transition in the Brazilian sugar industry, to reduce reliance on manual farm work, Cerradão has already achieved 100% mechanized harvest and has eliminated burning practices, as required by the State of Minas Gerais.

The Company has also adopted a series of procedures to manage issues related to human resources ("HR") and OHSS, pertaining to contracted companies, such as the Risk Prevention Program ("PGR"), the Occupational Health Medical Control Program ("PCMSO") and the Hearing Protection Program. The OHSS procedures and practices are detailed in the item related to PS2 in this document.

4.1.e Organizational Capacity and Competency

Cerradão has HSSE staff who report directly to Administrative and Financial Management and are responsible for environmental and social, occupational health, safety, and security, and quality management issues. The team is further made up of environment analysts and OHS technicians.

In addition to their internal HSSE team, the company also engages environmental consulting companies to perform specific tasks, such as the monitoring of fauna and air emissions. The results are consolidated in reports and discussed in periodic management meetings or through in-person meetings involving the environment and sustainability staff and department managers from each area. When incidents reoccur, the environment team conducts awareness-raising campaigns among workers. External consultants also support the company in the environmental licensing and legal-requirement compliance processes. The unit also has a medical team consisting of a doctor and a nurse's aid specialized in occupational health.

The implementation of the ESMS and any new certifications to be obtained will require greater document control and internal processes. Therefore, Cerradão will reassess their HSSE staffing and, if needed, will expand the team to meet future needs.

[5] *Aqueduct* is a data platform administered by the *World Resources Institute*, an environmental research organization. Aqueduct includes tools that help companies, governments, and civil society to understand and respond to water risks – such as water stress, seasonal variability, pollution and access to water. More information on the tool is available at https://www.wri.org/aqueduct.

4.1.f Emergency Preparedness and Response

Cerradão developed an Emergency Response Plan (ERP),[6] which establishes the guidelines required for actions in emergency situations that may potentially cause incidents within or outside the operational unit. The considered emergency scenarios include fires, explosions, product spills, among others. In the case of accidents involving poisonous animals, the employee is taken to the closest healthcare facility (Frutal). In addition, the company joined the Mutual Assistance Plan (PAM),[7] which is coordinated by the City of Frutal's fire department and includes other local companies.

Drills are conducted periodically and Cerradão has a team of firefighters, as required under the Fire Department's Normative Instruction, and a firefighting system. The company also takes various preventive measures, such as the implementation of firebreaks, theoretical and practical training, a fire protection system in the harvesters, and has firefighting and control equipment in case a fire occurs, such as a firefighting system at the ethanol storage facilities and industrial unit, water trucks, satellite tracked fleet, and radio communication.

The industrial unit has a valid inspection certificate ("AVCB") issued by the Minas Gerais' State Fire Department and proper emergency signage and firefighting and prevention equipment, such as fire detectors, alarms, hydrants, foam chamber, and portable extinguishers.

4.1.g Monitoring and Review

Cerradão has implemented the pertinent environmental monitoring programs in accordance with environmental licensing requirements, which include monitoring emissions into the atmosphere from boiler combustion, surface and underground water quality, soil, among others. The effluents from the industrial process (vinasse) are used in the agricultural processes, in accordance with a Vinasse Application Plan ("VAP") developed by the company.

As previously reported, and to meet PS1 requirements within the framework of their ESMS, Cerradão will follow up on the development and implementation of procedures to monitor and measure the management program's effectiveness, as well as compliance with any legal and/or contractual obligations and regulatory requirements. The company will also appoint a professional to be in charge of monitoring, as well as establish an internal audit procedure and a timeline for periodic revisions.

4.1.h Stakeholder Engagement

Cerradão conducts specific engagement activities with some stakeholders in the region, particularly by providing support to local entities' social initiatives. However, the company does not yet have a stakeholder engagement plan. To this end, in the context of the proposed operation, Cerradão will

[6] This document is referred to internally as Fire Intervention Plan (PII), in compliance with State of Minas Gerais legislation. However, the PII covers various emergency scenarios that do not necessarily involve fire, in accordance with the scope usually found in an Emergency Action Plan (EAP).

[7] In 2018, the Mutual Assistance Plan was renamed RINEM – Integrated Emergency Network.

structure such a plan considering: i) mapping, analysis, and planning of identified social actors' participation; ii) a mechanism for information dissemination, consultation, and communication with social actors; and iii) a mechanism to collect and resolve grievances, including anonymous submissions.

4.1.i External Communication and Grievance Mechanisms

Cerradão is in the process of implementing a grievance mechanism, which should have a means of receiving suggestions, grievances, and reports of violation of and noncompliance with the company's policies and procedures.

The program will include 3 channels: i) a hotline: 0800 517 0020; ii) a contact form on the company's website www.usinacerradao.com.br; and iii) an ethics and reporting channel at https://www.contatoseguro.com.br/usinacerradao. In addition, in the context of the proposed operation and as described further down, the company will install suggestion boxes around the industrial park and in the agricultural community centers.

Opinions received through these channels will be securely and anonymously reviewed by the company's Ethics Committee. All Cerradão stakeholders, including employees, suppliers, clients, consumers, and society in general, will be able to use the available communication channels. As part of the ESMS implementation process, the company will establish a procedure for upper management and the technical team to periodically assess the system and its results.

In addition to the already developed and implemented channels, in the context of the proposed operation, the company will start to publish, on its web page, periodic reports on their environmental and social performance.

4.2 Labor and Working Conditions

4.2.a Working Conditions and Managing the Relationship with Workers

Cerradão has a clear approach to recruiting, training, and retaining a well-qualified workforce. The Company has a workforce of approximately 1,240 direct employees assigned to the mill and the crop areas.

The Company has established HR procedures related to recruitment and selection, positions, and salaries, among other aspects. However, Cerradão does not yet have a Structured Human Resource Policy in line with PS2 requirements. Therefore, in the context of the proposed operation, the company will consolidate a Human Resource Policy that contemplates the elements of PS2, including principles related to outsourced workers and supply chain, and that clearly bans any form of forced, child, or compulsory labor, discrimination, threat, coercion, abuse, or harassment in the workplace.

Working conditions are defined in the contracts signed by Cerradão with their employees and are consistent with the provisions of Brazilian labor legislation. The Company offers competitive salaries to their employees and all basic benefits guaranteed under Brazilian law, as well as additional

benefits (such as access to private health insurance, life insurance, transportation and meal vouchers, among others), in order to attract and retain employees and enhance their performance. Cerradão is one of the largest employers in the region, providing jobs to a significant portion of workers in the cities of Frutal, Itapagipe, and Fronteira.

Cerradão has a formal onboarding process, whereby every new hire is welcomed on their first day and introduced to the Company's mission, vision, and values, to benefits offered, and to the compensation policy.

The terms and conditions of employment are clearly defined in the contracts and collective bargaining agreements to which the company is subject. Labor rights in Brazil, including freedom of association and collective bargaining, are protected under the 1988 Constitution and the Consolidated Labor Laws (CLT), which are consistent with International Labor Organization (ILO) guidelines. Under Brazilian labor laws, all workers may join a union, and Cerradão employees benefit from collective bargaining agreements in place in their areas. The Company does not restrict participation in unions, complies with collective bargaining agreements, and respects workers' rights. Most workers are part of two unions: i) Union of Rural Workers of Frutal; and ii) Union of Food Industry Workers of the City of Frutal.

Workers are hired regardless of gender, race, nationality, ethnic, social, and native origin, religion or faith, disability, age, or sexual orientation, and is based, rather, on technical skills and behavior. With respect to gender equality, currently only 14.5% of total employees are women, who work primarily on administrative tasks.

4.2.a.i Grievance Mechanism

Cerradão is in the process of implementing its Grievance and Complaint Mechanism, which will be available to internal and external stakeholders and will be managed by a specialized external company. Currently, the company has three formal channels to receive reports: i) a hotline: 0800 517 0020; ii) a contact form on the company's website www.usinacerradao.com.br; and iii) an ethics and reporting channel at https://www.contatoseguro.com.br/usinacerradao.

In the context of the proposed operation, the company will install suggestion boxes around the industrial park and in the agricultural community centers, and the communication channels will be publicized among internal stakeholders through bulletin boards, posters, and e-mail, and, to external stakeholders, through the website and social media. Reports received through the channels will be recorded and organized in a spreadsheet or system, and will be monitored by the company's ethics committee. In addition, in order to meet PS2 requirements, a specific procedure will establish the report collection and treatment flows, processing deadlines, and the persons responsible for managing communication, as well as other requirements under this Performance Standard.

4.2.b Protecting the Workforce

The contracts between Cerradão and their workers are consistent with local labor legislation and establish, among other aspects, the length of a workday, the hours of work, overtime, paid rest days,

minimum compensation, benefits, bonuses stipulated by law and minimum occupational health, safety, and security requirements. These aspects are also evaluated when subcontracting tasks and services.

The company's hiring procedures are in compliance with the minimum age of 18 years, with the exception of young apprentices, who are at least 16 years of age.

4.2.b.i Child and Forced Labor

Data made available by the Ministries of Labor and Social Security and of the Economy indicate that evidence of the use of forced[8] and child labor can still be found in the sugarcane industry in Brazil. Harvest activities in the project area are already 100% mechanized but it is understood that some farms still rely on manual activities during the sowing stage; hence, extra caution must be exercised to avoid risks related to this issue.

The company's contracts with suppliers contain an express provision that obligate them to comply with laws and norms that regulate hiring of employees, particularly with respect to child and adolescent labor and protection. The company also performs supplier inspection and audit activities in order to ascertain compliance with such obligations, with the issuance of a "Supplier Area Safety Inspections" report.

In the context of the proposed operation, Cerradão will develop and disclose a Public Manual with Instructions for Sugarcane Production and Harvesting, which will establish detailed requirements related to labor and HSSE topics that company suppliers must meet to be in compliance with the company's internal norms and Brazilian legislation. This manual will be provided to suppliers when a supply contract is signed, and Cerradão will continue to perform periodic inspections of workplace frontlines.

The company will also conduct annual workshops for their suppliers to disseminate good practices and smooth the transfer of information and technical requirements for growing sugarcane. These workshops will address the basic labor and health, safety, and security rules and good practices applicable to a rural setting, covering topics such as passenger transportation, accomodation, personal protective equipment, among others.

During the Environmental and Social Due Diligence ("ESDD") process, the company stated that there is no evidence of child and forced labor in their operations or supply chain.

Further details on the company suppliers' management practices are presented in item 4.2.e of this document.

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[8] In Brazil, forced labor is defined as labor analogous to slave labor, as defined under Article 149 of the Brazilian Criminal Code. The elements that characterize this typology are: degrading workplace conditions (incompatible with human dignity, consisting of violation of basic rights and placing workers under health and life risks), exhausting shifts (during which workers are required to make excessive efforts or are subjected to work overloads that are harmful to health or life-threatening), forced labor (keeping a person in service through fraud, geographic isolation, threats, and physical and psychological violence), and debt servitude (forcing workers to illegally enter into debt and to bind them to it). The elements may occur together or separately.

4.2.c Occupational Health, Safety and Security

Brazil has a set of norms that are detailed and prescriptive regarding occupational health, safety, and security ("OHSS"), known as Regulatory Norms ("NRs"). The main NRs that are applicable to the Company's operations and must be continually observed are: Specialized Safety Engineering and Occupational Medicine Service – SESMT (NR-4); Internal Accident Prevention Commission – CIPA (NR-5); Personal Protection Equipment (NR-6); Occupational Health Medical Control Program – PCMSO (NR-7); Assessment and Control of Occupational Exposures to Physical, Chemical, and Biological Agents (NR-9); Transportation, Movement, Storage, and Handling of Materials (NR-11); Boilers, Pressure Vessels, and Metal Pipes and Storage Tanks (NR-13), Workplace Safety and Health in Agriculture, Ranching, Forestry, Forest Exploration, and Aquaculture (NR-31), as well as those related to electrical facilities, elevated work, fire protection, among others.

Through the development of RMPs, the required medical examinations are established for the hiring, periodic assessment and termination of any employee, which are defined according to the nature and risk profile of the specific position (through the PCMSO).

As observed during the ESDD, Cerradão conducts team OHSS awareness-raising and engagement activities. The main tools used by the company are: Preliminary Risk Analysis ("APR"); verification of applicable OHSS legislation; environmental assessment and biological monitoring; training and awareness-raising; employee communication, participation, and consultation; availability of personal and collective protective equipment; access control; emergency preparedness and response, noncompliance records, and investigation of any workplace or other accidents.

Most industrial processes are automated, which limits the number of workers in the operational area and thus reduces worker exposure to risks inherently and normally found in a sugar and ethanol mill. Confined spaces were identified and labeled with warning signs, and workers are trained to follow safety rules for work in confined spaces in accordance with Brazilian safety requirements.

Fall prevention measures in elevated work, such as railings, harnesses, and platforms, are installed at the mill. In general, the company has adequate preventive safety measures in place, which were observed on the technical visit to their facilities. However, improvement opportunities were observed with respect to general maintenance of the facilities, emergency signage, waste organization, among others. In this regard, in the context of the proposed operation, the company will implement a program to verify the general organization and maintenance of industrial facilities to reduce the risks of HSSE incidents.

With respect to agricultural activities, good general conditions were observed during the visit to the work fronts. Workers were using appropriate personal protective equipment, transportation vehicles were in a good state of conservation, and there was cold water available, as well as a covered community and eating space with tables and chairs. Bathrooms had gender identification, good hygienic conditions, and basic items available (soap, toilet paper, water).

As demonstrated in documents reviewed during the ESDD, the company has made significant efforts to improve safety conditions for workers. In this regard, the company conducted a diagnostic of their facilities with respect to the NRs requirements and developed a action plan to achieve full

compliance, which has been implemented in recent years. In the context of the proposed operation, the company will continue to implement the proposed action plan in order to achieve full compliance with the requirements established under the applicable technical standards. On an annual basis, compliance with applicable NSs will be verified by an expert external consultant.

4.2.d Workers Engaged by Third Parties

In general, Cerradão does not use outsourced workers on a continuous basis, and only enters into service provision contracts as needed in the maintenance and/or operational areas. The only continuously outsourced employees are those working in sugarcane transportation, restaurant, cleaning, and facility security. Companies that provide outsourced workers are examined by the supply department to ascertain their compliance with labor and OHSS standards, social security payments, history of labor lawsuits, among others. Standard HSSE requirements are included in the contracts, and Cerradão releases payments against evidence of compliance with such requirements. The internal grievance mechanism can also be used by outsourced workers.

4.2.e Supply Chain

Cerradão obtains approximately 46% of the sugarcane they process from 35 suppliers, which grow sugarcane on their own farms and/or leased land. These producers, in turn, hire and manage their own workforce and machinery.

Third-party producers are members of an association called Aprovale[9], through which Cerradão conducts joint engagement and training activities to align good practices among all the company's partners. Third-party producers also go through the aforementioned mechanization process, thus eliminating the need for temporary (often migrant) manual labor for sugarcane harvesting. However, they still rely on temporary manual labor during the sowing stage, despite the growing trend toward mechanization.

As part of their procurement process, Cerradão assesses their supply chain and requires that they submit valid documentation related to land ownership, compliance with State and Federal environmental regulations, and compliance with Brazilian labor legislation and worker health, safety, and security regulations. The company also helps producers to remain in compliance with laws and regulations when these change, providing information and referring them to adequate professional services. The contracts of producers that are not in compliance with the company's requirements are blocked and/or not renewed.

In the context of the proposed operation, Cerradão will develop and disclose a public manual of good HSSE management practices for their suppliers, which will be attached to supply contracts entered into with partner producers. In addition, the company will consider the list of employers that have subjected workers to conditions analogous to slavery in their supplier evaluation and approval process.[10]

[9] Association of Sugarcane Producers of the Rio Grande Valley.

[10] Also known as the Dirty List of Slave Labor, published periodically by the Ministry of Labor and Social Security.

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

Sugarcane production in Cerradão's operations rely on natural rainfall and irrigation with residual water (Fertirrigation) from their industrial processes. Water used in Cerradão's production is captured at underground water wells and surface capture points, in accordance with the permit from the Minas Gerais Water Management Institute (IGAM).

Cerradão has permits issued by IGAM, which authorize them to capture 445 l/s of surface water; and IGAM Certificates to capture underground water at five locations, with a flow ranging from 2.76 to 79.30 m^3/h.

The company has a water recirculation process to optimize the industrial process. The water use per ton of sugarcane produced is consistent with the reference values in the World Bank Group's EHS Guidelines (*WBG EHS Guidelines*).

In addition, the company has focused on improving their efficiency in the use of resources (energy, water, inputs, etc.) and incorporating cleaner production principles to product manufacturing and production processes. Moreover, energy efficiency is a fundamental aspect of the company's business strategy. In addition to generating their entire energy needs through cogeneration of electricity from the burning of bagasse, Cerradão sells excess energy to third parties, which is distributed by the National Interconnected System ("SIN"). With the expansion of their sugarcane crushing capacity, the company will be licensed to generate up to 165MWh.

Bagasse burning produces combustion gas, nitrogen oxide, and particulate material emissions. Particulate materials are the result of inadequate boiler adjustment or factors that are adverse to combustion, which may release not fully burned sparks. The emission of NOx from boilers occurs only with high-temperature flames and is a product of the reaction between nitrogen and oxygen in the air. The emission of carbon dioxide is mitigated through the absorption by sugarcane as it grows. Details regarding the control and monitoring of air emissions are presented below.

4.3.a.i Greenhouse Gases

Cerradão participates in the RenovaBio program, which issues negotiable carbon credits known as CBIOs conferred to certified producers. RenovaBio is a federal program to reduce carbon emissions equivalent by at least 10% before 2028, in line with the United Nations Paris Agreement on climate change. The process is reviewed by independent auditors and approved by the National Petroleum, Natural Gas and Biofuel Agency ("ANP"). During the 2021/22 crop, the company generated 96,971 certified CBIOs, which is equivalent to almost 100 thousand tons of emissions avoided during the period.

With respect to greenhouse-gas (GHG) emissions, they may be deemed minimal given that sugarcane biomass is a renewable source of energy. In addition, considering that this is renewable energy from sugarcane plantations, most of Cerradão's GHG emissions are recaptured from the atmosphere by the cultivation of sugarcane and, therefore, naturally offset. Moving forward,

Cerradão will conduct an inventory of greenhouse gas emissions and incorporate the main results in its periodic environmental and social performance reports.

4.3.b Pollution Prevention

The main subproducts of the sugar/ethanol agricultural industry are straw, bagasse, vinasse, filter cake, ashes from boilers, and soot. Secondary subproducts, which a few years ago were designated as waste, have already been incorporated into the process through technologies that were developed to allow their reuse in an environmentally adequate manner, as raw materials or sources of energy in their own generating activity or by third parties.

4.3.b.i Wastes

Cerradão has a standard operating procedure to manage waste, which is classified in accordance with the technical standards of the Brazilian Association of Technical Standards ("ABNT"), and National Environmental Council ("Conama") and National Health Surveillance Agency ("Anvisa") resolutions. The Company prepares a periodic inventory of waste generated in the production process, which consists mainly of bagasse, ferrous metals, batteries, recyclable materials, oil and grease, light bulbs, contaminated packaging, rubber, solvents, and scraps. Thus, the Company is responsible for the collection, segregation, temporary storage, and correct destination according to the type of material.

Bagasse is a solid matter obtained from sugarcane after the extraction of their juice, with approximately 50% liquid, 45% fiber, 4.5% sucrose, 0.5% reducing-sugar, and 1.5% ash content. However, it is estimated that, in effect and on average, approximately 270 kg of bagasse is produced per ton of sugarcane. Bagasse is used in the energy cogeneration units and vinasse is used for application in the crop areas as fertilizer.

Gas scrubbing water is important in terms of water consumption, given the volume of water used in this system and their replacement due to losses by evaporation. The process takes place in a closed circuit and nothing is discarded from this system (only losses by evaporation when scrubbing water comes into contact with hot gases).

With respect to hazardous waste, particularly when it contains oil in its composition (e.g.: sandbox sediments, rags, used oil, etc.), the company arranges for their collection in drums placed temporarily in the industrial yard (covered and waterproofed) until its proper final disposal (incineration or coprocessing) contracted from a specialized company accredited by the State environmental agency.

4.3.b.ii Pesticide Use and Management

Agrochemicals are stored on pallets, with access restricted to authorized personnel. Empty solid agrochemical waste containers are sent or returned to the suppliers through warehouses accredited by the Minas Gerais Agriculture Institute – IMA, after they are cleaned or triple-washed and damaged. Final disposal is at the empty agrochemical packing collection center located in the City of Uberaba, Minas Gerais. It was observed during the technical visit that both the storage area and

the waste warehouse are already filled to capacity. Therefore, in the context of this operation, these locations will be expanded and rendered adequate to meet current and future demand, as well as applicable technical requirements related to the management of agrochemicals and waste.

Agrochemicals are classified according to the organism that will be subject to control, such as: insecticides, nematicides (nematode control), fungicides, rodenticides (rodent control), and herbicides (invasive plant control). With respect to products used in growing sugarcane, herbicides are the most common, as invasive plants in a sugarcane field interfere in the development of sugarcane as they compete for vital elements (water, light, CO2 and nutrients), and through allelopathy (chemical inhibition). These are normally applied through the soil or directly on their leaves. These agrochemicals may be transported through volatilization, lixiviation, and surface runoff, and may contaminate surface and underground waters and soil.

In order to minimize their impacts, Cerradão uses more resistant varieties and applies measures still in the nursery, before they are planted, which avoids the excessive use of agrochemicals. Other measures include biological control to eliminate certain insects. The company has a biological pest control system to reduce the use of pesticides and increase efficiency through the lab cultivation of Cotesia flavipes to control sugarcane borer (Diatrea sacchralis). This type of pest control is performed at Cerradão-owned fields, while its suppliers are in the process of implementing this technology.

All materials are labeled and the Chemical Product Safety Data Sheets ("CPSDS") are available for consultation. The handling, storage, and use of agricultural chemicals are in accordance with national regulations, and workers involved in pest control are trained periodically. In order to be compliant with PS3 requirements, the company is committed to use only approved chemicals that do not include Classes Ia (extremely hazardous) and Ib (highly hazardous) according to the World Health Organization ("WHO").[11]

In addition to agrochemicals, sugarcane production requires the application of nutrients, such as nitrogen, an essential component in growing the crop; potassium, a key element for photosynthesis; and products to adjust acidity through liming.

To minimize mineral fertilization, Cerradão recycles nutrients that are extracted from the soil in sugarcane production; in other words, they reapply mill subproducts, such as vinasse, by aspersion. A VAP is developed for each crop, which also serves to eliminate soil-contamination and surface- and underground-water pollution risks through the rational and controlled agricultural application according to the sugarcane crop's water and nutrient needs.

4.4 Community Health, Safety and Security

4.4.a Community Health, Safety and Security

The transportation of sugarcane, raw materials, and products may interfere in the traffic on the main access road to the operational unit, particularly during the harvest period.

[11] The WHO recommended classification is available at https://www.who.int/publications/i/item/9789240005662

As these are heavy transportation vehicles, Cerradão has a transportation logistics plan based on National Transportation Infrastructure Department ("DNIT") safety rules. The company has an operational control center dedicated to fleet logistics management, where all vehicles are tracked with route verification and speed control. Therefore, given that the mill is remotely located in relation to urban centers and communities, it may be considered that potential impacts due to the company's vehicle traffic are not significant.

Fires in sugarcane fields cannot always be avoided due to criminal, accidental or natural incidents resulting from a combination of hot weather and dry conditions. Whatever the cause may be, Cerradão's priority for the sustainability of their operations is to prevent and combat fires, and the company undertakes awareness-raising programs and campaigns. In addition, the company works in partnership with the Fire Department, and participates in the Mutual Assistance Plan in their region, providing equipment and technical support.

Cerradão does aerial applications of agrochemicals and fertilizers using a geomonitoring system that allows the establishment of physical limits for the applications based on the presence of communities, protected areas, and other restricted areas. In the context of the proposed operation, Cerradão will formalize an aerial application procedure in accordance with United Nations Food and Agriculture Organization (FAO) Guidelines. The procedure will include monitoring weather conditions during spraying, pro-active communications with neighbors, and safety buffer zones for cities, small villages, and homes.

4.4.a.i Infrastructure and Equipment Design and Safety

Law No. 14,130 of 2001 deals with fire and panic prevention in the State of Minas Gerais, and it is regulated by decrees and other later legal instruments that establish the licensing procedures applicable to requests for permits from the Fire Department of the State of Minas Gerais. In this regard, Cerradão has the appropriate Fire Inspection Certificate ("AVCB") for their operations.

NR-10 establishes that industrial facilities must be protected according to the risk of fire and explosion, and in areas considered to be of high risk (for example, distilleries, sugar storage warehouses or grain silos, flammable storage tanks). Cerradão has operating equipment for fire safety, such as fire detectors, alarm systems, water pump systems and water storage tanks, hydrants, portable extinguishers, and firefighting foam solution to be used on ethanol tanks, in accordance with the Normative Instructions of the Fire Department of the State of Minas Gerais.

As previously mentioned, the company's operational area is far from nearby communities and busy roads. Therefore, communities are not likely to be affected by any emergency events occurring at the mill.

4.4.b Security Personnel

Cerradão has armed personnel due to the increased incidence of agrochemical thefts from the industry's industrial plants. The rules that apply to the security team are in accordance with national norms and are regulated by the Brazilian Federal Police, and the company conducts training in the

use of nonlethal weapons and the appropriate use of force. The grievance mechanism for the external public is available for the population in general, which may communicate their concerns regarding any abuses by security personnel.

4.5 Acquisition of Land and Involuntary Resettlement

The project will not cause any physical or economic displacement of the population. The lands used by Cerradão are owned by the company and/or leased for sugarcane production. Most of these lands have been given the same use for decades, with no significant land-use and/or crop variations.

4.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

4.6.a General Requirements

The vegetation that formerly predominated in the area and vicinity of the mill is reduced to small fragments of forest spread throughout the region. Land use and occupation began with some smaller scale perennial crops, and is now dedicated mainly to sugarcane and pastures.

Considering that the mill and the crops are in areas that are already dedicated to agricultural activities, there will be no need for any vegetation to be removed. The change in conditions for land fauna resulting from this project is related to various factors, particularly the movement of machines, vehicles, and equipment, and fauna may be disturbed by noise and potentially run over by trucks and vehicles. Any disturbances are monitored under the Fauna Monitoring Plan, which has been in place at the company since 2009.

4.6.b Biodiversity Protection and Conservation

The Environmental Impact Study conducted when the mill was installed pointed out that the region's remaining areas of vegetation are rare and therefore have high ecological value and must be preserved. The Mill's Operating Licenses in effect also require verification, in the form of photographic technical reports, of the implementation and progress of improvement and recovery measures in Permanent Preservation Areas ("APPs") and Legal Reserves, as well as the implementation of offset measures.

4.6.c Sustainable Management of Living Natural Resources

Permanent Preservation Areas and Legal Reserves were mapped to identify and manage crop areas.

4.6.d Supply Chain

Cerradão has environmental protection clauses in their contracts with suppliers and partners, and provides technical support for the implementation of measures to comply with environmental requirements. In light of the project's location and the ongoing agricultural context, no new pressures on biodiversity are expected to be caused by companies in their supply chain.

4.7 Indigenous Peoples

The Project will not intercept indigenous areas or territories nor will it directly impact indigenous peoples.

4.8 Cultural Heritage

The company's crops are located in areas with established agricultural production. Therefore, PS8 does not apply to this project.

5. Local Access to Project Documentation

Documentation related to the project are available on the IDB Invest website (https://idbinvest.org/es/projects) and more information about the Company can be found at http://www.usinacerradao.com.br.